MINGACHEVIR STATE UNIVERSITY

POLICY DOCUMENT

CLIMATE CHANGE MITIGATION POLICY

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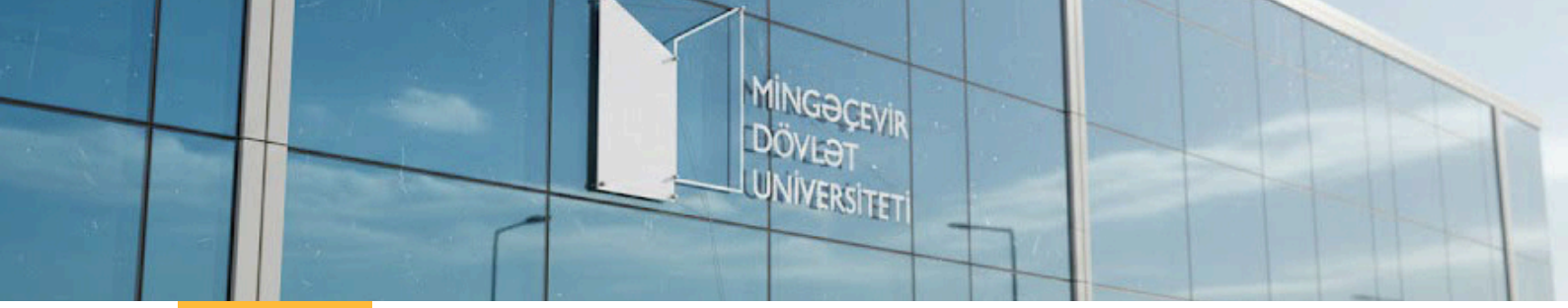

01 Document Information

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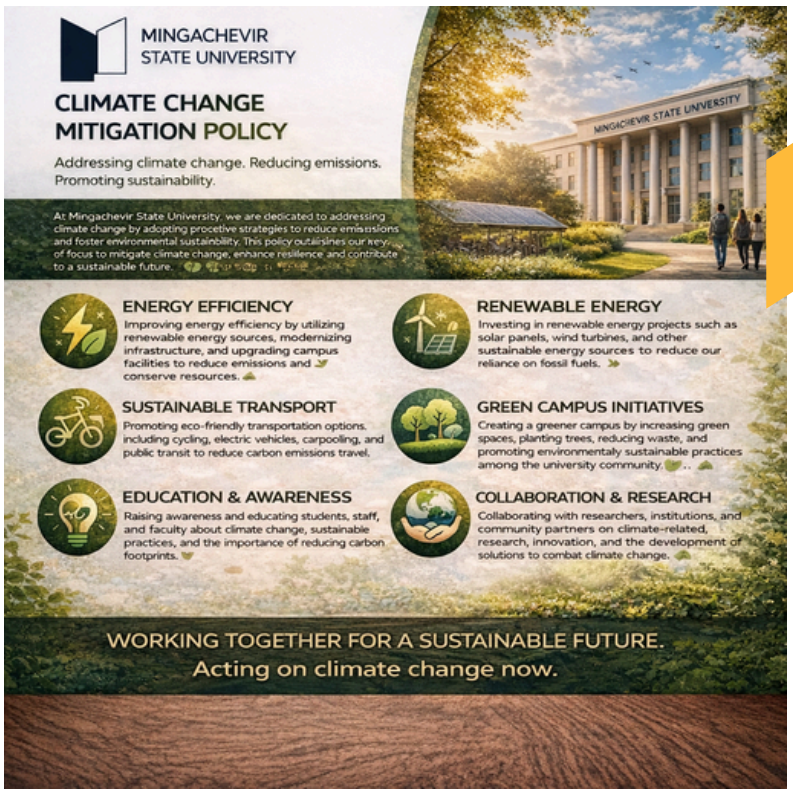
02 Purpose:



The primary purpose of this Policy document is to establish a comprehensive, structured, and evidence-based framework for systematically managing and minimizing the environmental impacts arising from the academic, administrative, and operational activities of Mingachevir State University. The policy seeks not only to ensure regulatory compliance but also to position the University as a proactive institutional leader in environmental stewardship. In alignment with the targets defined in the institutional "Climate Action Plan," the document sets out a clear legal and strategic pathway toward achieving full carbon neutrality by 2030, integrating sustainability principles into all levels of decision-making and governance.

In accordance with the commitments outlined in the Paris Agreement, particularly the global objective of limiting temperature increase to 1.5°C above pre-industrial levels, the University establishes an institutionalized system for the accurate measurement, continuous monitoring, and progressive reduction of greenhouse gas emissions. This includes the development of internal carbon accounting mechanisms, periodic environmental audits, and the adoption of innovative technologies aimed at reducing the carbon footprint of campus infrastructure and operations.

A core objective of the policy is to leverage the University's scientific and laboratory capabilities to ensure precise quantification of carbon dioxide and oxygen dynamics, thereby supporting data-driven environmental management. The document further emphasizes the assessment and utilization of renewable energy potential within the campus, promoting the transition toward clean energy sources such as solar and other sustainable alternatives. Through the implementation of a resource-efficient "Net Zero" model, the University aims to optimize energy consumption, reduce waste, and enhance overall environmental performance.

03 Introduction

In the modern era, global climate change represents not only an environmental concern but also a profound socio-economic challenge that directly affects the long-term sustainability and resilience of societies worldwide. The accelerating impacts of climate change—ranging from rising temperatures and resource scarcity to increased environmental risks—require coordinated and transformative action across all sectors. In this context, the global target of limiting temperature rise to 1.5°C, as established by the Paris Agreement, necessitates comprehensive and systemic changes in the operational models of both public and private institutions. Universities, as centers of knowledge creation, innovation, and societal influence, bear a particular responsibility in advancing climate action and sustainable development.

Mingachevir State University, as a leading higher education institution in the region, recognizes its critical role in addressing climate challenges and promoting environmental sustainability. The University adopts a proactive and strategic approach to environmental protection, positioning itself not only as an educational institution but also as a driver of ecological awareness, scientific solutions, and community engagement. This commitment reflects an understanding that universities must act as role models in integrating sustainability principles into governance, teaching, research, and daily operations.

As an integral component of the University's central management philosophy, this policy document serves as a comprehensive framework guiding the reduction of carbon emissions, the transition toward renewable energy sources, and the establishment of efficient and responsible natural resource management systems both within and beyond the MSU campus. The document goes beyond technical and administrative measures by embedding sustainability into institutional culture and strategic planning. It supports the development of a low-carbon campus model through energy efficiency, waste reduction, sustainable procurement, and environmentally responsible infrastructure management.

04 Key Definitions

Climate Change Mitigation: Climate change mitigation refers to the totality of preventive strategic interventions implemented by the university in the global fight against warming. This process involves reducing greenhouse gas emissions at their source—phasing out fossil fuels—while enhancing natural carbon sequestration through expanded green areas and increased photosynthesis.

Net Zero Target: The Net Zero state represents the establishment of an absolute mathematical equilibrium between the volume of emissions generated during the university's operations and the measures implemented to neutralize those emissions. Distinct from achieving absolute zero emissions, this concept follows the principle of removing residual emissions that cannot be technically avoided through carbon offsets and innovative technologies.

Carbon Footprint and Measurement: The carbon footprint is the key sustainability metric that reflects total greenhouse gas emissions—direct and indirect—from the university's activities, expressed in equivalent, including energy use, transportation, and waste.

Circular Economy Model: A sustainable approach that replaces the "take-make-dispose" model by maximizing resource efficiency, promoting reuse and recycling, and extending product life cycles to reduce costs and emissions.

Renewable Energy and Energy Efficiency: The two key pillars of a low-carbon campus—renewable energy uses clean sources like solar and wind, while energy efficiency reduces consumption through technology and responsible use, lowering overall environmental impact.

05 Scope of application

The climate change mitigation policy at Mingachevir State University is not limited to theoretical obligations; it encompasses broad application areas covering all structural divisions and operational directions of the university. The first primary area where the policy is applied is the university's physical infrastructure and energy management, which includes increasing the energy efficiency of buildings, modernizing heat-insulation systems, and integrating renewable energy sources into the campus environment. In the second important application area, the transportation and logistics department, efforts are made to align service vehicles with environmental standards, promote emission-free movement within the campus (bicycle and pedestrian paths), and transform the mobility habits of staff based on green principles to reduce the university's carbon footprint.

The teaching and scientific-research field constitutes the intellectual center of the policy’s implementation; here, the subject of climate change is synchronized into the curricula of all faculties, and innovative research on determining the amount of atmospheric gases is conducted in laboratory conditions. Furthermore, in the field of resource management, the policy ensures the implementation of "zero waste" and "paperless university" models, the economical use of water resources, and preference for environmentally friendly products in procurement processes. Finally, within the scope of social and public application, the preservation of biodiversity on the university territory, the execution of large-scale greening projects such as the "Student Forest," and the implementation of climate awareness programs for the regional community are considered integral parts of this policy. Thus, the climate change mitigation policy unites both the technical-economic and the scientific-academic environments of MSU on a single platform of sustainable development.

06 Core Principles

Environmental Responsibility and Ethical Behavior

The University prioritizes the principle of minimal environmental impact in all its administrative, economic, and academic activities. This principle entails that every employee and student adheres to ecological ethics in their daily decisions, maintains a "custodian" attitude toward resources, and prioritizes the needs of future generations.

Scientific Evidence–Based Approach

Every step taken within the framework of climate action, including emission reduction targets and technological transition decisions, must be based on scientific research, laboratory measurements, and internationally accepted methodologies (e.g., IPCC standards).

Innovation and Modernization

In the fight against climate change, the University prioritizes innovative technologies over traditional methods. The modernization of buildings, the implementation of renewable energy sources, and the transition to digital management systems reflect the university's principle of being open to technological innovations.

Transparency and Public Accountability

All indicators related to the implementation of the climate policy, especially annual reports on energy consumption and carbon emissions, must be open to the public. By honestly declaring the environmental impact of its activities, the University maintains the principle of full accountability to both the local community and international partners.

Inclusivity and Collective Effort

The success of the climate action plan depends on the joint participation of the entire university community (leadership, faculty, students, and technical staff). MSU applies the principle of inclusive management by taking into account the opinions of student organizations and volunteers in the decision-making process.

Alignment with Sustainable Development Goals

All climate initiatives of the university must be carried out synchronously with the UN Sustainable Development Goals (SDGs) and Azerbaijan’s national environmental priorities. Each project should contribute to global sustainability targets and promote international cooperation in this direction.

07 Strategic Objectives

Ensuring Carbon Neutrality (Scope 1 & 2): The university's primary strategic priority is to achieve full "Net Zero" status by 2030 by progressively reducing greenhouse gas emissions arising from direct operations and energy consumption. Within this framework, priority is given to scientific methodologies for emission prevention, the technological replacement of outdated systems, and the overall minimization of the carbon load.

Transition to Renewable Energy and Efficiency: MSU aims to increase the share of renewable energy in the campus infrastructure by installing solar panels and evaluating the potential of other clean energy sources.

Circular Economy and Digital Transformation: Applying the "Zero Waste" philosophy, the university integrates digitalization to minimize paper consumption and establishes systems for sorting plastic and other solid waste at the source.

Green Campus and Biodiversity Expansion: The university plans to expand green belts within its territory by promoting the planting of climate-resilient tree and plant species (such as the "Student Forest" project).

Strengthening Scientific Innovations in Climate Science: A key strategic goal is to intensify research on the scientific determination of carbon and oxygen levels utilizing the university's laboratory capabilities. By organizing international climate conferences and supporting the publication of high-impact scientific articles, MSU leads the development of climate science and innovation within the region.

08 Key Performance Indicators (KPIs)

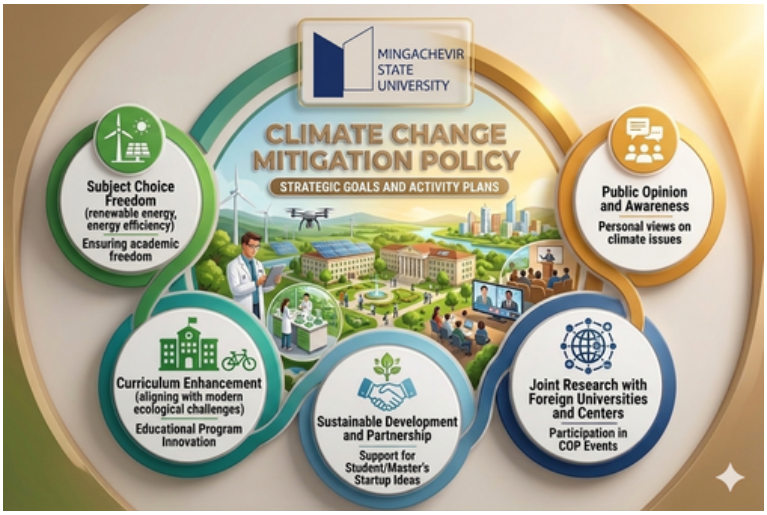
Objective	Indicator (KPI)	Baseline (2023)	Target (2027)	Timeline	Responsible Unit
Reduction of carbon emissions	Percentage reduction of total greenhouse gas emissions	100% (Current level)	60% (Net Zero)	2024-2027	Department of Natural Sciences
Ensuring energy transition	Share of renewable sources (solar, etc.) in consumed energy	5%	40%	2024-2027	Maintenance Department
Greening of transportation	Share of electric/hybrid vehicles in the university's transport fleet	0%	50%	2024-2027	Maintenance Department
Paperless university model	Percentage reduction in paper consumption through digitalization	100%	70% reduction	2024-2027	Digital Development and IT Center
Waste management	Share of waste sent for recycling in total waste	10%	40%	2024-2027	Maintenance Department / SDG Club

09 Implementation Mechanism

The practical application of the Climate Change Mitigation Policy is based on the coordinated activities of the university's structural divisions and a phased implementation plan. The implementation process begins primarily with the establishment of the "Working Group on the Climate Action Plan" and the integration of specific "Green Targets" into the university's annual operational programs. The foundation of the mechanism consists of regular scientific measurement of carbon and other greenhouse gas emissions using the university's existing laboratory infrastructure and the creation of a corresponding database.

The implementation process is grouped into four main directions: modernization of infrastructure (LED lighting, solar panels, thermal insulation), optimization of transportation (electric vehicle charging stations and bicycle lanes), resource saving through digital transformation, and large-scale greening measures. Each division develops internal instructions that promote technological updates and behavioral changes to achieve the KPIs defined in its strategic plan.

To ensure the financial sustainability of the implementation mechanism, the university leadership utilizes both internal budget funds and international "green grant" projects. At the same time, the results obtained and the technical difficulties encountered during the implementation process are regularly discussed in the academic environment, and necessary adjustments are made to the "Roadmap" to increase the effectiveness of the policy. This mechanism intends to transform not only the administrative but also the scientific potential of MSU into a unified climate solution model.



10 Governance and Responsibilities

Structure / Role	Responsibilities
University Leadership (Rector's Office)	Defines the overall strategic directions of the policy and ensures the allocation of necessary financial and technical resources to achieve **"Net Zero"** targets. The Rector's Office approves annual reports on climate action and leads the signing of international partnership agreements.
Sustainability Committee	The main coordinating body directly responsible for the implementation of the policy. The working group analyzes emission indicators, regulates inter-departmental cooperation, proposes adjustments in cases of deviation from strategic targets, and manages the public relations strategy.
Environmental Research and and Climate Change Center	Forms the scientific-methodological basis of the policy. Utilizing the university's laboratory capabilities, the center determines the amounts of carbon and oxygen gases, prepares comparative characteristics, and proposes innovative scientific solutions for emission reduction.
Facilities Department	Responsible for the energy efficiency of university buildings, as well as the installation and maintenance of renewable energy systems (solar panels, etc.). The department also ensures the practical implementation of waste sorting and greening measures within the campus.
Research and Innovation Department	Responsible for promoting scientific research on climate change, organizing conferences in this field, and supporting green startup projects of the faculty and student community.
Student Organizations and SDG Club	Responsible for conducting awareness-raising activities among the student community, organizing voluntary environmental actions (e.g., the "Student Forest"), and instilling resource-saving habits at an individual level.
Quality Assurance and Accreditation Department	Verifies the compliance of climate action indicators with international ranking standards (e.g., THE Impact Rankings) and monitors the transparency of the accountability process.

11 Monitoring and Evaluation

A continuous monitoring and evaluation system is implemented at Mingachevir State University to track the implementation status of the Climate Change Mitigation Policy and ensure the achievement of the defined strategic targets. This system is based on the regular measurement of carbon and other greenhouse gas emissions into the atmosphere through the university's scientific laboratories and a comparative analysis with the indicators of previous years (baseline).

Within the framework of the monitoring process, data on energy consumption, water usage, paper consumption, and waste volume are collected on a quarterly basis and entered into a central database. In the evaluation phase, these collected digital evidences are compared with the established KPIs (Key Performance Indicators), and the degree of deviation from the targets is analyzed using scientific methodologies.

The annual "Climate Report," prepared based on the monitoring results, is submitted to the University's Scientific Council and, in accordance with the principles of transparency, is publicly disclosed on the official "sustainable.mdu.edu.az" portal. This process ensures not only the recording of achievements but also the identification of risks and technical challenges arising during climate action, allowing for necessary corrections to be made in the "Roadmap." Thus, the monitoring and evaluation mechanism transforms MSU's progress toward the 2030 "Net Zero" target into a dynamic and managed process based on scientific evidence.

12 Stakeholder Engagement

Mingachevir State University implements its climate change mitigation policy not only through internal resources but also through a wide range of local and international partnership networks. The university considers climate action a collective responsibility and applies the following partnership models in this process:

- Cooperation with State and Municipal Authorities: MSU works closely with the Mingachevir City Executive Power, the Ministry of Ecology and Natural Resources, and other government agencies to improve the environmental condition of Mingachevir and support the "Green City" concept. Within this partnership, regional tree-planting campaigns, urban waste management programs, and joint environmental monitoring are carried out.
- Industry and Private Sector Partnerships: "Experiential learning partnerships" are established with industrial enterprises and energy companies interested in climate change. This collaboration involves testing renewable energy technologies on campus, conducting energy efficiency audits, and organizing internships in the "green economy" field for students in real work environments.
- International Organizations and Networks: To achieve global climate goals, the university expands its relations with international green funds, climate centers, and global networks such as the Sustainable Development Solutions Network (SDSN). International partners provide support for the transfer of innovative climate technologies, the attraction of foreign grants, and the alignment of MSU's climate indicators with international ranking systems (e.g., THE Impact Rankings).
- Civil Society and Academic Networks: Joint scientific conferences, forums, and educational seminars on climate change are organized with local NGOs, environmental clubs, and other universities. Through these partnerships, MSU ensures a synergy of academic and social resources in solving the environmental problems of the region.
- Student and Alumni Community: Students act not only as subjects of the policy but also as active partners. The SDG Club and student volunteer organizations are considered key executive partners in spreading the university's green initiatives across campus and increasing environmental literacy among the local population.

13 Alignment with Sustainable Development Goals

SDG 13: Climate Action – Core focus on emissions reduction, scientific measurement of gases, and achieving climate resilience by 2030.

SDG 7: Affordable and Clean Energy – Direct implementation of renewable energy through solar panel integration and campus-wide energy efficiency.

SDG 4: Quality Education – Integration of climate science into curricula to ensure ecological literacy and practical research skills for future generations.

14 Evidence and Reporting

Mingachevir State University considers the official documentation, scientific evidence-basing, and public accessibility of every activity carried out toward climate change mitigation as the cornerstone of its policy. This accountability mechanism is primarily based on empirical data obtained through the university's laboratory infrastructure; thus, regular scientific measurements conducted on the amount of carbon and oxygen gases in the atmosphere form the most important evidence base regarding emission reduction. Digital indicators obtained before and after each technological innovation and infrastructural change are archived as comparative characteristics, showcasing the real results of the university's climate action.

To ensure transparency, all these statistical indicators - including annual energy savings, carbon footprint dynamics, and recycling reports - are presented to the public in real-time on the university's official "sustainable.mdu.edu.az" portal.

The accountability process is also fully aligned with international audit standards and the criteria of global ranking systems such as "THE Impact Rankings," which allows for the verification of the presented evidence by external experts and facilitates the international confirmation of the university's "Green University" status. On the academic level, scientific articles published on climate change, conference materials, and innovative green projects by students are accepted as intellectual evidence of the successful implementation of the policy. Thus, MSU's evidence and accountability system serves as a complex mechanism that ensures not only the disclosure of figures but also the full scientific, administrative, and social validation of the university's commitment to its environmental obligations.