



DR. BHIMRAO AMBEDKAR UNIVERSITY, AGRA

(Formerly Agra University, Agra)

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Report on

Sustainable Development Goal 13



SDG 13
CLIMATE ACTION

Take urgent action to combat
climate change and its impacts

13.1 Research on climate action

Dr. Bhimrao Ambedkar University is dedicated to advancing SDG 13: Climate Action by encouraging high-quality research on climate change mitigation, adaptation, resilience, and sustainable development. Through interdisciplinary research projects, the University promotes innovative ways to reduce greenhouse gas emissions, improve resource efficiency, and strengthen climate resilience at the local and national, and levels.

13.1.1 Climate Action: Cite Score-The university's climate-action research is being published in well-cited, high-visibility outlets, which can amplify the reach of findings on mitigation, adaptation, and resilience .In 2025, the average citation count is 10.43 highlights the strong scholarly impact and visibility of Dr. Bhimrao Ambedkar University on climate action.

13.1.2 Climate Action: FWCI- The average Field-Weighted Citation Impact (FWCI) 0.741 indicates that the University strives to enhance the international impact of its climate action research by encouraging collaborative research, interdisciplinary projects, international partnerships, and publication in high-quality journals.

13.1.3 Climate Action: Publication-

The university publishes 21 papers on climate action and environmental sustainability. These papers help to advance scientific understanding and practical solutions for tackling climate-related issues at the local, national levels. The University encourages academics and research scholar to publish in peer-reviewed journals, conference proceedings, book chapters, and international collaborative projects. Publications are indexed in recognized databases such as Scopus and Web of Science, which enhance global visibility and contribute to institutional research excellence.

S. No.	Year	Title	Author(s)	Journal / Book	Citation	DOI
1.	2025	Cigarettes as a Source of Heavy Metal Toxicity: Evaluating Human Health Risks	Sandal S.; Verghese P.S.; Taneja A.; Massey D.D.; Habil M.	Discover Public Health	15	10.1186/s12982-025-00650-2

2.	2025	Metal Contamination in Sediments of River Kalu, Maharashtra, India	Salgaonkar S.; Botle A.; Tiwari R.; Barabde G.	Sustainable Chemistry for Climate Action	2	10.1016/j.scca.2025.100105
3.	2025	Health Concerns and Issues Associated with Toxic Heavy Metals	Botle A.; Salgaonkar S.; Barabde G.; Tiwari R.	Global Perspectives of Toxic Metals in Bio Environs (Book Chapter)	5	10.1007/978-3-031-89725-2_7
4.	2025	Exposure Assessment of Size Segregated PM and Associated Respirable Deposition Dose Near National Highway	Shikha; Kumar V.; Singh A.; Taneja A.	Water, Air, and Soil Pollution	3	10.1007/s11270-025-08314-2
5.	2025	A Critical Review on Effective Removal of Volatile Organic Compound from Air by Catalyst	Tiwari, R., Rajouriya, K., Singh, P.P. <i>et al</i>	Journal of the Iranian Chemical Society	2	doi.org/10.1007/s13738-025-03277-x
6.	2025	Variability of Fine Particulate Matter (PM1.0 and PM2.5) and Its Oxidative Potential at Different Locations in Northern India	Tulika Tripathi, Madhu Anand, Gursumeeran Satsangi	Aerosol Science and Engineering	1	10.1007/s41810-024-00269-x

7.	2025	Health Risk Assessment and Morphometric Study of Metal-Bound Ultrafine Aerosol in Indo-Gangetic Plain, India	Rahul Tiwari ,Kalpana Rajouriya, Renuka Saini	Journal of Atmospheric Chemistry	2	10.1007/s10874-025-09471-8
8.	2024	Inherent Roadmap in Synthesis and Applications of Sustainable Materials Using Oil Based and Microbial Polymers	Kumar.D.Garvan dha M.; Kumar S.; Deo N.	Materials Today Sustainability	22	10.1016/j.mtsust.2023.100615
9.	2024	Morphology, Aspect Ratio, and Surface Elemental Composition of Primary Aerosol Particles at Urban Region of India	Pipal A.S.; Kaur P.; Singh S.P.; Rohra H.; Taneja A.	Environmental Science and Pollution Research	6	10.1007/s11356-024-34372-w
10.	2024	A Review on Sequential Extraction of Metals Bound Particulate Matter and Their Health Risk Assessment	Kalpana Rajouriya, Atar Singh Pipal ,Ajay Taneja	Journal of Atmospheric Chemistry	5	10.1007/s10874-024-09460-...
11.	2023	Temporal and Spatial Variations of Satellite-Based Aerosol Optical	Singh A.; Kumar S.	Aerosol Science and Engineering	32	10.1007/s41810-022-00168-z

		Depths, Angstrom Exponent, Single Scattering Albedo, and Ultraviolet-Aerosol Index over Five Polluted and Less-Polluted Cities of Northern India				
12.	2023	Chemical Fraction and Health Effect of Size Segregated PM at National Highway of Northern India	Rahul Tiwari et.al	Pollution	3	10.22059/poll.2023.360350.194
13.	2023	Water Physicochemical Factors and Oxidative Stress Physiology in Fish: A Review	Soumya V. Menon, Avnish Kumar, Sushil Kumar Middh	Frontiers in Environmental Science	9	10.3389/fenvs.2023.1240813
14.	2023	Predicting the Effect on Land Values After Introducing High-Speed Rail	Annie Srivastava, Shilpi Lavania & Swati Mohapatra	Transportation Energy and dynamic	9	doi.org/10.1007/978-981-99-2150-8_8
15.	2023	Effects of Electromagnetic Radiations Emitted from Cell Phone Towers on Avifaunal Diversity in urban landscape	Atul Sharma, Meera Singh, Mani Gahlaut, Mukesh Kumar	Ecology, Environment and Conservation	1	10.53550/EE.C.2023.v29i03s.059

		of Aligarh region, India				
16.	2023	Biocomposites: Prospects and Manifold Applications for Human and Environmental Sustainability	Dr. Shilpi Lavania	ECS Journal of Solid State Science and Technology	21	10.1149/2162-8777/acbe17
17.	2023	Temporal and Spati- al Variations of Satellite-Based Aerosol Optical Depths, Angstrom Exponent, Single Scattering Albedo, and Ultravi- olet-Aerosol Index over Five Polluted and Less- Polluted Cities of Northern India: Impact of Urbanization and C limate Change	Gautam A.	Aerosol Science and Engineering	38	10.1007/s418 10-022- 00168-z
18.	2022	Variations in Black Carbon and Particulate Matter During Firecracker Bursting Episodes and Biomass Burning	Ajay Taneja	Journal of Air Pollution and Health	2.1	10.18502/japh .v7i4.11383

19.	2022	Progress in Absorption of Environmental Carbon Dioxide Using Nanoparticles and Membrane Technology	Jaiswar G.; Dabas N.; Chaudhary S.; Jain V.P.	International Journal of Environmental Science and Technology	13	doi.org/10.1007/s13762-022-04526-9
20.	2022	A Systematic Review on Long Term Variation of Carbonaceous Aerosols in Pm2.5 at Different Sites of “Delhi” Capital City of India	Bhupendra Swarup Sharma, Astha Tomar	International Journal of Current Science Research and Review	5	https://doi.org/10.47191/ijcssr/V5-i11-08
21.	2022	Revisiting the Atmospheric Particles: Connecting Lines and Changing Paradigms	Tanya Tripathi, Akshay Kale, Prabal G. Satsangi, Ajay Taneja	Science of the Total Environment	6	https://doi.org/10.1016/j.scitotenv.2022.156676

13.2 Low Carbon energy Use-

Dr. Bhimrao Ambedkar University is committed to lowering greenhouse gas emissions and fostering sustainable energy practices in its institution, taking into consideration all of the Sustainable Development Goal (SDG) 13. The University has installed renewable energy systems, including rooftop solar photovoltaic (PV) panels, to generate clean electricity and reduce dependence on conventional fossil fuel-based power. Energy-efficient technologies such as LED lighting, occupancy sensors have been implemented in academic buildings, laboratories, administrative offices, libraries to minimise electricity consumption. The campus

also promotes sustainable energy management through regular energy audits, preventive maintenance of electrical systems, and continuous monitoring of energy consumption. Smart energy management practices help identify opportunities for reducing wastage and improving operational efficiency. To further reduce its carbon impact, the University supports sustainable transportation by offering electric vehicle mobility on campus. Awareness events, workshops, and campaigns are held on a monthly basis to educate students, teachers, and staff about energy saving methods and the necessity of decreasing carbon emissions.

13.2.1 Low Carbon Energy Tracking-

To integrate energy tracking into a campus, the university should first map all energy sources and major consuming areas across the campus. Smart meters and sub-meters can then be installed to collect data on electricity use from different buildings and systems such as lighting, laboratories, and hostels. This data should be connected to a central digital platform or dashboard so that energy consumption can be monitored regularly and analyzed in real time.

The university should also set a baseline for energy use, compare current performance with past records, and identify areas of high consumption. Regular energy audits, maintenance checks, and awareness programs can help reduce waste and improve efficiency. By combining monitoring, analysis, and action, the campus can track low-carbon energy use effectively and support SDG 13: Climate Action.

Energy Audit reports- Dr. Bhimrao Ambedkar University, Agra conducted a comprehensive Energy Audit (2022–23) to evaluate energy consumption patterns, identify opportunities for energy conservation, and improve overall energy efficiency across its campuses. The audit, carried out by EHS Alliance Services, assessed electricity consumption, diesel usage, DG set performance, air-conditioning systems, lighting infrastructure, fans, and other electrical equipment. Electricity consumption data from July 2022 to June 2023 were analyzed to establish an energy baseline, revealing a total annual energy consumption of 844,538 kWh, including 187,200 kWh generated through the University's Solar Photovoltaic (PV) system.

<https://dbrau.ac.in/wp-content/uploads/2024/04/Agra-UST-Energy-Audit-Report-2022-23.pdf>



CERTIFICATE

PRESENTED TO

**DR. BHIMRAO AMBEDKAR UNIVERSITY,
AGRA**

Has been assessed by EHS Alliance Services for the comprehensive study of Energy Audit on institutional working framework to fulfill the requirement of

ENERGY AUDIT

INITIATIVE CARRIED OUT BETWEEN YEAR 2020-2023

The energy-saving initiatives carried out by the institution have been verified in the report submitted and were found to be satisfactory.

The efforts taken by management and faculty towards all types of energy used in the institution and sustainability are highly appreciated and noteworthy.

SIGNATURE



28.06.2023

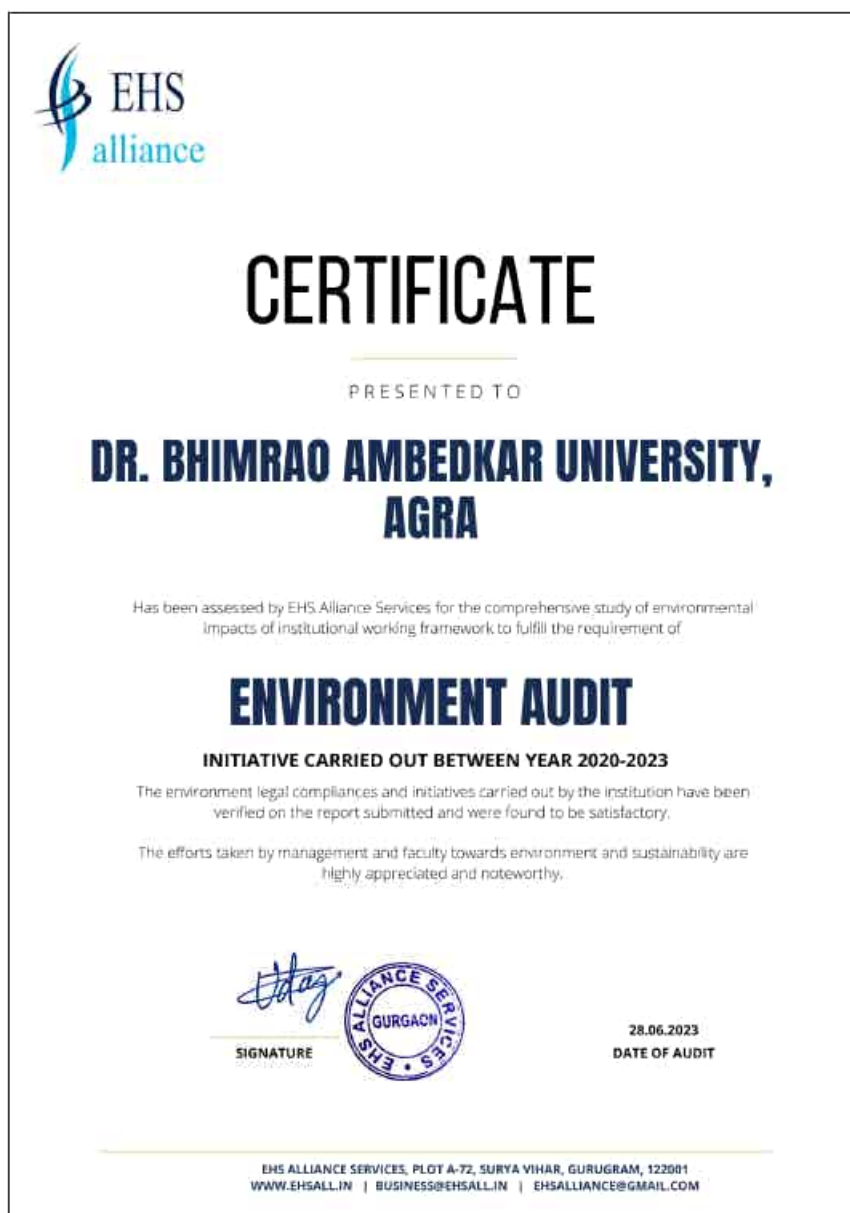
DATE OF AUDIT

EHS ALLIANCE SERVICES, PLOT A-72, SURYA VIHAR, GURUGRAM, 122001
WWW.EHSALL.IN | BUSINESS@EHSALL.IN | EHSALLIANCE@GMAIL.COM

Environment Audit reports-The audit assessed key areas including waste management, energy conservation, water and wastewater management, air quality, environmental compliance, and campus sustainability practices. It identified existing initiatives such as waste segregation, efficient use of water and electricity, green landscaping, and measures to maintain a clean and healthy campus environment. The audit also provided recommendations to further improve resource efficiency through enhanced waste recycling, increased adoption of energy-efficient technologies, regular environmental monitoring, and awareness programmes for students and staff. By implementing these recommendations, the University aims to reduce its

environmental footprint, conserve natural resources, minimize greenhouse gas emissions, and strengthen institutional resilience to climate change.

<https://dbrau.ac.in/wp-content/uploads/2024/04/Agra-UST-Environment-Audit-Report-2022-23.pdf>



Green Audit Report -The Green Audit 2022–23 of Dr. Bhimrao Ambedkar University assessed the environmental sustainability of the campus by evaluating green infrastructure, waste management, water conservation, biodiversity, carbon footprint, and eco-friendly practices. The audit highlighted the University's commitment to creating a sustainable campus through extensive green cover, tree plantation, landscape development, waste minimization, and efficient water and wastewater management. It recognized the University's initiatives in

maintaining green spaces that enhance carbon sequestration, improve air quality, and support local biodiversity. The audit also reviewed practices related to solid waste segregation, recycling, rainwater management, and environmental awareness among students and staff. Recommendations included increasing native plantation, strengthening waste recycling systems, improving carbon footprint monitoring, and expanding sustainable campus initiative

<https://dbrau.ac.in/wp-content/uploads/2024/04/Agra-UST-Green-Audit-Report-2022-23.pdf>



13.2.2 Low Carbon Energy Use-

Solar Energy- The university's commitment to sustainable development shines through its integration of solar power systems into its infrastructure. A substantial portion of the power demand is met by the energy generated through solar cells. It's imperative to minimize reliance on conventional energy sources and transition towards renewable resources. Currently, the university boasts two different capacities of solar cells, producing 60 kWh at the Khandari Campus and 70 kWh at the Challesar Campus.

University Solar Energy System



Picture - Sensor Based Energy Consumption

The university encourages students and staff to utilize bicycles, allowing them to be kept on campus premises. Additionally, battery-operated vehicles are provided for differently abled students' transportation within the campus and for transporting luggage, guests, and others. Both faculty and students predominantly use battery-powered vehicles, contributing to sustainable mobility practices. Promotion of electric vehicles (EVs), bicycles, and pedestrian-friendly infrastructure within the campus. Charging stations for EVs will be installed to encourage adoption among students and staff.

- Cleaner campus environment
 - Promotion of sustainable transport culture
-
- A photograph showing a blue and white auto-rickshaw with passengers on a paved road. In the background, there is a green gate and a white archway with text in Hindi and English. The image is part of a presentation slide with a watermark 'A CENTENARY OF ACADEMIC EXCELLENCE' and 'अंबेडकर विश्वविद्यालय'.
- अंबेडकर विश्वविद्यालय
- A CENTENARY OF ACADEMIC EXCELLENCE
- GPS Map Camera
- Agra, Uttar Pradesh, India
 6X5R+4FW, NH2, Pushpa Vihar Colony, Khandari, Agra, Uttar Pradesh 282002, India
 Lat 27.208081°
 Long 77.991517°
 10/04/24 12:39 PM GMT +05:30

Pic- Battery power Vehicle Bill

The University promotes the use of bicycles as an environmentally friendly and sustainable mode of transportation to support the achievement of Sustainable Development Goal.



Pic- Student using Bicycle



Pedestrian Friendly Pathways

Campus being mostly vehicle-free, students and staff enjoy the convenience of walking along pedestrian- friendly pathways. Moreover, covered and tiled pathways enhance the walking experience for students and faculty, further promoting a pedestrian-friendly environment



Pic- Student walking on pathway

Landscaping with Trees

The university's landscaping is visually captivating, reflecting a keen aesthetic sense, with well-maintained lawns and trees providing shade and enhancing the ambiance. The university boasts a diverse landscape comprising old, middle-aged, and young trees, along with herbs and shrubs, all meticulously maintained by skilled personnel.





Uses of LED lights - The University is committed to promoting sustainable campus operations by adopting energy-efficient LED lighting and solar-powered lighting systems across academic buildings





Pic- Uses of LED lights and solar light

13.3 Environmental Education Measures

The university integrates climate-related topics into relevant courses and programmes, including environmental studies, engineering, management, and social sciences. This includes modules on climate science, carbon footprint reduction, renewable energy, sustainable campus practices, and climate-resilient infrastructure. Faculty members are encouraged to embed case studies, local climate issues, and practical projects so that students can connect theory with real-world challenges.

13.3.1 Local Education Programmes on climate

Integration of Sustainability into the Curriculum

The university incorporates environmental sustainability and climate change topics into undergraduate, postgraduate programmes across multiple disciplines. Courses include subjects such as climate change, renewable energy, environmental engineering, sustainable development, biodiversity conservation, waste management, environmental law, green technologies, and carbon management. Interdisciplinary learning enables students from diverse academic backgrounds to understand the environmental, social, and economic dimensions of climate action.

Program Name	UG/PG	Course Title	Course Description
B.E	UG	Environmental and Ecology	The course introduces the concepts of biodiversity, ecosystem structure and

			function, natural resource management, environmental pollution, climate change, ecological conservation, and sustainable development
B.sc	UG	Environmental Science	<p>The aim of the UG course is to build fundamental knowledge, a about fundamentals of ecology and ecosystems Biodiversity and conservation</p> <p>Environmental chemistry and pollution (air, water, soil, noise)</p> <p>Natural resource management (water, forests, land, energy)</p> <p>basic laboratory analysis</p>
M.sc	PG	Environmental Science	<p>PG programme provides advanced and specialized training in Environmental Science, Environmental impact assessment (EIA) and risk assessment, Climate change science, adaptation, and mitigation strategies</p>
Phd	PG	Environmental Science	<p>The Department of Environmental Science, under the School of Life Sciences, offers a Ph.D. in Environmental Science to promote advanced research in environmental protection, climate change, pollution control, and sustainable development, Biodiversity Conservation, Waste Management and Wastewater Treatment.</p>
Diploma	UG	Sustainable Development	<p>understanding of sustainability principles and practical skills to address social, economic, and environmental challenges.</p>

M.A	PG	Disaster Management	Disaster Management designed to prepare students for disaster risk reduction, emergency planning, climate resilience, and sustainable development. The programme provides both theoretical knowledge and practical skills for managing natural and human-induced disasters
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Activities:

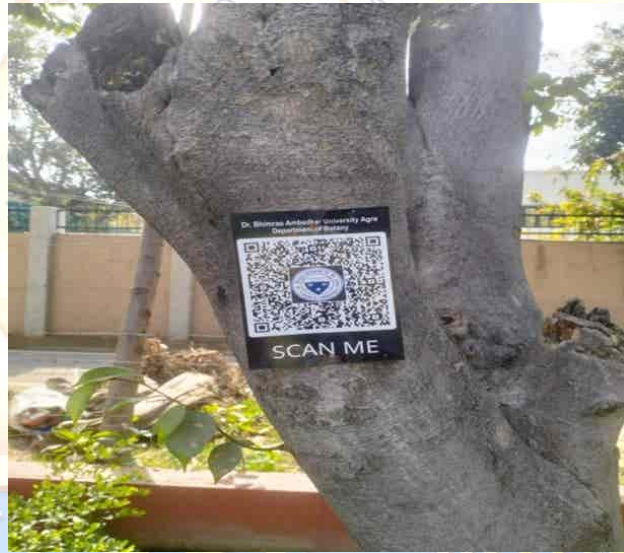
Student Participation and Green Campus Initiatives

Students actively participate in environmental activities through Eco Clubs, NSS, NCC, Youth Red Cross, and other student organisations. Activities include:

- Campus cleanliness campaigns
- Plastic-free campus initiatives
- Waste segregation programmes
- Bicycle rallies and green transportation awareness
- Earth Day, World Environment Day, Energy Conservation Day, and Climate Action Week celebrations

Green Campus Initiative: Plantation, Conservation and Botanical Learning Enhancement- The Department of Botany, School of Life Sciences, Khandari Campus, Dr. Bhimrao Ambedkar University, Agra, undertook a Green Campus Initiative from July 2025 to February 2026 focused on plantation, biodiversity conservation, and botanical learning enhancement. As part of this initiative, M.Sc. Botany students developed designated plantation beds in Sur Udyan and the lawns of the School of Life Sciences for medicinal, aromatic, ornamental, and indigenous plant species. Under the guidance of the Hon'ble Vice Chancellor and Dean, plantation drives were organized involving students and research scholars, including planting saplings of Palash (*Butea monosperma*), the state tree. The initiative also included the transformation of campus spaces into a living repository of medicinal and aromatic plants for practical learning and research. Additionally, plant labeling and QR coding activities were undertaken to disseminate scientific information about plant species and enhance digital botanical learning. The project strengthened environmental awareness, biodiversity conservation, student responsibility, and sustainable green campus development.

- Developed plantation beds for medicinal, aromatic, ornamental, and indigenous plants.
- Successfully planted Palash (*Butea monosperma*) saplings on campus.
- Introduced plant labeling and QR coding for digital dissemination of botanical knowledge.
- Enhanced awareness regarding medicinal plant significance and environmental sustainability. Strengthened SDG-based Green Campus initiatives



वनस्पति विज्ञान विभाग में पलाश वृक्षारोपण: पर्यावरण संरक्षण की ओर विद्यार्थियों का कदम

आगरा: डॉ. भीमराव अम्बेडकर विश्वविद्यालय, स्वामी विवेकानंद परिसर स्थित वनस्पति विज्ञान विभाग में आज नव पर्यावरण छात्र-छात्राओं द्वारा राजकीय वृक्ष पलाश/शाक के 30 पौधों का सफलतापूर्वक रोपण किया गया। यह कार्यक्रम वनस्पति छात्र-छात्राओं के सामुदायिक पर्यावरणीय जवाबदाारी के संरक्षण की दिशा में एक सार्वजनिक पहल रही। इस अवसर पर विभागाध्यक्ष एवं सहायक अध्यक्ष डॉ. राजेश अग्निहोत्री के निर्देशन में व्यासपुरी विद्यार्थियों ने पौधों का रोपण किया एवं उनकी देख-रेख की जिम्मेदारी भी संभाल ली। वृक्षारोपण का उद्देश्य न केवल पौधों के प्रति भावनात्मक जुड़ाव बनाना था, बल्कि उन्हें संरक्षित कर भविष्य की पीढ़ियों के लिए एक हरित विरासत सौंपना भी था।



अज्ञातचित्त स्वभाव था, बल्कि वनस्पति विज्ञान में उनके योगदान को सम्मानित करने का भी एक प्रयास था। इस कार्यक्रम में विभाग की प्राध्यापिका डॉ. सुनि चतुर्वेदी, सोनजा चर्मा, राजजा इमिनबाज, सुनील कुमार, लक्ष्मण स्वभाव, जगदीश सहित विभाग के परास्नातक एवं शोध छात्र-छात्राएं भी सक्रिय रूप से उपस्थित रहे। सभी प्रतिभागियों ने पौधों की महत्ता को समझते हुए भविष्य में इनके संरक्षण का संकल्प लिया। यह आयोजन विद्यार्थियों के लिए पर्यावरणीय जवाबदाारी का एक प्रेरणादायक कदम, जिससे विश्वविद्यालय परिसर को अधिक हरित, स्वच्छ और समृद्ध बनाने की दिशा में प्रेरणा प्राप्त हुई।

अम्बेडकीय है कि यह सभी चीजें प्रसिद्ध आलम रोम विशेषज्ञ डॉ. निरंजन चतुर्वेदी द्वारा उनके पिताजी, प्रख्यात वनस्पतिशास्त्री स्व. डॉ. एन. एन. चतुर्वेदी की स्मृति में विभाग की प्रदान किए गए थे। यह कार्य न केवल

Pic Newspaper Clipping

2. Tree Plantation Drive

As part of the Green Campus Initiative, the Institute of Pharmacy and Paramedical Sciences, Chhalesar Campus, Dr. Bhimrao Ambedkar University, Agra, organized a Tree Plantation Drive to promote environmental sustainability and ecological conservation. The initiative focused on restoring green landscapes, enhancing biodiversity, improving air quality, and creating awareness regarding environmental protection among students and staff. Tree plantation activities contributed significantly to reducing carbon emissions, strengthening the green campus ecosystem, and supporting climate change mitigation efforts. The drive also encouraged active participation in SDG-based environmental initiatives and promoted long-term ecological responsibility within the university community.

- Promoted environmental sustainability and strengthened green campus development.
- Increased awareness regarding ecological conservation among students and staff.
- Enhanced biodiversity and improved greenery across the campus.
- Strengthened SDG-based environmental and sustainability activities on campus.





Pic- Tree plantation by Vc (Theme- Ek ped maa ke naam)

Waste Utilization for Biofuel Generation

The Department of Microbiology, School of Life Sciences, Dr. Bhimrao Ambedkar University, Agra, initiated a Green Campus Initiative on Waste Utilization for Biofuel Generation to promote the sustainable conversion of organic waste into biogas, a renewable source of energy. The initiative supports environmental protection, renewable energy production, sustainable waste management, and research-based learning for students and faculty members. The project was developed under a collaborative framework between the Department of Botany & Microbiology and M/S Garg Green Gases for industrial and research activities related to biogas production. It focuses on research, development, and optimization of microbial biogas generation processes at laboratory and pilot scale. This initiative aims to reduce environmental pollution caused by organic waste accumulation, encourage renewable energy production within the university campus, and strengthen academic-industrial collaboration while promoting eco-friendly waste management and sustainable bioenergy solutions.

Key Achievements

- Converted biodegradable waste into useful biofuel (biogas) for renewable energy generation.
- Enhanced practical exposure for students in industrial microbiology, bioenergy, and waste valorization.
- Strengthened academic-industrial collaboration with M/S Garg Green Gases.

- Contributed to SDG-based environmental sustainability and green campus development.



**MEMORANDUM OF UNDERSTANDING
(MoU)**

Between



Department of Botany & Microbiology
Dr. Bhimrao Ambedkar University,
Khandari, Agra-282001 U.P., India

&

M/S Garg Green Gases

On

Industrial and Research Collaboration



Pic- Mou with M/S Garg Green Gases.

Solid Waste Management through Source Segregation and Scientific Disposal

Dr. Bhimrao Ambedkar University, Agra follows a systematic Solid Waste Management mechanism to ensure effective waste segregation, collection, and disposal across the campus. The university has implemented a three-bin segregation system in all hostels, academic departments, and administrative blocks. Separate dustbins are provided for biodegradable waste, non-biodegradable waste, and chemical waste, enabling proper handling at the source itself. This organized segregation minimizes environmental hazards and improves waste processing efficiency. The collected solid waste is subsequently transported to the Agra Municipal Corporation for final disposal in compliance with established government regulations.

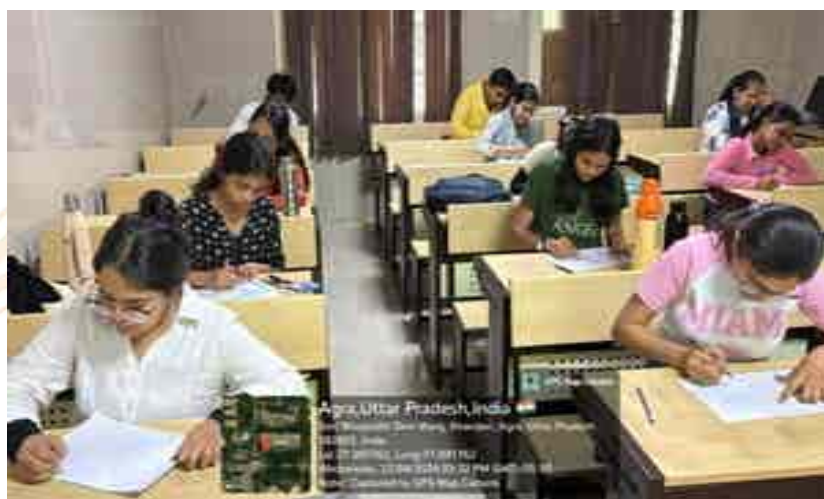


Pic- Disposal Management

Earth Day Celebration: Encouraging Sustainable Living and Environmental Stewardship

The Department of Environmental Studies, Dr. Bhimrao Ambedkar University, Agra, celebrated Earth Day on 22 April 2024 with activities focused on promoting sustainability and environmental responsibility. The celebration included two major activities: a Poster Competition and an In-House Awareness Seminar, both organized within the department premises. Students creatively presented posters on environmental themes such as climate change, deforestation, biodiversity loss, plastic pollution, and renewable energy, showcasing

scientific understanding and creativity. Faculty members and student speakers also conducted awareness sessions highlighting the significance of Earth Day, global environmental movements, and the importance of adopting eco-friendly practices. The event successfully strengthened environmental awareness, sustainability values, and scientific thinking among students.



13.3.2 Climate Action Plan, Shared

As part of its commitment to **Sustainable Development Goal 13 (Climate Action)**, the University has developed and implemented a comprehensive **Climate Action Plan** that provides a strategic framework for reducing environmental impacts, promoting climate resilience, and fostering a culture of sustainability across the campus. The University's climate policies also encourage regular monitoring of environmental performance, documentation of sustainability initiatives, and continuous improvement through measurable targets and periodic

reviews. These policies provide evidence of the institution's commitment to responsible environmental governance and accountability.



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13.3 POLICY FOR CLIMATE CHANGE FOR SUSTAINABILITY

1. Short Title and Commencement

- This Policy shall be called the 'Dr. Bhimrao Ambedkar University Policy for Climate Action for Sustainability under Sustainable Development Goal 13: Climate Action.
- This Policy shall come into force from the date of its approval by the Executive Council of Dr. Bhimrao Ambedkar University, Agra.

2. Preamble

- Dr. Bhimrao Ambedkar University (DBRAU), Agra recognizes climate change as one of the most significant global challenges affecting environmental sustainability, human health, biodiversity, agriculture, water resources, and socio-economic development.
- As a premier State University, DBRAU is committed to supporting the United Nations Sustainable Development Goal 13 (Climate Action) by integrating climate-conscious practices into teaching, research, innovation, campus operations, and community engagement.
- The University acknowledges its responsibility to promote climate resilience, reduce greenhouse gas emissions, encourage sustainable lifestyles, and prepare students and

society to address climate-related challenges through scientific knowledge, technological innovation, and responsible governance.

- This Policy provides a comprehensive framework for strengthening climate action initiatives across the University through sustainable campus management, environmental education, research, renewable energy adoption, and community participation.

3. Purpose

- The purpose of this Policy is to establish a comprehensive institutional framework for climate action by promoting sustainable environmental practices, reducing the University's carbon footprint, strengthening climate resilience, and integrating climate change mitigation and adaptation into academic, administrative, research, and outreach activities.

4. Objectives

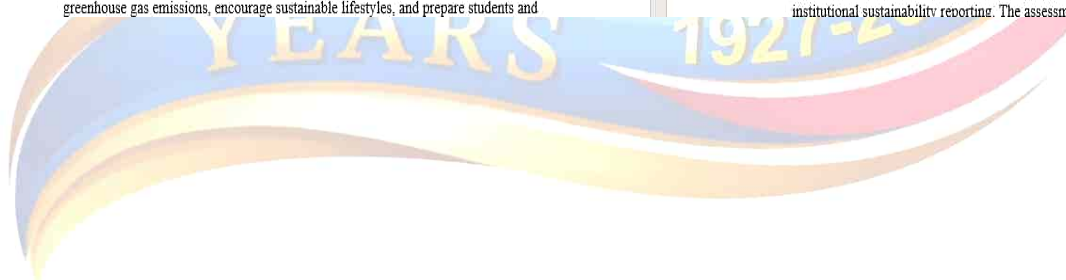
- Integrate climate change education into academic programmes and research.
- Promote energy efficiency and renewable energy.
- Reduce greenhouse gas emissions.
- Encourage water conservation, waste management, and biodiversity protection.
- Promote climate-resilient infrastructure.
- Strengthen environmental awareness.
- Encourage interdisciplinary climate research.
- Contribute towards national and global sustainability commitments.

5. Scope

- This Policy applies to all Faculties, Departments, Centres, Administrative Offices, teaching and non-teaching staff, students, researchers, University campuses, hostels, laboratories, libraries, and all academic, administrative, research, extension, and outreach activities.

6. Policy Provisions

- Sustainable Campus Development: Green infrastructure, rooftop solar, tree plantation, rainwater harvesting, climate-resilient planning.
- **University Climate Action Plan** shall be facilitated that has time-bound goals for renewable energy use, energy efficiency, carbon neutrality, and reducing emissions of greenhouse gases in line with India's climate commitments.
- The University may conduct an Annual Carbon Footprint Assessment, Climate Risk Assessment, and Resource Efficiency Assessment covering greenhouse gas emissions, energy consumption, renewable energy generation, transportation, water use, waste generation. The assessment may support evidence-based planning and institutional sustainability reporting. The assessment report may support NIRF SDG



Ranking, NAAC accreditation, THE Impact Rankings, and other national and international sustainability assessments.

- Energy and Resource Conservation: LED lighting, smart energy monitoring, water conservation, digital governance.
- Waste Management: Waste segregation, recycling, composting, e-waste management, reduction of single-use plastics.
- Climate Education and Research: Climate-focused curriculum, interdisciplinary research, innovation projects, collaborations.
- Awareness and Community Engagement: Workshops, awareness campaigns, Eco Clubs, NSS/NCC activities, observance of environmental days.
- Climate Governance: Environmental audits, sustainability reporting, climate action plans, measurable sustainability indicators.

7. Implementation and Monitoring

- Implementation shall be coordinated by the University Green Campus and Climate Action Committee under the Vice-Chancellor.
- The Committee shall include representatives from academic departments, administration, engineering section, environmental experts, NSS/NCC and students. It shall periodically monitor implementation, review progress, recommend improvements and prepare annual reports.

8. Compliance and Enforcement

- All University stakeholders shall comply with this Policy. Periodic environmental audits and sustainability assessments shall be conducted. Non-compliance shall be addressed in accordance with University rules and applicable Government regulations.

9. Expected Outcomes

- Reduced carbon footprint; improved energy efficiency; increased renewable energy adoption; enhanced environmental awareness; strengthened climate research; greener and climate-resilient campus; improved contribution towards SDG 13 and sustainability rankings.

10. Review of the Policy

- This Policy shall be reviewed every three years or earlier, if required, to ensure alignment with national policies, climate commitments, technological advancements, and international best practices.

13.3.3 Co-Operative Planning for Climate Change Disasters

Name of the activity- Mock Drill on Fire Safety

A fire safety mock drill is a simulated emergency exercise conducted to practice evacuation procedures and test firefighting readiness. The activity involves triggering a fire alarm, evacuating the building via designated escape routes, gathering at a safe assembly point, and participating in live fire extinguisher demonstrations. A 250 no of student participated in this activity.



आपातकालीन स्थिति से बचाव और उपचार की हुई माकड़िल

जम्मू संसदसभा, आगरा: अगर भूकंप आ जाए तो कैसे बचा जाए? आपातकालीन स्थिति या दुर्घटना से बचाव और उपचार की माकड़िल डा. भीमराव आंबेडकर विश्वविद्यालय के दैनिकीय उपचार्य ग्राम्य विकास संस्थान पर हुई। दुर्घटना से बचने एवं आपात स्थिति से निपटने के लिए सुरक्षितमक दृष्टिकोण से आपदा प्रबंधन के छात्रों द्वारा आयोजित भूकंप एवं अग्नि जागरूकता शिविर का आयोजन किया गया। शिविर में आपातकालीन स्थिति से निपटने एवं सुरक्षा की जानकारी प्रदान की गई।

माकड़िल का शुभारंभ प्रति कृतापति प्रो. अजय तनेजा ने किया। उन्होंने बताया कि प्राकृतिक एवं मानव निर्मित आपदाओं को



विश्वविद्यालय के दैनिकीय उपचार्य ग्राम्य विकास संस्थान द्वारा आयोजित माकड़िल में प्रशिक्षण लेते विद्यार्थी • टैकडिल से दिखे

प्रशिक्षण एवं अभ्यास के माध्यम से उनके प्रभाव को कम किया जा सकता है। संस्थान के प्रभारी डा. मनोज कुमार सिंह ने कहा कि संस्थान में संचालित आपदा प्रबंधन के छात्रों को उच्च शिक्षण एवं ट्रेनिंग मुहैया कराई जा रही है। उन्होंने बताया कि

संस्थान के छात्र की पढ़ा में जित्त आपदा प्रबंधन विशेषज्ञ के पद पर नौकरी लगी है। माकड़िल का आयोजन डा. आरुण मंगल व डा. अश्वि सिंह के निर्देशन में किया गया। माकड़िल में संस्थान के 51 छात्रों ने सहभागिता की।

Pic- Headline of training

The University organized an Environmental Awareness Rally to educate students and the local community about environmental conservation and climate action. Participants carried placards and spread messages on tree plantation, waste reduction, plastic-free living, water conservation, and sustainable lifestyles. The rally promoted public awareness on protecting natural resources and encouraged active participation in environmental stewardship, contributing to the achievement of SDG 13: Climate Action.





Pic- Environment Awareness Rally

13.3.4 Inform and Support Government

The University actively collaborates with national institutions and government agencies to strengthen disaster preparedness, climate resilience, and sustainable development in alignment with **Sustainable Development Goal 13: Climate Action**. As part of this commitment, **Dr. Bhimrao Ambedkar University, Agra**, in collaboration with the **National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India**, organized a **Training Programme on "Disaster Risk Reduction in Rural Context"** from **3–5 January 2023**.

The programme was designed to enhance institutional capacity for disaster risk reduction by equipping participants with the knowledge and practical skills required to address climate-induced disasters and build resilient communities. The training focused on disaster preparedness, climate adaptation strategies, rural infrastructure resilience, disaster management planning, emergency response mechanisms, and community-based disaster risk reduction. It also emphasized the integration of disaster risk reduction into development planning to minimize the impacts of climate-related hazards.



Dear Prof Pathak,

National Institute of Disaster Management (NIDM) is a statutory body of Government of India dedicated for capacity building for disaster risk mitigation and management. The Institute has taken several initiatives in the past which have helped its partner Institutes and state governments in achieving their objective of disaster risk reduction.

2. NIDM proposes to conduct a training programme on "Disaster Risk Reduction in Rural Context" from January 3-5, 2023 in collaboration with Deen Dayal Upadhyay Institute of Rural Development (DDU IRD), Dr. Bhimrao Ambedkar University, Agra at Agra. The Programme intends to sensitize, promote and institutionalize issues concerning disaster safe rural development/disaster risk reduction among the stakeholders. The Programme will also sensitize the participants on various issues like formulation of disaster management plan, etc.
3. The target group for this programme would be state government officials engaged in management of rural development programmes/schemes, development and maintenance of infrastructure in rural areas and university/college teachers involved in teaching disaster risk reduction/management and related subjects. In addition, few officers from administration who are directly involved in handling disaster management/reduction programmes at state level may also be requested to join the programme. You are requested to facilitate the nominations of the participants for this programme. The nominations received may please be shared with NIDM.
4. DDU IRD, Agra University will make all administrative arrangements for the programme, including the boarding and lodging arrangements for the outstation participants, NIDM faculty and local resource persons, etc. Expenses of the NIDM faculty involved with the Programme including local travel, etc., will be borne by the host organization.
5. As per the norms, NIDM will provide an all-inclusive grant of Rs. 2000/- (including boarding and lodging) per day per participant for all off-campus programmes or on actual basis, whichever is less. In case, where lodging is not required by the participants, a course fee of Rs. 1000/- (including boarding) per day per participant or on actual basis, whichever is less will be paid. The financial grant will be released on submission of statement of actual expenditure, training programme report and final list of participants on completion of the training programme.
6. Please feel free to communicate with Dr. Amir Ali Khan, NIDM Faculty Coordinator of the course (email: amir.nidm@nic.in), in case more information/clarifications are needed.

With regards,

Yours sincerely,

Taj Hassan
(Taj Hassan)

Prof. Vinay Kumar Pathak
Vice Chancellor,
Dr. Bhimrao Ambedkar University,
Paliwal Park, Agra (U.P.) 282004
Email: vc@dbrau.org.in

आपदा प्रबंधन महाविचार: पूरा भारत भागीदार

फोन / Ph: +91-11-20873401, • ई मेल / E-mail: ed.nidm@nic.in, • वेब साईट / Website: www.nidm.gov.in

Pic- Letter from NIDM

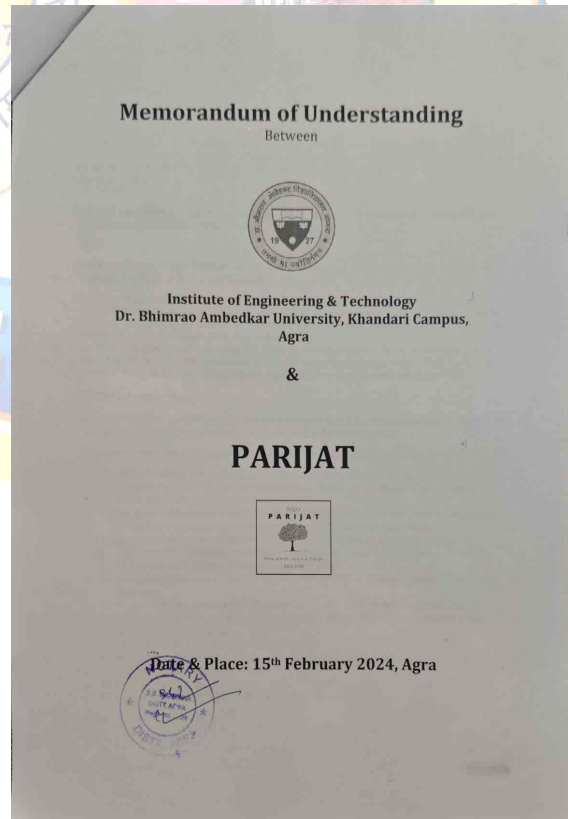
13.3.5 Environmental Education Collaboration with NGO

Dr. Bhimrao Ambedkar universities plays a significant role in achieving these objectives is through collaboration with Non-Governmental Organizations (NGOs) Such partnerships provide valuable opportunities to combine academic knowledge with practical expertise,

enabling students, faculty, and local communities to engage in meaningful climate action. In addition to educational activities, university–NGO partnerships often facilitate community outreach programmes, tree plantation drives, cleanliness campaigns, plastic-free initiatives, biodiversity surveys, environmental awareness rallies, and citizen science projects.



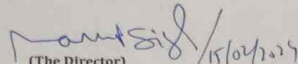
Dr. Bhimrao Ambedkar University, Agra has received the **"Best Clean & Green Campus Award (2022–2023)"** from **Parijat**, and you mentioned that the University has a Memorandum of Understanding (MoU) with this NGO. The collaboration aims to strengthen environmental education by integrating sustainability practices into academic activities, campus initiatives, and community outreach programmes. Through this partnership, the University organizes awareness campaigns, plantation drives, clean-campus initiatives, waste management programmes, and environmental education activities that encourage students, faculty, and staff to adopt environmentally responsible behaviour.



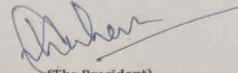
Pic- Mou With PARIJAT

In case, there is a dispute relating to any aspect of collaboration, Institute of Engineering & Technology (Dr.Bhimrao Ambedkar University) Khandari Campus, Agra and PARIJAT will jointly resolve the dispute in a spirit of independence, mutual respect, and shared responsibility. Both parties agree that they will welcome the establishment of this Memorandum for cooperation and jointly agree to the provisions as set out above.

As a witness to their consent to this agreement, the appropriate authorities hereunto provide their signatures.


(The Director)

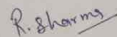
Institute of Engineering & Technology
(Dr. Bhimrao Ambedkar University)
Khandari Campus, Agra


(The President)

PARIJAT, Agra



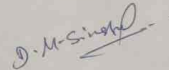
In the presence of witnesses:



1. Dr. Rekha Sharma

NSS Coordinator, IET

Institute of Engineering & Technology (Dr.Bhimrao Ambedkar University)
Khandari Campus, Agra



Dr. Dheeraj Mohan Singhal

Secretary, Parijat



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ATTESTED
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S.S. SIKARWAR
NOTARY, AGRA

YEARS

1927-2021

EXCELLENCE
AGRA •

13.4.1 Commitment to carbon neutral university year(2026-2031)

Vision

To transform the University into a carbon-neutral and climate-resilient campus by reducing greenhouse gas (GHG) emissions, increasing renewable energy use, improving resource efficiency, and fostering a culture of sustainability through education, research, and community engagement.

Mission

The University is committed to integrating climate action into governance, teaching, research, infrastructure, and campus operations while achieving measurable reductions in its carbon footprint in alignment with the United Nations Sustainable Development Goal (SDG) 13 – Climate Action.

Implementation Approach (2026–2031)

DBRAU will follow a structured pathway, consistent with best-practice frameworks and its existing energy audit and Green Clean Campus.

1. **Establish** a core carbon team and governance structure (2026).
2. **Identify and measure** all significant direct and indirect sources of CO₂ and other GHG emissions on campus, updating the 2025 baseline inventory with complete, accurate data.
3. **Prioritise** abatement opportunities based on potential, cost-effectiveness, and feasibility (“easy wins” first, then systemic changes).
4. **Reduce** emissions through:
 - **Energy efficiency:** LED retrofits, HVAC optimisation, building automation, sub-metering, and behavioural campaigns.
 - **Renewable energy:** Scaling rooftop solar and other clean energy sources for lighting and other campus needs, building on existing plans to switch to solar energy.
 - **Electrification and mobility:** Transition of campus fleet to EVs, promotion of e-shuttles, cycling, and walking; rationalisation of generator .
 - **Sustainable procurement and waste:** 3Rs (Reduce, Reuse, Recycle), systematic paper and e-waste recycling, plastic-free campus enforcement, and exploration of waste-to-biofuel and composting .
 - **Food and land use:** Low-carbon menu options in canteens, scientific recycling of organic waste, biodiversity conservation, and enhancement of campus green cover (building on existing tree inventory).

5. **Offset** any remaining emissions with high-quality, verified credits or on-campus carbon sinks (afforestation, urban greening), only after maximising reductions.
6. **Document and validate** progress and achievements in line with recognised carbon-neutrality standards and third-party verification where available.
7. **Sustain** carbon neutrality through ongoing monitoring, periodic target updates (every two years), and continuous improvement.

Governance and accountability

To operationalise this commitment, the University will:

- **Establish a Carbon Neutrality Cell / Climate Action Committee** comprising senior leadership, facilities, finance, academics, student representatives, and external experts.
- **Approve a Carbon Neutrality Roadmap** with clear interim milestones, responsibilities, and resource allocations for energy, buildings, transport, procurement, food, waste, and land use.
- **Embed climate KPIs** into performance frameworks for relevant units and link progress to institutional reporting and accreditation processes where appropriate.
- **Publish an annual Carbon Neutrality Report**, including inventory results, progress against targets, key initiatives, challenges, and plans for the coming year.

Policy for clean energy



Dr. Bhimrao Ambedkar University, Agra
Formerly Agra University, Agra
(A+ Grade NAAC Accredited)

POLICY FOR AFFORDABLE AND CLEAN ENERGY

1. Short Title and Commencement

- This policy shall be entitled as the Policy for Affordable and Clean Energy of Dr. Bhimrao Ambedkar University, Agra.
- It shall come into force from the date of its approval by the Executive Council of the University.
- The policy shall apply to all University campuses, academic and administrative departments, hostels, residential facilities, research centres, affiliated institutions, and all stakeholders associated with the University.

2. Preamble

Dr. Bhimrao Ambedkar University (DBRAU), Agra, recognized as a NAAC Grade A+ institution with a rich history of academic excellence, acknowledges its pivotal role in combating climate change and fostering sustainable environments. Aligned with India's National Education Policy (NEP-2020) and the United Nations 2030 Agenda, this policy establishes a framework to transition DBRAU into a carbon-neutral campus model.

Through the optimized utilization of clean energy, state-of-the-art infrastructure upgrades, robust research, and community-driven awareness, DBRAU commits to realizing **SDG 7: Affordable and Clean Energy** across all its campuses.

3. Objectives

- **Energy Transition:** Increase the share of renewable solar and bio-energy in the university's total final energy consumption mix.
- **Energy Efficiency:** Reduce overall primary energy footprint through automated and smart building systems.
- **Curricular & Research Integration:** Encourage academic breakthroughs, industrial partnerships, and experiential learning in green energy domains.
- **Community Responsibility:** Educate neighboring communities in the Agra and Braj regions on accessible, clean energy conservation models.

4. Scope

- This policy applies to all campuses, academic departments, administrative offices, hostels, laboratories, research centres, residential facilities, and affiliated institutions of the University.
- It covers energy generation, consumption, conservation, renewable energy adoption, sustainable infrastructure, research, outreach, and campus operations.
- The policy adheres to students, faculty, staff, contractors, vendors, visitors, and all other stakeholders associated with the University.

5. Policy Provisions

Expansion of Renewable Energy Sources

- **Solar PV Infrastructure Expansion:** DBRAU shall systematically upgrade its existing grid-connected solar power infrastructure to scale up campus energy independence.
- **Biofuel and Waste-to-Energy:** The campus will install its *Waste Utilization for Biofuel Generation* facilities. Biodegradable wet waste from campus canteens and hostels must be systematically diverted to micro-biogas generation plants.

- **Green E-Mobility Support:** Establish dedicated solar-powered e-cycle and e-vehicle charging stations featuring off-grid battery storage to secure 24/7 reliability.
- **Solar-Powered Smart Building Initiative** - The University may develop solar-powered smart buildings in a phased manner by installing solar panels with Battery Energy Storage Systems (BESS) on roofs of selective buildings like Libraries, administrative buildings, or any departmental buildings. Successful pilot projects can be expanded in a phased manner to create a sustainable and energy-efficient campus.
- **Renewable Energy Targets and Net-Zero Roadmap** - The policy may define time-bound renewable energy targets and develop a phased Net-Zero campus roadmap with measurable milestones for increasing renewable energy adoption and reducing institutional carbon emissions.

Energy Conservation & Efficiency Measures

- **100% LED Transition:** The university mandates a complete phased replacement of all conventional fixtures. All administrative buildings, laboratories, lecture theatres, and streetlights must exclusively utilize high-efficiency LED lights and low-radiation appliances.
- **Campus Energy Management System** -To monitor electricity consumption across buildings in real time. The system can identify high-energy consumption areas, optimize resource utilization, and support data-driven energy management.
- **Sensor-Based Automation:** New and existing infrastructural installations will integrate automated motion sensors, timer-based switches, and localized cut-off grids to minimize idle electricity drain.
- **Green Audits:** DBRAU will mandate an institutional **Annual Energy and Green Audit** conducted by certified third-party bodies to mathematically map energy intensity per square meter and implement continuous improvements.

Academics, Research, and Innovation

[Infrastructural Wing] [Academic & Research] [Community Outreach]
(Heads of Departments) (NSS / Coordinator)

Key Performance Indicators (KPIs) for Review:

1. **Total Solar Generation Contribution:** Share of solar-generated units vs. total commercial grid draw.
2. **Carbon Offset Metric:** Equivalent metric tons of CO_2 reduced annually via clean practices.
3. **Lumen-per-Watt Efficiency:** The replacement percentage rate tracking the progress toward a 100% LED campus environment.
4. **Annual Energy Audit and Carbon Performance Report** -An Annual Energy Audit & Carbon Performance Report, which will include information such as renewable energy production, electricity usage, reductions in carbon emissions, energy savings, research findings, and future sustainability goals, may be issued by the University.

7. Expected Outcomes

- Strengthened adoption of renewable and clean energy across all University campuses.
- Increased energy efficiency and reduction in overall electricity consumption.
- Reduced institutional carbon emissions and progress towards a Net-Zero campus.
- Enhanced research, innovation, and industry collaboration in clean energy technologies.
- Greater awareness and participation of students, faculty, staff, and the community in sustainable energy practices.
- Strengthened contribution of the University towards achieving SDG 7 – Affordable and Clean Energy and other sustainability goals.

8. Review Mechanism

- **Credit-Based Curriculum Integration:** Capitalizing on the university's existing three-credit course framework on green practices, DBRAU will systematically update its syllabi to integrate technical specifications of renewable systems, carbon accounting, and energy laws.
- **Student Research, Innovation and Demonstration Projects** Interdisciplinary research and innovation projects related to renewable energy, energy storage, solar energy possibilities, hydrogen energy, electric vehicles, AI-based energy management systems, and carbon-neutral campuses may be encouraged at the University level.

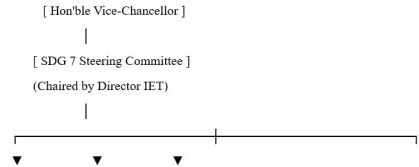
Some selected projects can then be undertaken as pilot projects on campus demonstrating the innovative technology, generating patents, and facilitating industry interaction.

Sustainable Campus Operations & Mobility

- **Restricted Automobile Entry:** Private fossil-fuel combustion vehicles shall face strict restriction guidelines inside core campus boundaries to manage structural carbon loads.
- **Promoting Passive Transport:** The university will actively provide and encourage the deployment of shared campus bicycles and battery-operated shuttle carts for internal mobility among staff, students, and visitors.

6. Implementation, Monitoring, and Governance Structure

To systematically oversee the metrics of this policy, a dedicated **DBRAU SDG 7 Steering Committee** shall be constituted:



This policy document shall remain active from the date of its syndicate approval and will undergo structural reviews every **three year** to seamlessly align with newer mandates issued by the Bureau of Indian Standards (BIS), Ministry of New and Renewable Energy (MNRE), and the United Nations Global Compact targets.

End of document ■