



DR. BHIMRAO AMBEDKAR UNIVERSITY, AGRA

(Formerly Agra University, Agra)

A+ Accredited by NAAC

Report on

Sustainable Development Goal 2



SDG 2 ZERO HUNGER

End hunger, achieve food security and
improved nutrition and promote
sustainable agriculture

6.1 Research on Water-

Dr. Bhimrao Ambedkar University, Agra has contributed to research addressing several dimensions of **SDG 6: Clean Water and Sanitation**, including water-quality assessment, water pollution, wastewater treatment, microbial contamination, toxicological impacts of polluted water, groundwater contamination, and water-use efficiency. The available research record demonstrates both long-standing engagement with regional water-quality issues and more recent work involving nanotechnology, biosensing, photocatalysis, and computational approaches for environmental monitoring and remediation.

6.1.1 Clean Water and Sanitation: Cite Score-

The research record provided for the university contains 25 publications related to water, water pollution, wastewater, groundwater, aquatic ecosystems, and associated environmental applications. Collectively, these publications have received 376 citations, indicating a measurable scholarly impact in the area of water and environmental research.

This citation distribution suggests that the university's water-related research has generated visibility beyond purely local applications. In particular, research addressing water-quality monitoring, biological impacts of water pollution, pathogen detection, and innovative sensing technologies has attracted considerable scholarly attention. The concentration of citations in a small number of influential studies also indicates that certain research contributions have served as important references within the broader environmental and water-research community.

6.1.2 Clean Water and Sanitation: FWCI- The Field-Weighted Citation Impact (FWCI) is an important bibliometric indicator because it compares the citation performance of publications with the expected citation rate for publications of similar field, year, and document type. An FWCI is **0.31** for this paper. 1.0 represents the world average, while a value above 1.0 indicates citation performance above the corresponding global benchmark.

6.1.3 Clean Water and Sanitation: Publications-

A significant component of the research addresses microbial and biological contamination of water. Studies on the isolation of mycobacteria from soil and water samples, detection of *E. coli* in water, and multidrug-resistant pathogenic *E. coli* in water sources and the Yamuna River demonstrate efforts toward identifying biological hazards associated with contaminated water. These studies have direct relevance to the broader SDG 6 objective of improving water quality and reducing contamination

S. No.	Research Paper	Year	Journal / Source	Citations	DOI
1	Water physicochemical factors and oxidative stress physiology in fish, a review	2023	<i>Frontiers in Environmental Science</i>	176	10.3389/fenvs.2023.1240813
2	Performance of nanopolyaniline-fungal enzyme based biosensor for water pollution	2011	<i>Advanced Materials Letters</i>	36	10.5185/amlett.2010.8149
3	Optimization of procedures for isolation of mycobacteria from soil and water samples obtained in Northern India	2004	<i>Applied and Environmental Microbiology</i>	35	10.1128/AEM.70.6.3751-3753.2004
4	Detection of E. coli in water using semi-conducting polymeric thin film sensor	2006	<i>Sensors and Actuators B: Chemical</i>	32	10.1016/j.snb.2006.01.052
5	Ecofriendly Nanomaterials for Wastewater Treatment	2024	<i>Green Synthesis of Nanomaterials: Biological and Environmental Applications</i>	4	—
6	Multidrug resistant pathogenic Escherichia coli status in water sources and Yamuna river in and around Mathura, India	2014	<i>Pakistan Journal of Biological Sciences</i>	11	10.3923/pjbs.2014.540.544
7	Assessment of water quality of River Yamuna at Agra	1999	<i>Pollution Research</i>	8	—
8	Trachyspermum Ammi Supported Synthesis of Nano-CeO₂ and Its	2025	<i>Chemistry Africa</i>	6	10.1007/s42250-025-01187-2

S. No.	Research Paper	Year	Journal / Source	Citations	DOI
	Scope in Photocatalytic Degradation of Ibuprofen in Water				
9	A Hybrid Approach Based on Principal Component Analysis and Artificial Neural Network for Modeling River Water Quality of Prayagraj Region	2025	<i>Environmental Quality Management</i>	0	10.1002/tqem.70229
10	Heavy Metal Pollution in River Ulhas, Maharashtra, India: Unraveling Contamination Dynamics Through Pollution Indices, Multivariate Analysis, and Health Risk Assessment	2025	<i>International Journal of Environmental Research</i>	11	10.1007/s41742-025-00754-2
11	Unveiling heavy metal pollution dynamics in sediments of river Ulhas, Maharashtra, India	2024	<i>Environmental Geochemistry and Health</i>	12	10.1007/s10653-024-02208-8
12	Metal contamination in sediments of River Kalu, Maharashtra, India	2025	<i>Sustainable Chemistry for Climate Action</i>	2	10.1016/j.scca.2025.100105
13	Seasonal variations of physico-chemical parameters in the coastal and estuarine waters of Kollam	2008	<i>Indian Journal of Environmental Protection</i>	2	—
14	Effect of ground water arsenic on the liver of albino rat	2012	<i>Journal of Ecophysiology</i>	0	—

S. No.	Research Paper	Year	Journal / Source	Citations	DOI
			<i>and Occupational Health</i>		
15	Effects of ground water arsenic on the testes of albino rats	2011	<i>Journal of Ecophysiology and Occupational Health</i>	1	—
16	Effect of industrial effluent on wheat crop	2021	<i>Agricultural Research Journal</i>	0	10.5958/2395-146X.2021.00006.5
17	Phycoremediation of industrial effluents contaminated soils	2019	<i>Microbes in Soil, Crop and Environmental Sustainability</i>	10	10.1016/B978-0-12-818258-1.00016-9
18	Effect of sewage sludge and fertilizers on accumulation of micronutrients and yield of cauliflower	2015	<i>Indian Journal of Agricultural Sciences</i>	3	10.56093/ijas.v85i7.50141
19	Gas exchange variability and water use efficiency of thirty landraces of rice	2009	<i>Physiology and Molecular Biology of Plants</i>	5	10.1007/s12298-009-0034-6
20	Impact of watershed programme in Madhya Pradesh, India	2014	<i>Indian Journal of Agricultural Research</i>	0	10.5958/j.0976-058X.48.2.024
21	Sorption, degradation and movement of three carbamate pesticides in soils	2011	<i>Indian Journal of Agricultural Sciences</i>	1	—
22	Studies on the Effect of Polluted Water on <i>Cassia auriculata</i> Linn. Seeds	1997	<i>Asian Journal of Chemistry</i>	0	—

S. No.	Research Paper	Year	Journal / Source	Citations	DOI
23	Distribution and abundance of zooplankton in relation to petroleum hydrocarbon content along the coast of Kollam	2007	<i>Journal of Environmental Biology</i>	6	—
24	Toxicological effects of leather dyes on total leukocyte count of fresh water teleost, <i>Cirrhinus mrigala</i>	2009	<i>Biology and Medicine</i>	15	—
25	Heavy metals in sediments of river Tapti	2005	<i>Indian Journal of Environmental Protection</i>	0	—

6.3 Water Usages and Care

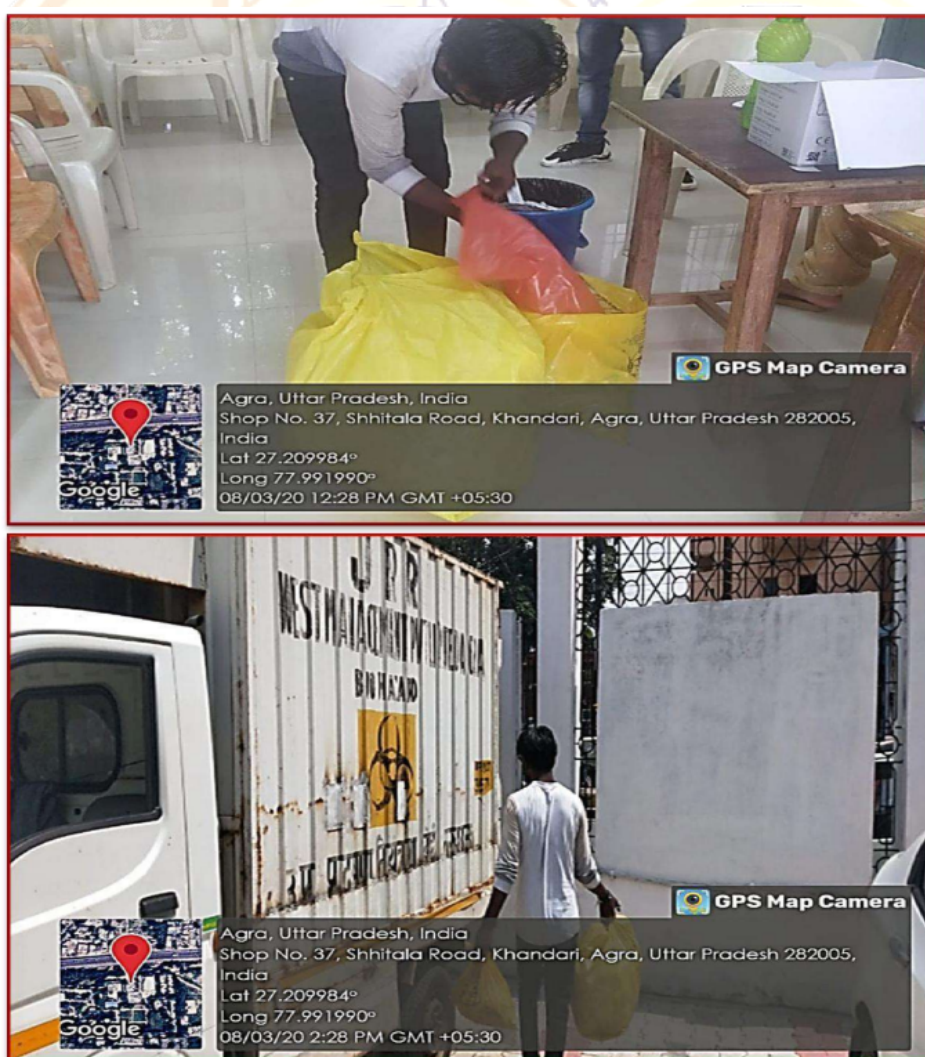
Dr. Bhimrao Ambedkar University, Agra is committed to the judicious use, conservation, and sustainable management of water resources across its campuses. The University's Water Management Policy emphasizes responsible water consumption, water conservation, rainwater harvesting, prevention of water loss, and the reuse of available water resources. These measures support the University's commitment to SDG 6: Clean Water and Sanitation and contribute to the long-term sustainability of campus water resources.

6.3.2 Preventing Water System Pollution

The University is committed to protecting surface water, groundwater, and campus water resources by preventing the discharge of untreated wastewater, chemicals, solid waste, and other pollutants into water systems. These initiatives form an important part of the University's environmental management practices and contribute to the objectives of Sustainable Development Goal SDG:6. The University promotes the proper collection, segregation, treatment, and disposal of wastewater and solid waste generated across the campus. Wastewater from different campus activities is managed through appropriate drainage and treatment arrangements to minimize the possibility of untreated effluent entering natural water bodies or contaminating groundwater.

Particular attention is given to preventing pollution from laboratories, workshops, maintenance activities, sanitation facilities, and other areas where potentially harmful substances may be generated. Chemicals, oils, laboratory waste, and other hazardous materials are handled and disposed of through appropriate procedures rather than being discharged into drains or water bodies.

The University also undertakes measures to prevent plastic waste, litter, and other solid waste from entering stormwater drainage systems. Regular cleaning and maintenance of drains, water-storage facilities, and wastewater-management infrastructure help reduce the risk of blockages, contamination, and uncontrolled discharge.



Pic-Biomedical waste segregation



Pic-Plastic waste segregation

6.3.3 Free Drinking Water Provided

The University is committed to ensuring equitable and free access to safe and clean drinking water for all students, faculty members, staff, visitors, and other members of the campus community. This initiative supports the objectives of Sustainable Development Goal 6 (SDG 6): Clean Water and Sanitation, particularly the goal of ensuring universal and equitable access to safe and affordable drinking water.

Adequate drinking-water facilities are provided at accessible locations across the University campus, including academic buildings, administrative areas, and other commonly used spaces. Students and staff can access drinking water free of cost, thereby ensuring that lack of access or affordability does not become a barrier to adequate hydration and well-being.

The University emphasizes the provision of safe, hygienic, and regularly maintained drinking-water facilities. Water purification and filtration systems are maintained periodically, and the drinking-water points are cleaned and monitored to maintain appropriate hygiene standards. Where applicable, water-quality testing is undertaken to ensure that the supplied drinking water remains suitable for consumption.

The initiative also contributes to reducing dependence on commercially packaged drinking water and can help minimize the generation of single-use plastic bottles on campus. Students and staff are

encouraged to use reusable water bottles and responsibly utilize the available drinking-water facilities.

Through the provision of free drinking water, the University promotes water accessibility, public health, hygiene, and sustainable water management. The initiative demonstrates the University's commitment to creating an inclusive and healthy campus environment while contributing directly to the objectives of SDG 6 – Clean Water and Sanitation.

Key Features:

- Free drinking water accessible to students, faculty, staff, and visitors.
- Drinking-water facilities provided at convenient campus locations.
- Regular cleaning and maintenance of water dispensers and purification systems.
- Periodic monitoring and, where applicable, testing of drinking-water quality.
- Promotion of reusable water bottles to reduce single-use plastic waste.
- Equal and non-discriminatory access to drinking-water facilities



6.3.5 Water Conscious Planting

Ground Water Conservation and Rain Water Harvesting

As part of the Green Campus Initiative, the **Institute of Pharmacy and Paramedical Sciences, Chhalesar Campus, Dr. Bhimrao Ambedkar University**, Agra, undertook significant measures for groundwater conservation and rainwater harvesting. The initiative was implemented in collaboration with the Uttar Pradesh Ground Water Department under the Namami Gange and Rural Water Supply Department. The project focused on promoting sustainable water management practices, improving groundwater recharge, and enhancing awareness regarding water conservation among students and staff. It also aligned with environmental sustainability goals and supported responsible use and regulation of groundwater resources under the Uttar Pradesh Ground Water (Management and Regulation) Act, 2019.

Key Achievements

- Promotion of sustainable water conservation practices
- Improvement in groundwater recharge and rainwater storage
- Increased awareness regarding water management and environmental sustainability
- Contribution towards Green Campus and SDG-based environmental initiatives
- “Saving Rain Water for the Future” initiative successfully implemented on campus



Source: <https://www.dbrausdg.in/initiatives/6a0f4ac0491b948ad539c029>

6.4 Water Reuse-

The University is committed to the conservation, efficient use, and reuse of water resources in accordance with the objectives of **Sustainable Development Goal 6 (SDG 6): Clean Water and**

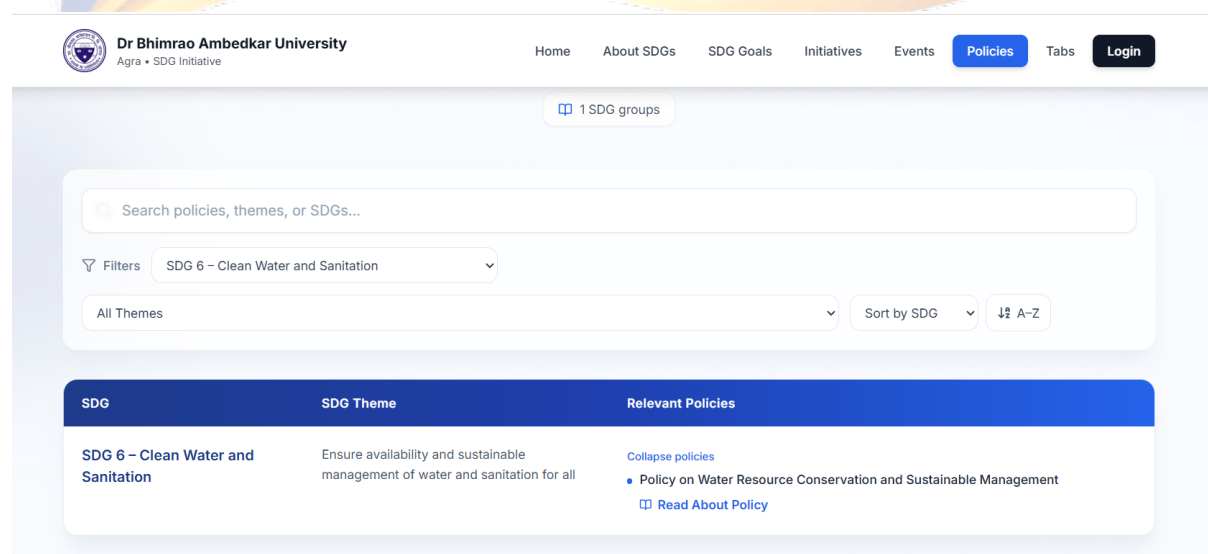
Sanitation. The University's Water Reuse Policy promotes the reduction of freshwater consumption by encouraging the treatment and reuse of wastewater generated through various campus activities.

6.4.1 Water Reuse Policy-

The university policy encourages the use of **water-efficient fixtures, rainwater harvesting, wastewater treatment systems, and regular monitoring of water consumption.** Separate collection and treatment arrangements are encouraged wherever required to ensure that reused water is safe and suitable for its intended application. Through the implementation of the Water Reuse Policy, the University aims to **reduce dependence on freshwater sources, minimize wastewater discharge, improve water-use efficiency, and strengthen sustainable water management** across the campus. The policy also contributes to climate resilience by reducing pressure on local freshwater resources and promoting a circular approach to water management.

Key Objectives

- Reduce freshwater consumption through systematic water reuse.
- Promote the treatment and safe reuse of wastewater for non-potable applications.
- Encourage rainwater harvesting and groundwater-recharge initiatives.
- Reduce water losses through efficient infrastructure and regular maintenance.
- Promote water-efficient technologies and fixtures.
- Create awareness regarding water conservation and responsible water use.
- Monitor water consumption and the quantity of water reused periodically.



The screenshot displays the website of Dr. Bhimrao Ambedkar University, Agra. The header includes the university's name, logo, and navigation links: Home, About SDGs, SDG Goals, Initiatives, Events, Policies (highlighted), Tabs, and Login. Below the header, a search bar is present with the text "Search policies, themes, or SDGs...". A filter dropdown menu is set to "SDG 6 – Clean Water and Sanitation". Below the filter, there are options for "All Themes", "Sort by SDG", and "A-Z". The main content area features a table with the following structure:

SDG	SDG Theme	Relevant Policies
SDG 6 – Clean Water and Sanitation	Ensure availability and sustainable management of water and sanitation for all	Collapse policies • Policy on Water Resource Conservation and Sustainable Management Read About Policy

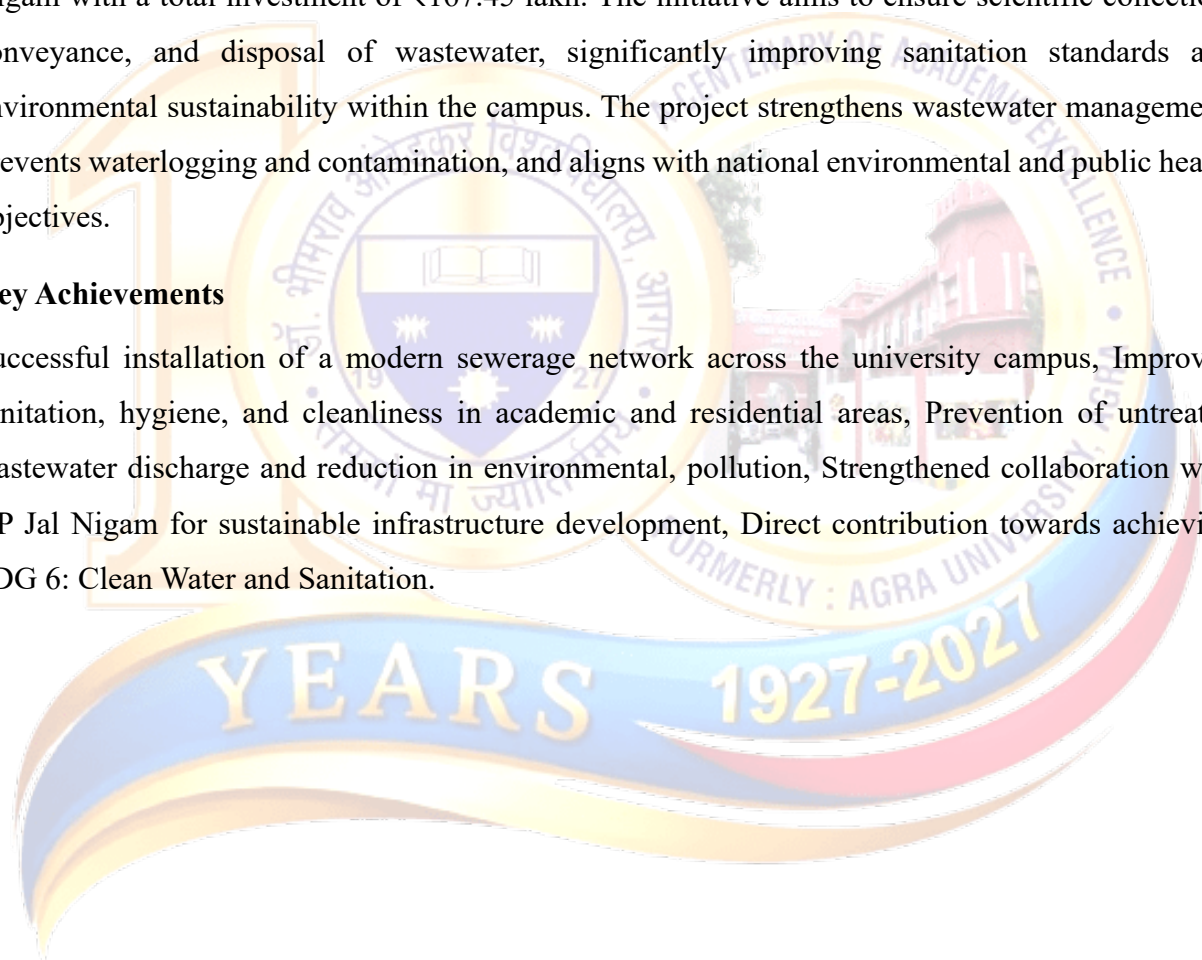
Source: <https://www.dbrausdg.in/policies>

6.4.2 Water Reuse Measurement

Dr. Bhimrao Ambedkar University, Agra has undertaken a major Liquid Waste Management initiative through the installation of an underground sewerage line system across the university campus. This critical infrastructure project was implemented in collaboration with Uttar Pradesh Jal Nigam with a total investment of ₹167.45 lakh. The initiative aims to ensure scientific collection, conveyance, and disposal of wastewater, significantly improving sanitation standards and environmental sustainability within the campus. The project strengthens wastewater management, prevents waterlogging and contamination, and aligns with national environmental and public health objectives.

Key Achievements

Successful installation of a modern sewerage network across the university campus, Improved sanitation, hygiene, and cleanliness in academic and residential areas, Prevention of untreated wastewater discharge and reduction in environmental pollution, Strengthened collaboration with UP Jal Nigam for sustainable infrastructure development, Direct contribution towards achieving SDG 6: Clean Water and Sanitation.





कार्यालय परियोजना प्रबन्धक, यमुना प्रदूषण नियन्त्रण इकाई, उ०प्र० जल निगम

वाटर वर्क्स चौराहा, जीवनी भण्डी रोड, आगरा - 282 004

पत्रांक २५५ / प्राक्कलन / १०

दिनांक २९.३.१९

सेवा में

कुल सचिव,
डॉ० भीमराव अम्बेडकर विश्वविद्यालय,
आगरा।

विषय:- विश्वविद्यालय के खंदारी परिसर की सीवर लाइन कालने के सम्पूर्ण कार्य का पुनरीक्षित प्राक्कलन उपलब्ध करने के सम्बन्ध में।

महोदय,

उपरोक्त विषयक विश्वविद्यालय के खंदारी परिसर की सीवर लाइन कालने हेतु नगर आगुक्त, नगर निगम, आगरा महोदय के पत्रांक 400/D/NA/17, दिनांक 06.11.2017 के अनुसार विश्वविद्यालय अभियंता द्वारा खंदारी परिसर में बंदाये गये स्थानों पर सीवर लाइन कालने हेतु रु० 89.33 लाख का प्राक्कलन पूर्व में इस कार्यालय द्वारा माह जुलाई-2018 में प्रेषित किया गया था। जिसके संदर्भ में वर्तमान में विश्वविद्यालय के पत्रांक इंजी० 908, दिनांक 07.03.2019 के अनुक्रम में दिनांक 07.03.2019 को ही इस कार्यालय के परियोजना अभियंता एवं सहायक परियोजना अभियंता द्वारा विश्वविद्यालय के अभियंता श्री हरिमोहन शर्मा को साथ संयुक्त रूप से खंदारी परिसर के निरीक्षण में पूर्व में प्रस्तावित कार्यो हेतु प्रेषित प्राक्कलन के अतिरिक्त परिसर के सभी शौचालयों की सीवर लाइन से संयोजन करने, सम्बन्धित के नवीनीकरण, प्रस्तावित सीवर लाइन को जल संयोजन की सीवर लाइन से संयोजन करने इत्यादि कार्यो हेतु भी प्राक्कलन प्रेषित करने हेतु अवगत कराया गया है।

अतः उपरोक्तानुसार विश्वविद्यालय अभियंता के साथ दिनांक 28.03.2019 को दूरभाष पर हुई वार्ता के अनुसार पूर्व प्रेषित प्राक्कलन अनुमानित लागत रु० 89.33 लाख के विरुद्ध समायोजन कराने का कराने का कष्ट करे ताकि अग्रतर कार्यवाही की जा सके।

भवदीय

(लोकेश शर्मा)
परियोजना प्रबंधक

प्र०स० एवं दिनांक उपरोक्तानुसार।

प्रतिलिपि निम्नलिखित को सूचनाार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. महाप्रबंधक, यमुना प्रदूषण नियंत्रण इकाई, उ०प्र० जल निगम, आगरा।

परियोजना प्रबंधक

YEARS

1927-2027

INDIA NON JUDICIAL
Government of Uttar Pradesh

PRAVEEN KUMAR
LICENCE NUMBER
E-STAMP ACC. NO. 14
CIVIL COURT AGRA

e-Stamp

Certificate No.	: IN-UP4147531044744V
Certificate Issued Date	: 22-Feb-2023 12:12 PM
Account Reference	: NEWIMPACC (SV) up14324004/ AGRA BADAR/ UP-AGRA
Unique Doc. Reference	: SUBIN-UPUP1432480476898554863652V
Purchased by	: DR B R A UNIVERSITY AGRA
Description of Document	: Article 5 Agreement or Memorandum of an agreement
Property Description	: Not Applicable
Consideration Price (Rs.)	:
First Party	: DR B R A UNIVERSITY AGRA
Second Party	: UP JAL NIGAM AGRA
Stamp Duty Paid By	: DR B R A UNIVERSITY AGRA
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)

Please write or type below this line

MEMORANDUM OF UNDERSTANDING

THIS Memorandum of Understanding is made at AGRA on this 18 day march month 2023 between Finance Officer Dr. B.R.A. University, Agra (Hereafter called "The Client" which expression shall unless repugnant to the context thereof include its successor-in-office and assign of one part and "Project Manager. Construction Unit U.P. Jal Nigam (Nagariya) Agra." (Here-inafter called the construction Unit U.P. JAL NIGAM which expression shall unless repugnant to the context there of include its successor assigns) of the other part.

Whereas at the proposal of the "Client" the construction Unit U.P. JAL NIGAM (Nagariya) is executing "खिर्वाजित कार्यक्रमान्तर्गत आगरा के बी० आर० अम्बेडकर यूनिवर्सिटी, खंवारी कैम्पस, खंदारी आगरा योजना (UIT-DEP-CU-AGR-001-1)", amounting to Rs. 167.45 Lac (Here

 Finance Officer
Dr. Bhimrao Ambedkar University

 Executive Engineer
 Construction

Statutory Agent:
 1. The authenticity of this E-stamp certificate should be verified from the website www.e-stamp.com or using e-Stamp Mobile App. For more details, visit the website / Mobile App and read the terms and conditions.
 2. The time of checking the authenticity is on the users of the certificate.
 3. Use of any information or document without the permission of the Government is prohibited.

Source : [Sewerage infrastructure development](#)

6.5 Water in Community

Rural Water Quality Testing and Health Awareness Program

The Department of Social Work at Dr. Bhimrao Ambedkar University, Agra conducted a rural water quality testing campaign in nearby villages. During this program, students collected and tested drinking water samples from various sources such as hand pumps, wells, and storage tanks to assess their quality. The main objective of the initiative was to identify potential contamination in drinking water and raise awareness among villagers about the health risks associated with polluted water. Through interaction with local residents, students also educated the community about safe drinking water practices and the importance of maintaining hygiene to improve overall health and well-being.

Key Achievements

- Drinking water samples from several village sources were tested and analyzed.
- Awareness was created among rural communities about water contamination and its impact on health.
- Villagers were informed about safe water handling and sanitation practices.
- The initiative contributed to improving public health awareness and promoting healthier living conditions in rural areas.



Source : <https://www.dbrausdg.in/initiatives/69a928d5d0d7a3345c2fea7c>

6.5.1 Water Management Educational Opportunities-

The Agra Local Centre of The Institution of Engineers (India), in association with the Department of Electrical Engineering, IET Khandari, Agra, organized a programme to commemorate World Water Day 2026. The event was held on 24 March 2026 at 1:00 PM at Room No. VK-12, Ground Floor, IET Khandari, Agra.

The programme was organized around the theme “Water and Gender”, highlighting the importance of equitable access to safe and sustainable water resources and the significant relationship between water security and gender equality.

The event was supported by distinguished office bearers of The Institution of Engineers (India), including Er. Raineesh Kumar Yadav, FIE, Chairman; Dr. Mayank Pratap Singh, Organizing Secretary and Incharge, Department of Electrical Engineering; and Dr. Anurag Khulshrestha, MIE, Hon. Secretary.

The celebration contributed to creating awareness among participants regarding the importance of sustainable water resources and the need for inclusive approaches to water management. The programme also strengthened the institution's commitment to Sustainable Development Goal 6 (Clean Water and Sanitation).

No of participant-50

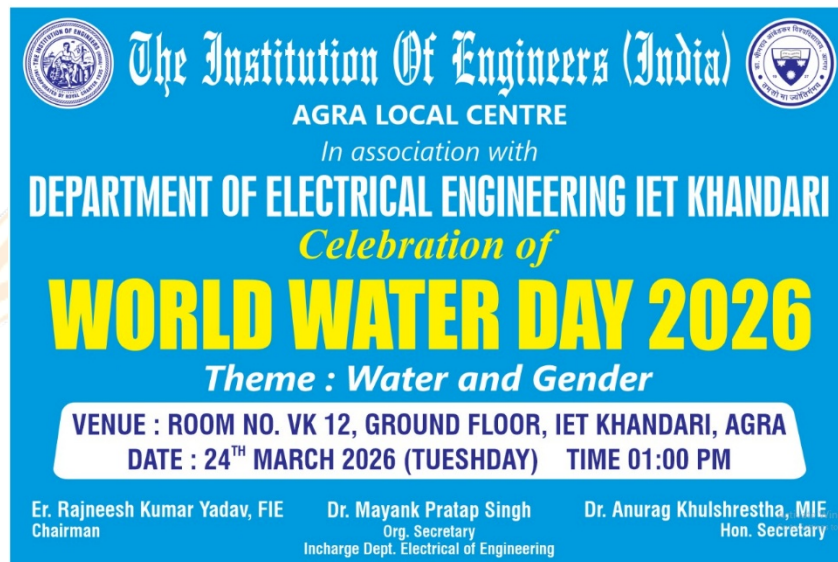




Image: Students take part in World Water Day.

6.5.3 Off-Campus Water Conservation Support

Discussion on Yamuna Conservation is organized with the Collaboration with IIPA, New Delhi. A MOU is also signed between Pt. Deen Dayal Institute of Rural Development and IIPA

A discussion on Yamuna Conservation was organized in collaboration with the Indian Institute of Public Administration (IIPA), New Delhi. The event was held on September 25, 2024, at J.P. Sabhagar, Khandari Campus, with approximately 180 attendees expected. The program explored strategies for the restoration of the Yamuna River with focus on environmental governance, policy frameworks, waste management, and integrated conservation approaches. An MoU was also signed between Pt. Deen Dayal Institute of Rural Development and IIPA to strengthen long-term academic collaboration in environmental governance and policy research.



Source: <https://www.dbrausdg.in/events/6976526c91d7abfa42ab3e09>

Dr. Bhimrao Ambedkar University, Agra is committed to the **sustainable extraction, conservation, and management of water resources** on its campus. The University recognizes the importance of reducing pressure on groundwater resources and has adopted measures that promote responsible water use while supporting groundwater recharge. Its Water Management Policy specifically states that the University is working towards making campus water use increasingly sustainable through **water-efficient fixtures, rainwater harvesting, and smart water-conservation practices**.

Agra, Uttar Pradesh, India
C-668, Bhagirathi Devi Marg, near Home Science Institute, Azad Nagar, Pushpavihaar Colony,
Agra, Uttar Pradesh 282001, India
Lat 27.207584°
Long 77.990463°
02/04/24 01:21 PM GMT +05:30



Rainwater Harvesting Pits



Rainwater falling on rooftops, paved areas, open grounds, and other campus surfaces is collected through a network of roof gutters, rainwater pipes, and surface drains. Instead of allowing rainwater to flow away as surface runoff, the collected water is directed towards designated rainwater-harvesting and groundwater-recharge structures.



Pic- Groundwater recharge system in IET, Khandari Campus