



**Dr. Babasaheb Ambedkar Marathwada University,
Aurangabad (MS) - 431004**

Environment and Energy Usage Policy

1. Purpose and Scope

1.1 Purpose

The purpose of this policy is to establish a comprehensive framework for the management of environmental and energy resources at Dr. Babasaheb Ambedkar Marathwada University (DR. BAMU), Aurangabad. This document outlines the university's commitment to enhancing green coverage, extensive fruit plantations, water conservation, rainwater harvesting, utilization of solar energy, energy efficiency, air quality monitoring, and waste management. It aims to foster a culture of sustainability, ensuring that environmental stewardship is integrated into all aspects of university operations and community life. By adhering to these guidelines, DR. BAMU seeks to minimize its environmental impact, promote the well-being of its community, and contribute to broader sustainability goals.

1.2 Scope

This policy applies to all activities within the campus boundaries of DR. BAMU, encompassing academic, administrative, and residential functions. It covers all students, faculty, staff, contractors, and visitors involved in university operations. The policy addresses the management of natural resources, energy consumption, waste, and emissions, providing a framework for sustainable development and environmental conservation across the university. It is intended to guide decision-making, promote best practices, and ensure compliance with relevant environmental regulations and standards.

2. Green Coverage in University Campus

2.1 Policy Statement

DR. BAMU is dedicated to increasing and maintaining green spaces across its campus to support biodiversity, reduce carbon footprints, and enhance the aesthetic and environmental quality of the campus. Green coverage plays a crucial role in mitigating the effects of climate change, providing habitat for wildlife, and creating a healthy environment for students, staff, and the wider community. The university aims to establish and preserve extensive green areas, including parks, gardens, and tree-lined avenues, to promote ecological balance and environmental sustainability.



2.2 Implementation Strategies

Tree Planting and Maintenance:

The university will conduct regular tree planting drives to enhance green coverage. Efforts will be focused on planting native and climate-resilient species to ensure long-term sustainability. The maintenance of existing trees and green areas will be a priority, with regular pruning, watering, and pest control measures in place to ensure their health and vitality.

Biodiversity Initiatives:

The university will develop green corridors and conservation areas to support local wildlife and biodiversity. These initiatives will include the creation of habitats for birds, insects, and other native species. The university will collaborate with environmental organizations and experts to implement biodiversity conservation projects and promote ecological research.

Community Engagement:

The university will actively engage students, faculty, and staff in green initiatives through educational programs, workshops, and volunteer opportunities. Green practices will be integrated into academic and extracurricular activities to foster a culture of environmental responsibility and stewardship within the campus community.

2.3 Monitoring and Evaluation

The university will perform annual surveys to assess green coverage and track progress towards green space expansion goals. Geographic Information System (GIS) technology will be utilized to map and monitor green areas, ensuring accurate data collection and analysis. Regular assessments will help identify areas for improvement and guide future planning efforts.

3. Extensive Fruit Plantations and Augmentation of Present Fruit Gardens

3.1 Policy Statement

The university is committed to promoting extensive fruit plantations on campus to support biodiversity, provide educational opportunities, and contribute to food sustainability. The university aims to establish a variety of fruit-bearing trees, including mango, custard apple, and sapota, which will enhance the green landscape and provide fresh produce for the campus community. The maintenance and expansion of existing fruit gardens will be prioritized to ensure their long-term productivity and ecological value.





3.2 Implementation Strategies

Planting and Maintenance:

The university will expand current fruit gardens and establish new orchards with a diverse range of fruit trees. Sustainable farming practices, such as the use of organic fertilizers and pest control methods, will be employed to maintain the health of fruit trees and optimize yield. Regular monitoring and maintenance will ensure the sustainability and productivity of fruit plantations.

Educational Integration:

Fruit plantations will be integrated into academic programs to provide hands-on learning opportunities for students in agriculture, horticulture, and environmental science. The university will use harvested fruits for campus consumption, distribution, and educational purposes, promoting food sustainability and healthy eating habits.

Sustainability Practices:

DR. BAMU will promote the use of organic and sustainable farming practices in the maintenance of fruit trees. This will include the use of compost, natural pest control, and water-efficient irrigation methods. The university will also engage in community outreach programs to share best practices in sustainable agriculture and fruit cultivation.

3.3 Monitoring and Evaluation

The university will maintain a database of fruit tree species, health status, and yield to track the progress and success of fruit plantations. Regular reviews will be conducted to assess the sustainability of fruit gardens and identify opportunities for improvement. Feedback from students, faculty, and staff will be used to guide future initiatives and ensure the continued success of fruit cultivation efforts.

4. Creation, Augmentation, and Maintenance of Water Conservation Sites in Campus

4.1 Policy Statement

DR. BAMU is dedicated to the creation, augmentation, and maintenance of water conservation sites to ensure sustainable water use and management. The university recognizes the importance of water conservation in maintaining a healthy ecosystem and supporting the needs of the campus community. Efforts will be made to develop and maintain water bodies such as ponds, reservoirs, and artificial lakes to collect and store rainwater, promote groundwater recharge, and provide recreational and educational opportunities.



4.2 Implementation Strategies

Development of Water Bodies:

DR. BAMU will construct and maintain water bodies across the campus to serve as water conservation sites. These water bodies will be designed to collect and store rainwater, promote groundwater recharge, and support local wildlife. The university will also utilize water bodies for academic and recreational purposes, providing opportunities for research, education, and outdoor activities.

Efficient Water Use:

The university will install drip and sprinkler irrigation systems to minimize water waste and ensure efficient water use in landscaping and gardening. Water-saving practices, such as the use of native plants and xeriscaping, will be promoted to reduce water demand and support sustainable water management.

Infrastructure Maintenance:

Regular inspections and maintenance of water conservation infrastructure will be conducted to ensure their functionality and efficiency. The university will engage in community awareness programs to promote water conservation practices and encourage responsible water use among students, faculty, and staff.

4.3 Monitoring and Evaluation

DR. BAMU will track water usage and savings from water conservation projects to assess their effectiveness and identify areas for improvement. Annual audits will be conducted to evaluate the impact of water conservation initiatives and guide future planning efforts. The university will also collect feedback from the campus community to inform water management strategies and ensure the sustainability of water resources.

5. Rain-Water Recharge of Borewells/Aquifers

5.1 Policy Statement

DR. BAMU is committed to implementing rainwater recharge systems to replenish borewells and aquifers, supporting sustainable groundwater management. The university recognizes the importance of maintaining healthy groundwater levels to ensure a reliable water supply and promote environmental sustainability. Efforts will be made to capture and store rainwater for groundwater recharge, reducing dependence on external water sources and enhancing water security.



5.2 Implementation Strategies

Installation and Maintenance:

The university will set up rainwater collection systems to recharge borewells and aquifers. These systems will be designed to capture rainwater from rooftops, paved areas, and other surfaces, directing it into recharge wells and aquifers. Regular maintenance and cleaning of recharge systems will be conducted to ensure their efficiency and longevity.

Awareness Programs:

DR. BAMU will educate the campus community on the importance of groundwater recharge and promote best practices for rainwater harvesting. Workshops, seminars, and awareness campaigns will be conducted to inform students, faculty, and staff about the benefits of rainwater recharge and encourage participation in related initiatives.

Sustainability Initiatives:

The university will collaborate with local authorities and environmental organizations to develop and implement groundwater management projects. Policies will be put in place to reduce the over-extraction of groundwater and promote sustainable water use practices across the campus.

5.3 Monitoring and Evaluation

DR. BAMU will monitor groundwater levels and recharge rates to assess the impact of rainwater recharge systems. Regular evaluations will be conducted to identify areas for improvement and ensure the effectiveness of recharge initiatives. The university will also track the volume of rainwater collected and recharged, using this data to guide future water management strategies.

6. Rain Water Harvesting at Various Points in Campus

6.1 Policy Statement

DR. BAMU is committed to establishing rainwater harvesting systems at multiple points across the campus to efficiently capture and utilize rainwater. The university recognizes the importance of rainwater harvesting in promoting water conservation, reducing runoff, and supporting sustainable water management. Efforts will be made to implement rainwater harvesting systems in buildings, gardens, and other areas to collect rainwater for various uses, including irrigation, landscaping, and non-potable purposes.





6.2 Implementation Strategies

System Installation:

The university will install rainwater harvesting systems in strategic locations across the campus, including rooftops, paved areas, and open spaces. These systems will be designed to capture and store rainwater, which can then be used for irrigation, landscaping, and other non-potable applications. Efforts will be made to expand rainwater harvesting infrastructure to maximize water collection and utilization.

Maintenance and Upkeep:

Regular maintenance and cleaning of rainwater harvesting systems will be conducted to ensure their functionality and efficiency. The university will develop guidelines for the proper use and maintenance of rainwater harvesting systems, providing training and resources to support campus-wide adoption and sustainability.

Community Engagement:

DR. BAMU will engage the campus community in rainwater harvesting initiatives through educational programs, workshops, and volunteer opportunities. The university will promote the benefits of rainwater harvesting and encourage students, faculty, and staff to participate in and support related projects.

6.3 Monitoring and Evaluation

The university will track the amount of rainwater collected and used through rainwater harvesting systems to assess their effectiveness and impact. Regular audits will be conducted to evaluate the performance of rainwater harvesting infrastructure and identify opportunities for improvement. Feedback from the campus community will be used to inform future rainwater management strategies and ensure the continued success of rainwater harvesting initiatives.

7. Augmentation of Solar Driven Borewells Units

7.1 Policy Statement

DR. BAMU is committed to enhancing the use of solar energy to power borewells, supporting sustainable water management and reducing reliance on conventional energy sources. The university recognizes the environmental and economic benefits of using solar energy, including the reduction of greenhouse gas emissions and energy costs. Efforts will be made to install and maintain solar-powered borewell systems across the campus, promoting the use of renewable energy and contributing to broader sustainability goals.



7.2 Implementation Strategies

Solar Borewell Installation:

The university will expand the number of solar-powered borewells on campus, prioritizing areas with high water demand and solar energy potential. These systems will be designed to provide a reliable and sustainable water supply for irrigation, landscaping, and other non-potable uses. Efforts will be made to ensure the efficient operation and maintenance of solar-powered borewells.

Energy Efficiency:

DR. BAMU will implement measures to optimize the energy efficiency of solar-powered borewells, including the use of advanced technologies and best practices for water and energy management. The university will promote the benefits of solar energy and encourage the adoption of renewable energy technologies across campus.

Sustainability Education:

The university will educate the campus community on the benefits of solar energy and the importance of sustainable water management. Workshops, seminars, and awareness campaigns will be conducted to promote the use of solar energy and encourage participation in related initiatives.

7.3 Monitoring and Evaluation

DR. BAMU will monitor the performance and impact of solar-powered borewells to assess their effectiveness and sustainability. Regular evaluations will be conducted to identify areas for improvement and ensure the continued success of solar energy initiatives. The university will track energy savings, water usage, and environmental benefits associated with solar-powered borewells, using this data to guide future planning efforts.

8. Use of Energy Efficient Lights Throughout Campus and Implementation of Sensor Driven Energy Resources

8.1 Policy Statement

DR. BAMU is dedicated to enhancing energy efficiency across campus through the use of energy-efficient lighting and sensor-driven energy management systems. The university recognizes the importance of reducing energy consumption and greenhouse gas emissions to support environmental sustainability and reduce operational costs. Efforts will be made to install and maintain energy-efficient lighting systems, including LED and SMD lights, and to implement sensor-driven energy management technologies to optimize energy use.





8.2 Implementation Strategies

Energy-Efficient Lighting:

The university will replace conventional lighting systems with energy-efficient alternatives, including LED and SMD lights, across campus buildings, pathways, and outdoor areas. Efforts will be made to ensure the proper installation, maintenance, and operation of energy-efficient lighting systems, promoting sustainable energy use and reducing energy costs.

Sensor-Driven Energy Management:

DR. BAMU will implement sensor-driven energy management systems to optimize energy use and reduce waste. These systems will include motion sensors, occupancy sensors, and daylight sensors to automatically control lighting and other energy-consuming devices based on occupancy and ambient light levels. The university will promote the adoption of smart energy management technologies to enhance energy efficiency and sustainability.

Energy Awareness Programs:

The university will educate the campus community on the importance of energy efficiency and the benefits of energy-efficient lighting and sensor-driven technologies. Workshops, seminars, and awareness campaigns will be conducted to promote energy conservation practices and encourage participation in related initiatives.

8.3 Monitoring and Evaluation

DR. BAMU will monitor energy consumption and savings associated with the use of energy-efficient lighting and sensor-driven energy management systems. Regular audits will be conducted to evaluate the performance and impact of energy efficiency initiatives, identify areas for improvement, and guide future planning efforts. The university will track energy savings, cost reductions, and environmental benefits associated with energy-efficient lighting and sensor-driven technologies, using this data to inform energy management strategies and ensure the continued success of energy efficiency initiatives.

9. Monitoring of Air Quality Index of the Campus

9.1 Policy Statement

DR. BAMU is committed to monitoring and improving air quality on campus to promote a healthy and sustainable environment for students, faculty, staff, and visitors. The university recognizes the importance of maintaining good air quality to support the health and well-being of the campus community and to minimize the environmental impact of university operations. Efforts will be made to regularly monitor air quality and implement measures to reduce air pollution and enhance air quality on campus.





9.2 Implementation Strategies

Air Quality Monitoring:

The university will establish an air quality monitoring network to regularly measure and report air quality parameters, including particulate matter (PM_{2.5} and PM₁₀), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide (CO), and ozone (O₃). Efforts will be made to ensure the accuracy and reliability of air quality monitoring systems and to provide timely information on air quality conditions to the campus community.

Pollution Reduction Measures:

DR. BAMU will implement measures to reduce air pollution from university operations, including the use of clean energy sources, the promotion of sustainable transportation options, and the adoption of green building practices. The university will also engage in tree planting and greening initiatives to enhance air quality and support environmental sustainability.

Awareness and Education:

The university will educate the campus community on the importance of air quality and the actions that can be taken to improve it. Workshops, seminars, and awareness campaigns will be conducted to promote air quality improvement practices and encourage participation in related initiatives.

9.3 Monitoring and Evaluation

DR. BAMU will track air quality data and trends to assess the impact of air quality improvement initiatives and identify areas for further action. Regular evaluations will be conducted to ensure the effectiveness of air quality monitoring systems and to guide future air quality management strategies. The university will report on air quality conditions and improvement efforts, providing transparency and accountability in its commitment to maintaining a healthy and sustainable campus environment.

10. Waste Management Initiatives and Mechanisms (Solid, Liquid, Biological, e-Waste)

10.1 Policy Statement

DR. BAMU is committed to implementing effective waste management practices to minimize waste generation, promote recycling and reuse, and ensure the safe and sustainable disposal of waste. The university recognizes the importance of responsible waste management in protecting the environment, conserving resources, and supporting a healthy campus community. Efforts will be made to establish and maintain comprehensive waste management systems for solid, liquid, biological, and e-waste, promoting sustainability and compliance with environmental regulations.



10.2 Implementation Strategies

Solid Waste Management:

The university will establish and maintain systems for the collection, segregation, and recycling of solid waste, including paper, plastics, metals, and organic waste. Efforts will be made to promote waste reduction and recycling practices across campus, including the use of composting systems for organic waste and recycling facilities for paper, plastics, and metals.

Liquid Waste Management:

DR. BAMU will implement systems for the collection, treatment, and disposal of liquid waste, including wastewater and chemical waste. The university will establish wastewater treatment facilities and promote the use of sustainable practices for the management and disposal of liquid waste, ensuring compliance with environmental regulations and standards.

Biological Waste Management:

The university will establish systems for the safe and sustainable management of biological waste, including waste from laboratories, medical facilities, and research activities. Efforts will be made to promote the proper handling, segregation, and disposal of biological waste, ensuring compliance with safety and environmental regulations.

e-Waste Management:

DR. BAMU will establish systems for the collection, recycling, and disposal of electronic waste, including computers, mobile phones, and other electronic devices. The university will promote the responsible use and disposal of electronic devices, supporting e-waste recycling initiatives and ensuring compliance with environmental regulations.

Sustainable Practices:

The university will promote sustainable waste management practices across campus, including the use of reusable products, the reduction of single-use plastics, and the adoption of zero-waste initiatives. Efforts will be made to engage the campus community in waste reduction and recycling programs, promoting a culture of sustainability and environmental responsibility.

10.3 Monitoring and Evaluation

DR. BAMU will track waste generation and disposal data to assess the effectiveness of waste management initiatives and identify areas for improvement. Regular audits will be conducted to evaluate the performance and impact of waste management systems, ensuring compliance with environmental regulations and standards. The university will report on waste management activities and achievements, providing transparency and accountability in its commitment to responsible waste management.





11. Roles and Responsibilities

11.1 Environmental Committee

The Environmental Committee will oversee the implementation of the environmental and energy policy, coordinating with various departments and external organizations to ensure effective policy execution. The committee will develop and maintain policies, procedures, and guidelines for environmental and energy management, ensuring compliance with environmental regulations and standards.

11.2 Campus Sustainability Office

The Campus Sustainability Office will support the implementation of environmental and energy initiatives, providing resources, training, and support to departments and units across campus. The office will monitor and report on progress towards sustainability goals, coordinating with the Environmental Committee and other stakeholders to ensure the success of environmental and energy initiatives.

11.3 Departments and Units

Departments and units across campus will be responsible for implementing and complying with the environmental and energy policy, integrating sustainability practices into their operations and activities. They will work with the Environmental Committee and Campus Sustainability Office to identify opportunities for improvement and support the achievement of sustainability goals.

11.4 Students, Faculty, and Staff

All students, faculty, and staff will be responsible for supporting and adhering to the environmental and energy policy, participating in sustainability initiatives and promoting responsible environmental practices. They will engage in educational and awareness activities to support the university's commitment to environmental stewardship and sustainability.

12. Review and Revision

12.1 Review Process

This policy will be reviewed annually by the Environmental Committee to assess its effectiveness and identify opportunities for improvement. Feedback from the campus community and external stakeholders will be used to inform the review process and ensure the continued relevance and effectiveness of the policy.

12.2 Revision and Update

The policy will be updated as necessary to reflect changes in environmental regulations, standards, and best practices. The Environmental Committee will be responsible for coordinating the revision process, ensuring that the policy remains current and effective in supporting the university's environmental and energy goals.





13. Approval and Implementation

13.1 Approval

This policy document has been reviewed and approved and an implementation plan will be developed to guide the execution of the policy, including timelines, responsibilities, and resources required for successful implementation. The Environmental Committee and Campus Sustainability Office will coordinate the implementation plan, ensuring that all aspects of the policy are effectively executed and supported.

This document outlines the comprehensive approach of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad towards environmental and energy management, ensuring a sustainable and healthy campus environment for future generations.