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Developed within M100 HUB

CLIMATE CITY CONTRACT

M100
Mirror Mission
Cities Hub Romania

Inspired by the EU Mission for Climate-Neutral and Smart Cities
Aligned with the NetZeroCities approach

Buzău
oraș deschis
open city

Primaria
Municipiului
Buzău

2035

CLIMATE CITY CONTRACT

Buzău Municipality

DISCLAIMER

This document, which was developed through the Mirror Mission Cities Hub Romania, draws inspiration, both in its structure and content, from the methodology developed by the European Commission for elaborating the documents pertaining to the Climate City Contracts (the Climate Neutrality Action Plan, Investment Plan and Commitments) for the 112 cities which officially participate in the EU Mission for Climate-Neutral and Smart Cities.

By aligning the M100 Climate City Contract with the model set forth by the European Commission, we aim to ensure that this document is in line with European strategic priorities and directives regarding the transition towards climate neutrality.

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ACRONYMS

- **AFOLU** Agriculture, Forestry and Other Land Use
- **BMS** Building Management System
- **CCS** Carbon Capture and Storage
- **CNAP** Climate Neutrality Action Plan
- **CO_2** Carbon Dioxide
- **DSO** Distribution System Operator
- **EEA** European Economic Area
- **ESCO** Energy Service Company
- **EU** European Union
- **GHG** Greenhouse Gas
- **GIS** Geographic Information System
- **GPC** Global Protocol for Community-Scale Greenhouse Gas Emission Inventories
- **GPS** Global Positioning System
- **HVAC** Heating, Ventilation, and Air Conditioning
- **ICT** Information and Communication Technology
- **IoT** Internet of Things
- **IPCC** Intergovernmental Panel on Climate Change
- **IPPU** Industrial Processes and Product Use
- **ITS** Intelligent Transport Systems
- **JTF** Just Transition Fund
- **kWh / MWh** Kilowatt-hour / Megawatt-hour
- **LIFE** EU LIFE Programme for Environment and Climate Action
- **LULUCF** Land Use, Land-Use Change and Forestry (related to AFOLU)
- **MaaS** Mobility as a Service
- **nZEB** Nearly Zero-Energy Building
- **NEB** New European Bauhaus
- **NGO** Non-Governmental Organization
- **NRRP** National Recovery and Resilience Plan
- **PIEE** Program for Improving Energy Efficiency
- **RER** Regional Ecological Waste Management Company)
- **RRF** Recovery and Resilience Facility
- **SBMP** Smart Building Management Platform
- **SECAP** Sustainable Energy and Climate Action Plan
- **IUDS** Integrated Urban Development Strategy
- **SUMP** Sustainable Urban Mobility Plan

I. COMMITMENTS

FORMAL AMBITION

Briefly present (in 2-3 pages) the following aspects:

- **The local climate neutrality context, highlighting the strategic directions adopted at the local level.**
- **The significance and / or opportunities associated with developing this Climate Neutrality Action Plan, particularly in relation to the relevant European strategic priorities.**
- **The vision (and / or goal and / or objectives) and targets officially endorsed by the Climate Neutrality Action Plan for achieving climate neutrality, highlighting the planned reductions in CO2 emissions.**
- **The key priorities delineated within the Climate Neutrality Action Plan.**
- **The overall direct impact expected from implementing the interventions outlined in the Action Plan, together with the total estimated budget.**
- **The local administrations should also commit to adhering to high architectural standards for the public projects, particularly for those with significant community or environmental impact.**

Cities across the globe are evolving amidst a context defined by profound climatic transformations, which exert increasingly deep impacts on both the environment and society. Over the past five decades, the global urban population has quadrupled, coinciding with a 1.2°C increase in average land surface temperature relative to pre-industrial levels. This global warming has intensified the frequency and severity of extreme weather events—including violent storms, prolonged droughts, floods, and heatwaves—whose effects are further amplified in urban settings due to the urban heat island effect. Rising sea levels also threaten coastal infrastructure and housing.

Greenhouse gas emissions resulting from urban activities continue to rise, compounding the negative effects on the global climate system. This trend highlights **the critical role that cities must play in deploying innovative solutions and fostering collaboration with local communities and decision-makers to reduce carbon footprints and build climate resilience**.

In Europe, although cities occupy merely 4% of the EU's land area, they are home to approximately 75% of its population and are responsible for over 70% of CO_2 emissions. This disproportionate impact positions urban centers as both vulnerable hotspots and essential actors in mitigation and adaptation strategies. Factors such as dense construction, heat-retaining surfaces, limited green infrastructure, and industrial activities increase cities' exposure to climate extremes—especially heatwaves.

In this global and regional landscape, cities are not only among the most acutely affected by climate change, but they also hold the greatest potential to implement effective measures to combat it. Through sustainable policies, green infrastructure, and a transition toward more resilient and environmentally friendly urban models, cities can lead the way in climate action.

The decision of Buzău Municipality to join the path toward climate neutrality demonstrates, on one hand, the local administration's growing commitment to engage—together with stakeholders and civil society—in a robust and inclusive climate transition. On the other hand, it highlights the enthusiastic support of the city's broader ecosystem, which, in collaboration with the Municipality, has co-developed a compelling portfolio of climate neutrality actions, carefully accounting for both barriers and opportunities.

The City of Buzău has formally committed to achieving climate neutrality by 2035—an ambitious goal supported by a strategic framework aimed at reducing greenhouse gas emissions and enhancing sustainability across multiple sectors. The city aspires to become climate-neutral by 2035, transforming into an attractive and competitive urban environment—a true "MAGNET CITY" for its residents, investors, and visitors alike.

BUZĂU – MAGNET CITY is committed to evolving into a modern European city and a driving force for sustainable development, aligning itself with European mechanisms, principles, and growth models. This includes fostering competitiveness in economically viable sectors, attracting investment and skilled labor from surrounding regions, and ultimately contributing to improved quality of life and the integrated, smart, sustainable, and competitive development of the city—with climate neutrality by 2035 at its core.

The Climate Neutrality Action Plan has been developed in accordance with the methodology of the **"100 Climate-Neutral and Smart Cities by 2030" Mission** and is fully integrated with the city's key strategic documents. These include:

- ✓ the **Sustainable Energy and Climate Action Plan (SECAP) 2021–2027**,
- ✓ the **Energy Efficiency Improvement Program (PIEE)**,
- ✓ the **Circular Economy Transition Strategy 2020–2030**,
- ✓ the conceptual development model **Smart–Green–Circular Buzău**,
- ✓ the **Smart City Strategy**,
- ✓ the **Integrated Urban Development Strategy (SIDU) 2021–2027**, and
- ✓ the **Sustainable Urban Mobility Plan (SUMP) 2021–2027**.

Together, these ensure alignment with European standards and provide a unified framework for transformative action.

Developing a Climate Neutrality Action Plan presents numerous **opportunities**, particularly when aligned with strategic European priorities. The European Union has set ambitious targets through the **European Green Deal**, which aims to make Europe the world's first climate-neutral continent by 2050.

The implementation of the Climate Neutrality Action Plan unlocks a wide array of opportunities, particularly when aligned with the strategic priorities of the European Union. These include:

➤ **Access to European Funding:**

- **Just Transition Fund (JTF):** Supports regions and communities most affected by the transition toward climate neutrality.
- **LIFE Programme:** Finances environmental and climate-related projects with high replicability and impact potential.

- **InvestEU and the Recovery and Resilience Facility (RRF):** Provide substantial financial support for green investments and digital transformation.
- **Horizon Europe:** Promotes research and innovation in green technologies and sustainable urban solutions.

➤ Growth of the Green Economy and Job Creation:

- Accelerating the deployment of **renewable energy sources** (solar, wind, hydro) and promoting **energy efficiency** can stimulate the emergence of new industries and generate high-quality jobs in the clean tech sector.
- Advancing the **circular economy** and sustainable resource management fosters innovation across sectors such as recycling, material reuse, and sustainable product design.

➤ Modernisation of Infrastructure and Transport Systems:

- Investments in **green infrastructure**—including energy-efficient buildings, electric public transportation, and smart grids—lay the foundation for a more sustainable and resilient urban environment.
- Promoting **sustainable mobility** through the expansion of electric vehicle infrastructure and the improvement of public transport systems helps reduce emissions and enhance urban accessibility.

➤ Improved Public Health and Quality of Life:

- Reducing air pollution and greenhouse gas emissions has a direct, measurable impact on population health and well-being.
- Creating more **green spaces** and adapting urban areas to climate change through **nature-based solutions** improves urban livability and ecological resilience.

➤ Stimulating Innovation and Emerging Technologies:

- The development and integration of **digital technologies** for emission monitoring and resource optimization enhances the effectiveness of climate actions.
- Emerging solutions such as **carbon capture and storage (CCS)** and **bioenergy systems** are gaining traction at the European level and offer new opportunities for local implementation.

➤ Partnerships and International Cooperation:

- Participation in **European networks and partnerships** facilitates the exchange of best practices and access to innovative technologies.
- **Cross-border collaboration** strengthens resource management and enables the development of regional-scale climate projects with shared benefits.

By embracing this strategic approach, Buzău is strengthening its position as a national leader in sustainable urban development. The city fosters innovation, drives economic growth, and supports the creation of green jobs—while enhancing its competitiveness and climate resilience.

The overarching vision of Buzău Municipality is firmly rooted in the city's commitment to becoming a modern, innovative, and climate-neutral urban center by 2035. As reflected in its strategic planning, Buzău seeks to address key social challenges by shaping a more inclusive and sustainable urban future.

Buzău's Overarching Vision Encompasses the Following Key Pillars:

- **Transformation into a City of Knowledge and Innovation:**
  Buzău is positioning itself as a center of knowledge and innovation, with a strong emphasis on sustainability, modern infrastructure, and efficient public services.
- **Integration of Circular Economy Principles:**
  The city is leading efforts to promote circular economy practices through innovative projects such as the development of an eco-industrial park and the advancement of green technologies.
- **Enhancing Quality of Life:**
  A central objective is to improve residents' quality of life by creating a healthy, dynamic, and safe urban environment—achieved through thoughtful urban planning, the expansion of green spaces, and modernized public transport systems.
- **Smart Mobility and Energy Efficiency:**
  Significant investments are being made in smart mobility solutions to reduce greenhouse gas emissions. At the same time, the city continues to digitize public services, thereby improving accessibility and convenience for all citizens.

Through these initiatives, Buzău aims to generate multiple social co-benefits—**improving air quality, reducing noise pollution, fostering innovation, and promoting sustainable economic growth**—all in alignment with the city's broader objective of achieving climate neutrality by 2035.

To support this vision, the Buzău Municipality has embraced open innovation approaches to test, pilot, and demonstrate integrated solutions for becoming a smart city—particularly in areas such as urban mobility, public service delivery, and environmental management. Notable examples include:

- **Smart Mobility Initiatives:**
  The city has developed an operational center for integrated urban mobility management and introduced a citizen mobility app, enabling real-time testing and feedback collection on transport services.
- **Digital Public Services:**
  Projects like the *Safe City Initiative*, which integrates smart technologies for public safety and emergency management, have been piloted in partnership with local communities to assess system performance before citywide implementation.
- **Environmental Monitoring:**
  Through the *Smart Green City* project, as well as living labs and testbed platforms, Buzău has implemented intelligent air quality management systems. These have been tested and optimized in real-life conditions using open innovation methodologies, directly within the city.

The Climate Neutrality Action Plan sets forth a clear roadmap for transforming Buzău into a climate-neutral city by 2035. Its core objectives include:

- ✓ **Reducing CO_2 emissions by 80% by 2035** compared to 2022 levels, with an **interim target of a 55% reduction by 2030**;
- ✓ **Expanding local renewable energy production capacities** to support energy sovereignty and decarbonization;
- ✓ **Ensuring that all public buildings meet nearly Zero Energy Building (nZEB) standards** by 2035.

To achieve its climate neutrality objectives, Buzău will concentrate efforts around the following sector-specific vision and strategic action areas:

➤ Strategic Objective 1: Sustainable Urban Transport

Buzău will expand its eco-friendly public transport system by increasing the fleet of electric buses and upgrading urban public transport networks. Renewable energy sources will be deployed to power charging stations, while efforts will be made to install additional charging infrastructure for residents' electric vehicles.

➤ Strategic Objective 2: Circular Management of Waste and Wastewater

The city will establish a Voluntary Collection Center to serve the urban area, equipped to sort mixed waste and large construction debris. The existing network of digitalized ecological islands will be expanded. Wastewater treatment costs will be reduced through the partial elimination of conventional biological purification technologies, ensuring the circular use of both wastewater and stormwater (e.g., the Iazul Morilor initiative).

➤ Strategic Objective 3: Revitalized Public Spaces and Investments in Green Infrastructure

Revitalizing green areas and public spaces will be a top priority. These spaces will be integrated into a green-blue urban network through sustainable solutions that improve air quality and mitigate urban heat islands. The municipality also plans to develop urban forests and green belts to further enhance environmental quality.

➤ Strategic Objective 4: Unified Energy Resilience

Investments in energy infrastructure will support the transition toward renewable energy sources. Energy storage solutions will be implemented to integrate renewable generation into the urban grid, ensuring energy security and reducing reliance on fossil fuels. By 2035, half of the multifamily rehabilitation projects will include renewable energy components, covering 30% of their energy needs.

➤ Strategic Objective 5: Energy-Efficient Buildings and Sustainable, Green Neighborhoods

Buzău will initiate the construction of energy-efficient housing for young people built to nZEB standards, beginning with 24 units and scaling up this pilot project. The city will also continue its ambitious energy efficiency retrofit program for existing buildings.

To successfully deliver on these strategic objectives, Buzău will adopt an integrated governance model. Digital transformation will play a central role, with investments in IT infrastructure and smart city technologies to ensure efficient resource management.

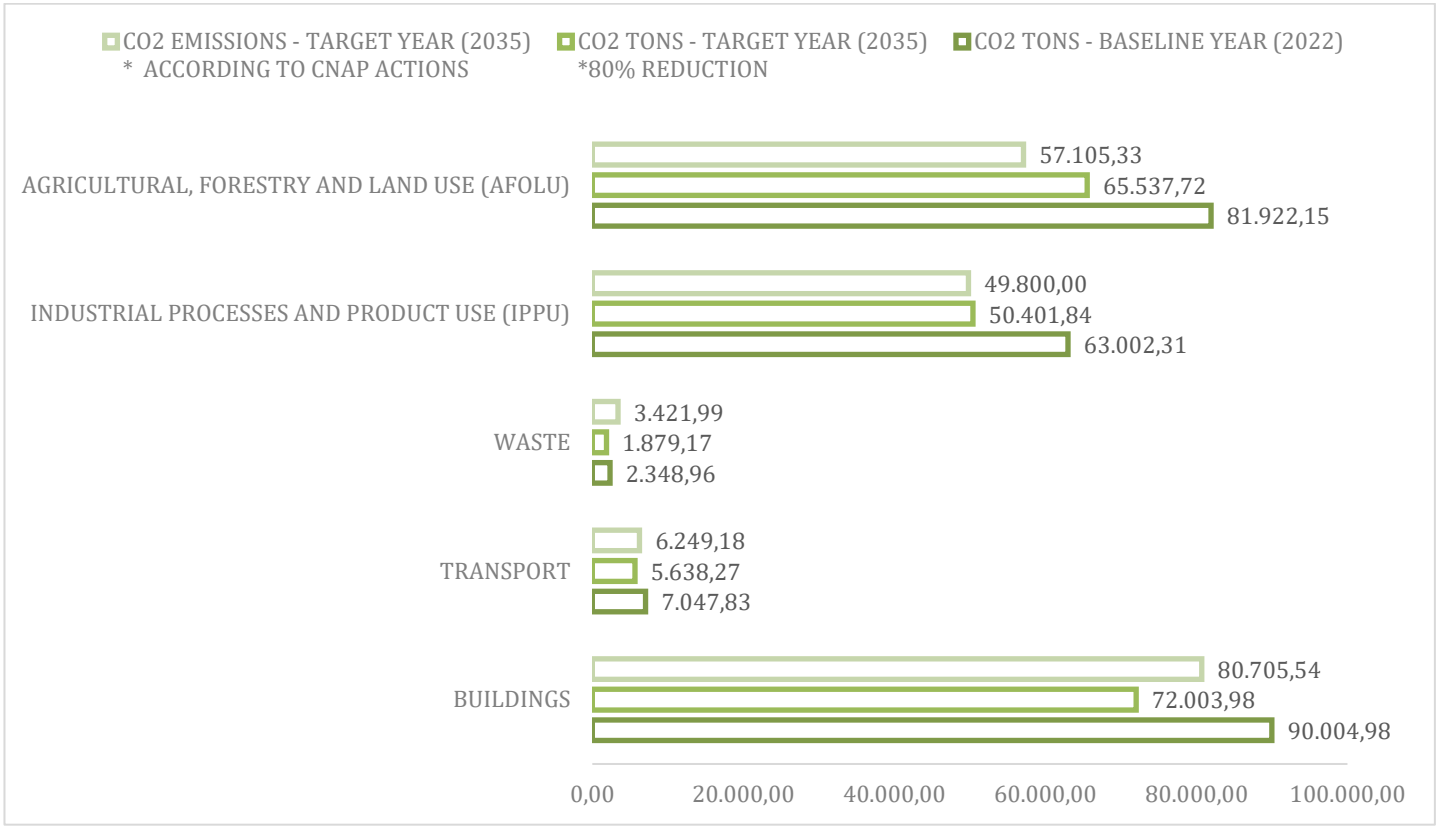
Public education and awareness-raising will be pivotal, supported through campaigns and programs that promote sustainable behavior and encourage community engagement in the city's transformation process. These educational efforts will empower residents to become active participants in the transition.

Through well-coordinated actions and close collaboration among all stakeholders, Buzău is set to become a national model of urban sustainability by 2035—offering a healthy, dynamic, and inclusive environment for all its citizens.

Table 1 - CO2 EMISIONS FOR THE REFERENCE YEAR (2022) AND TARGET YEAR (2035)

SECTOR	CO2 TONS - BASELINE YEAR (2022)	CO2 TONS - TARGET YEAR (2035) *80% REDUCTION	CO2 EMISSIONS - TARGET YEAR (2035) * ACCORDING TO CNAP ACTIONS	% REDUCTION BETWEEN 2022 AND 2035
BUILDINGS	90,004.98	72,003.98	80,705.54	89,67%
TRANSPORT	7,047.83	5,638.27	6,249.18	88,67%
WASTE	2,348.96	1,879.17	3,421.99	145,68%
INDUSTRIAL PROCESSES AND PRODUCT USE (IPPU)	63,002.31	50,401.84	49,800.00	79,04%
AGRICULTURAL, FORESTRY AND LAND USE (AFOLU)	81,922.15	65,537.72	57,105.33	69,71%
TOTAL	**244,326.22**	**195,460.98**	**197,282.04**	**80,75%**

Figure 1- CO2 EMISIONS FOR THE REFERENCE YEAR (2022) AND TARGET YEAR (2035)



The Climate Neutrality Action Plan must be structured around strategic priorities that comprehensively address all relevant economic and social sectors. These priorities must align with European and national targets for greenhouse gas emission reductions and climate change adaptation.

The **key priorities** of the Climate Neutrality Action Plan include:

➤ Decarbonisation of the Energy Sector:

- **Transition to renewable energy sources** such as solar, wind, hydro, and bioenergy.
- **Energy efficiency measures** including the modernization of distribution networks and reduction of energy losses.
- **Development of infrastructure for green energy storage** and integration of smart grids.
- **Phasing out fossil fuel-based power plants**, particularly coal and natural gas.

➤ Energy Efficiency in Buildings and Infrastructure

- **Renovation of buildings** to reduce energy consumption in line with the *Renovation Wave* initiative.
- Implementation of **nearly Zero Energy Building (nZEB)** standards.

- **Digitalisation and automation** of heating and lighting systems to optimize energy usage.

➤ Sustainable Mobility and Low-Emission Transport

- **Electrification of transport**, including the expansion of charging infrastructure and promotion of electric vehicles.
- **Green public transportation**, through modernization of fleets with clean technologies (electric, hydrogen).
- **Infrastructure for alternative mobility**, such as expanded bike lanes and pedestrian zones.
- **Shifting freight transport** from road to rail and maritime routes to reduce emissions.

➤ Development of the Circular Economy and Waste Reduction

- **Reducing resource consumption and waste generation** by promoting reuse and recycling.
- **Eco-friendly product design**, encouraging the production of durable and recyclable goods.
- **Utilization of waste as a resource** in industrial processes or for energy generation.

➤ Sustainable Agriculture and Responsible Land Use

- **Reducing agricultural emissions** through environmentally friendly farming techniques.
- **Soil and biodiversity conservation** as core elements of land management.
- **Carbon capture practices** in agriculture, such as agroforestry and crop rotation.

➤ Innovation, Digitalisation, and Green Technologies

- **Investment in R&D** for low-carbon technologies.
- **Digitalisation of industrial processes** to optimize resource efficiency.
- **Use of data and analytics** to monitor emissions and enhance operational performance.

➤ Climate Adaptation and Resilience

- Development of **resilient infrastructure**, including flood defenses and heatwave mitigation systems.
- Implementation of **nature-based solutions** like green spaces, ecological corridors, and ecosystem restoration.
- **Risk management plans** tailored to vulnerable communities.

➤ Education, Awareness, and Community Engagement

- **Public awareness campaigns** on climate change impacts and carbon footprint reduction strategies.
- **Vocational training programs** to support employment in green and sustainable industries.
- **Active involvement of civil society and local authorities** in the design and implementation of climate actions.

➤ Financing and Policy Support

- **Accessing EU and national funds** for climate neutrality projects.
- **Fiscal incentives and carbon pricing mechanisms** to encourage sustainable business practices.
- **Public-private partnerships** to develop green infrastructure and finance ecological projects.

➤ Monitoring, Reporting, and Continuous Improvement

- **Emission monitoring systems** and periodic progress assessments toward established targets.
- **Transparency and accountability** in communicating results to the public and decision-makers.
- **Policy and strategy adjustments** based on new scientific evidence and evolving conditions.

The implementation of the interventions outlined in the Climate Neutrality Action Plan is expected to generate substantial ecological, economic, and social benefits. These outcomes are interconnected and contribute to the sustainable transformation of society and the economy.

Expected Direct Impacts:

- **Reduction in greenhouse gas (GHG) emissions:** Lowering CO_2 and other GHG emissions across key sectors including energy, transport, industry, and agriculture.
- **Creation of green jobs and economic stimulation:** The development of green industries and the transition to a circular economy will open new employment opportunities and foster sustainable economic growth.
- **Increased energy efficiency and cost savings:** Optimizing energy consumption and modernizing infrastructure will lead to cost reductions for households, businesses, and municipalities.
- **Modernized infrastructure and enhanced climate resilience:** Investments in green infrastructure and climate adaptation will improve cities' and communities' resilience to natural disasters.
- **Improved air quality and public health:** Reducing air pollution (e.g., particulate matter, nitrogen oxides) will have direct, measurable health benefits for the population.

Expected Indirect Impacts:

- **Diversified and secure energy supply:** Transitioning to local renewable energy sources will reduce dependence on imported fossil fuels and improve energy sovereignty.
- **Promotion of innovation and green technologies:** Supporting research and development of climate-friendly technologies will drive innovation and increase systemic efficiency.
- **Conservation of biodiversity and protection of natural ecosystems:** Emissions reduction and responsible resource use will help preserve fragile ecosystems and biodiversity.
- **Behavioral change and increased public awareness:** Citizen education and engagement initiatives will help shift societal behaviors toward sustainable lifestyles.
- **Enhanced social cohesion and support for vulnerable communities:** A just transition ensures that all communities benefit from change and that no group is left behind.

The estimated budget for implementing this plan is substantial and will be supported by a mix of local and European funding sources. These resources will finance a broad range of interventions including infrastructure upgrades, public education campaigns, and community engagement initiatives.

The local public administration must combine high architectural standards with sustainability principles, ensuring transparency and community involvement at every stage of public project development. This approach will support the creation of functional, aesthetically pleasing, and environmentally friendly urban environments that enhance citizen well-being and preserve natural resources.

To achieve this, the following principles will be pursued:

- ✓ Integrating sustainable development principles into local policy:
  Adopting local regulations and guidelines that promote sustainable design and energy efficiency in public projects, while aligning with European and international green building standards.
- ✓ Promoting sustainable, energy-efficient architecture:
  Implementing nearly Zero Energy Buildings (nZEB); using eco-friendly, locally sourced materials; and installing smart energy management systems.
- ✓ Community-centered and inclusive design:
  Engaging the public and local communities through consultation processes before project initiation; designing open, functional, and accessible public spaces.
- ✓ Environmental protection and biodiversity conservation:
  Integrating nature-based solutions; minimizing the impact on local ecosystems; and implementing efficient water management strategies.
- ✓ Transparency and architectural design competitions:
  Ensuring openness in project selection processes and encouraging high-quality, competitive proposals.
- ✓ Education and capacity-building for municipal staff:
  Offering professional training, workshops, and exchanges of best practices with cities/regions that have successfully implemented quality architectural and urban projects.
- ✓ Funding and incentives for high-quality projects:
  Providing financial support and fiscal incentives for initiatives that meet sustainability and design excellence criteria.
- ✓ Monitoring and evaluating project impact:
  Deploying performance monitoring systems to track energy and environmental outcomes of buildings and infrastructure, with public reporting and strategy refinement based on lessons learned.

GUIDING PRINCIPLES

Provide a brief overview (1 page) of the principles that directed the Climate Neutrality Action Plan's design process, as well as those that will guide its implementation and monitoring within the designated time frame.

Climate neutrality is a fundamental commitment for the sustainable development of cities and communities. The **Climate Neutrality Action Plan** is designed to guide the Municipality of Buzău on the path toward reducing CO_2 emissions and adapting to climate change.

This Plan not only adheres to relevant European, national, and local directives and standards but also promotes a long-term, integrated, and sustainable vision for urban development. To maximize the effectiveness of its proposed measures, the Climate Neutrality Action Plan is aligned with existing local and regional strategic initiatives, ensuring coherence across environmental and urban planning policies. These include the Integrated Urban Development Strategy (SIDU), the Sustainable Urban Mobility Plan (SUMP), the Sustainable Energy and Climate Action Plan (SECAP), the Energy Efficiency Improvement Program, the Circular Economy Transition Strategy 2020–2030, the "Smart–Green–Circular Buzău" model, and the Smart City Strategy, among others.

Guiding Principles for the Design of the Action Plan

The design of the Action Plan is based on a set of core principles to ensure efficiency, inclusion, and transparency:

- **Participatory and transparent approach:** The plan is built through the active involvement of local communities and stakeholders, ensuring that every voice is heard and every interest considered.
- **Integrated planning:** The plan addresses the interdependencies among sectors such as energy, transport, urban planning, and public health to create cohesive, multidimensional solutions.
- **Alignment with EU and national frameworks:** The plan complies with the standards set by the EU Mission for 100 Climate-Neutral and Smart Cities, enabling access to EU funding and alignment with net-zero targets.
- **Cross-sectoral collaboration and coordination:** Integration across sectors is essential to create synergies and optimize resource allocation in achieving climate neutrality.
- **Prioritization of high-impact, low-cost measures:** Emphasis is placed on identifying cost-effective actions that significantly reduce emissions and protect the environment.
- **Social equity and justice:** The plan promotes equal opportunities and supports vulnerable groups, aiming to avoid exacerbating social inequalities.

- **Support for the green economy and green jobs:** The plan fosters the creation of new employment opportunities in green technologies, energy efficiency, sustainable construction, and related sectors.
- **Long-term sustainability:** Designed to deliver not only immediate results but also long-lasting environmental, economic, and social benefits.
- **Innovation and adaptability:** The plan encourages the adoption of innovative, flexible solutions that respond to scientific, technological, and contextual developments.
- **Transparency and accountability:** All decisions are clearly justified, and the design process remains open to public scrutiny.
- **Circular economy principles:** Every measure supports efficient resource use, waste reduction, and the integration of circular economy solutions.

Principles Guiding Implementation and Monitoring

The overarching goal of the implementation and monitoring framework is to ensure an inclusive, participatory, and transparent approach that actively involves all relevant stakeholders throughout every stage—from execution to evaluation.

The Municipality of Buzău has already demonstrated its commitment to participatory decision-making, as reflected in the Integrated Urban Development Strategy, which was built on multi-level governance principles and active community involvement.

Key principles for implementation and monitoring include:

- **Ongoing stakeholder engagement and public consultation:** A continuous dialogue with citizens and stakeholders is essential to ensure that actions remain effective and aligned with community expectations.
- **Flexibility and adaptability:** The plan must remain responsive to emerging scientific evidence, socio-economic changes, and technological innovations.
- **Progress tracking and public reporting:** A robust monitoring system will measure progress against key targets, identify gaps, and provide accessible, transparent data.
- **Interinstitutional cooperation:** Effective implementation relies on collaboration across local, regional, and national authorities, as well as between the public and private sectors.
- **Accountability and transparency:** Regular reporting on progress and expenditures will ensure high levels of public trust and institutional responsibility.
- **Use of specific performance indicators:** Clearly defined metrics will assess the impact of actions in terms of CO_2 reduction, energy efficiency, air quality, and other climate-related goals.
- **Financial sustainability:** The plan must be backed by diverse, long-term funding sources to maintain momentum and continuity.
- **Education and continuous training:** Local authorities and citizens alike should benefit from educational and capacity-building initiatives that encourage ownership and participation.

- **Risk assessment and mitigation measures:** A comprehensive risk analysis will help prevent or minimize negative impacts during implementation—whether social, economic, or ecological.
- **Continuous innovation and improvement:** The implementation and monitoring process should remain open to ongoing innovation and refinement of methods and technologies.
- **Firm commitment from all relevant actors:** A successful transition requires strong commitment and adequate resources from local governments, national institutions, the private sector, and civil society.
- **Community resilience support:** The plan must focus on strengthening the adaptive capacity of local communities - especially vulnerable ones - through targeted investments in infrastructure, training, and support systems.

These principles form the foundation of a robust, holistic, and adaptive framework for the successful implementation, monitoring, and continuous enhancement of the Climate Neutrality Action Plan. They will help ensure that Buzău achieves its climate goals while maximizing positive impacts on the environment, society, and local economy.

SIGNATORIES

In the below table, list the signatories of the Climate Neutrality Action Plan. Include local, regional, and potentially national and international stakeholders which have the interest and / or capacity to accelerate the implementation of this Action Plan and who can significantly influence the achievement of climate neutrality at the local level.

We, the undersigned, pledge to actively support Buzău Municipality's climate neutrality goals by 2035, as outlined in its Climate Neutrality Action Plan. We commit to collaborative efforts aimed at substantial greenhouse gas emission reductions and fostering systemic change, in line with the objectives set forth in this document.

INSTITUTION	SECTOR	REPRESENTATIVE	POSITION	SIGNATURE	SIGNATURE DATE
BUZĂU PREFECTURE	PUBLIC ADMINISTRATION	**Liliana SBÎRNEA**	**PREFECT OF BUZĂU COUNTY**	electronic	09/05/2025
BUZĂU COUNTY COUNCIL	PUBLIC ADMINISTRATION	**Lucian ROMAȘCANU**	**PRESIDENT OF THE COUNTY COUNCIL**	handwritten	09/05/2025
S.C. TRANS BUS S.A. – BUZĂU PUBLIC TRANSPORT COMPANY	TRANSPORT	**Toader GICĂ**	**EXECUTIVE DIRECTOR**	handwritten	30/04/2025
COMPANIA DE APĂ S.A. BUZĂU (WATER UTILITY)	UTILITIES	**Simona SĂVULESCU**	**GENERAL DIRECTOR**	handwritten	06/05/2025

RER SUD S.A. – BUZĂU WASTE MANAGEMENT COMPANY	WASTE	**Liviu Mihai MOCANU**	**GENERAL DIRECTOR**	electronic	07/05/2025
“DUNĂREA DE JOS” UNIVERSITY OF GALAȚI	UNIVERSITY	**Prof. Dr. Eng. Habil. Marian BARBU**	**RECTOR**	handwritten	05/05/2025
MĂRĂCINENI COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION “ADI – TRANSPORT - BUZĂU MĂRĂCINENI”	PUBLIC ADMINISTRATION	**Dumitru CONSTANTIN**	**MAYOR**	electronic	30/04/2025
ȚINTEȘTI COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION “ADI – TRANSPORT - BUZĂU MĂRĂCINENI”	PUBLIC ADMINISTRATION	**Victor VASILE**	**MAYOR**	electronic	05/05/2025
VADU PAȘII COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION “ADI – TRANSPORT - BUZĂU MĂRĂCINENI”	PUBLIC ADMINISTRATION	**Gheorghe FIRON**	**MAYOR**	electronic	05/05/2025
VERNEȘTI COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION “ADI – TRANSPORT - BUZĂU MĂRĂCINENI”	PUBLIC ADMINISTRATION	**Daniel NĂSTASE**	**MAYOR**	handwritten	05/05/2025
PRO EUROCULT ASSOCIATION	NGO	**Monica DOGARU**	**PRESIDENT**	handwritten	29/04/2025

BUZĂU PLANT GENETIC RESOURCES BANK – FOR VEGETABLES, FLORICULTURE, AROMATIC AND MEDICINAL PLANTS	RESEARCH	**Costel VÂNĂTORU**	**DIRECTOR**	handwritten	05/05/2025
S.C. ROMCARBON S.A.	BUSINESS SECTOR	**Huang LIANG-NENG**	**PRESIDENT**	electronic	08/05/2025
S.C. GREENTECH S.A.	BUSINESS SECTOR	**Alina-Elena GENEŞ**	**GENERAL DIRECTOR**	handwritten	08/05/2025
S.C. VOESTALPINE RAILWAY SYSTEMS ROMANIA S.A.	BUSINESS SECTOR	**Marius ADĂSCĂLIȚEI**	**GENERAL DIRECTOR**	handwritten	08/05/2025

We would like to emphasize that, **in the recent period, the Municipality of Buzău has organized a series of public meetings and consultations with relevant local stakeholders** – representatives of academia, the business sector, civil society organizations, and public institutions. These meetings aimed to gather opinions, identify priorities, and create the necessary framework for long-term collaboration.

At the same time, **we recognize the importance of strengthening and formalizing these partnerships by including a larger number of direct signatories in the document**. In this regard, **we are committed to continuing the process of expanding the list of involved stakeholders** so that it reflects as accurately as possible the diversity and shared responsibility of our community.

We would also like to reiterate that **the Climate Neutrality Action Plan is a living document**, one that will be continuously updated and improved – both by adding new projects that contribute to the achievement of the indicators, and by including new relevant actors as partners and supporters.

We believe that this flexible and participatory approach will strengthen the legitimacy and effectiveness of the plan's implementation, while at the same time ensuring the genuine and long-term involvement of the community in the transition process toward climate neutrality.

II. ACTION PLAN

INTRODUCTION

Briefly describe (1-2 pages) the local context within which the Action Plan is being formulated and outline the general gap it aims to address, by taking into account relevant local strategies and policies, socio-economic development factors, environmental conditions and climate considerations etc.

Achieving climate neutrality is an ambitious yet essential goal for the future of Buzău. This transformation requires a fundamental shift across multiple layers of urban life, including governance, infrastructure, the local economy, and civic engagement. Recognizing that meaningful change demands collective effort, the municipality is committed to fostering collaboration among public institutions, businesses, and civil society to ensure that climate action is both effective and widely supported.

As a testament to its commitment, Buzău has already established a solid foundation through various strategic frameworks and policy documents. **The Integrated Urban Development Strategy 2021–2027 outlines a long-term vision for the city under the concept "Buzău – Magnet City", which integrates economic, environmental, and social dimensions to build a more attractive and resilient urban environment.** Additionally, the city has developed several policy documents that address key areas of sustainability and greenhouse gas (GHG) mitigation, including:

- *Green Smart Circular Buzău – Development Framework;*
- *Circular Economy Transition Strategy 2020–2030;*
- *Sustainable Urban Mobility Plan (SUMP) 2021–2027;*
- *Smart City Strategy of Buzău;*
- *Sustainable Energy and Climate Action Plan (SECAP) 2021–2027.*

Notably, **Buzău was the first municipality in Romania to develop a Circular Economy Transition Strategy, positioning itself as the country's first circular city.** This pioneering initiative promotes infrastructure that supports the use of renewable and non-polluting energy sources, with the aim of creating a cleaner and more pleasant urban environment. It also seeks to foster collaboration among businesses and encourage investments in innovation and creativity, creating new opportunities for local development. **By 2030, the city aims to make circularity a common practice, targeting a 60% reduction in the consumption of primary resources**.

These strategic documents provide a roadmap for sustainability and urban resilience. However, further efforts are needed to address key gaps—particularly in data-driven emissions monitoring and systematic evaluation of climate measures. The success of climate neutrality efforts hinges on a robust mechanism for tracking CO_2 reductions, ensuring accountability, transparency, and adaptability in policymaking.

The **local socio-economic context** plays a crucial role in shaping Buzău's climate action approach. Located in southeastern Romania, the city is an emerging economic hub with a diversified industrial base—particularly in manufacturing, food processing, and commerce. Urban development has advanced steadily, attracting investment in both business infrastructure and public services. However, this economic progress has also contributed to increased energy demand, mobility needs, and emissions from both the industrial and transport sectors.

Buzău faces several climate-related challenges, including **air pollution**, **urban heat stress**, and the **growing risk of extreme weather events**. The city's reliance on private vehicles remains a major contributor to GHG emissions, underscoring the urgent need to expand **sustainable transport solutions**, **active mobility infrastructure**, and **public transit options**. Transitioning away from fossil-fuel-based heating systems and improving the energy efficiency of buildings are also critical steps toward reducing emissions from the residential and commercial sectors.

Green infrastructure and urban biodiversity are key pillars of Buzău's climate resilience strategy. While progress has been made in expanding green spaces, ensuring a higher share of accessible, functional green areas per capita remains a top priority. **Expanding urban forests**, **implementing nature-based solutions**, and **embracing climate-adaptive urban planning** will be essential to mitigating heat island effects and improving overall air quality.

While Buzău has made significant strides toward sustainability, the path to climate neutrality requires overcoming structural and systemic challenges. A critical gap remains in the real-time, comprehensive monitoring of emissions - a need that must be addressed through advanced digital tools and intersectoral collaboration. Moreover, ensuring the active participation of all stakeholders—from local government and businesses to individual citizens—is vital to the long-term success of the climate transition.

The **Climate City Contract** offers a timely opportunity to align Buzău's efforts with national and European climate policies, drawing on best practices from the **EU Mission on 100 Climate-Neutral and Smart Cities**. By focusing on **sustainable mobility**, **circular economy principles**, **clean energy systems**, and **governance innovation**, Buzău aims to position itself as a climate leadership model—demonstrating that environmental responsibility can go hand in hand with economic growth and improved quality of life.

The interventions under the Climate Neutrality Action Plan are structured around six key thematic areas:

1. **Sustainable Urban Mobility;**
2. **Green Infrastructure and Nature-Based Solutions;**
3. **Waste Management and Circular Economy;**
4. **Built Environment;**
5. **Energy Systems;**
6. **Soft Measures (Governance and Social Innovation).**

Through coordinated actions across these domains, Buzău aims to show that ambitious climate measures can not only reduce environmental impacts and meet CO_2 reduction targets, but also foster a thriving local economy and a high quality of life for all its residents.

WORK PROCESS

Within the overarching context of the city's journey toward climate neutrality, outline the working steps involved in preparing the Action Plan, including both the completed stages and the future anticipated ones.

➔ **Additionally, delineate the timeline and key milestones (including the ones regarding the quality assurance - e.g., foreseen design competitions) for the forthcoming iterations in the Action Plan's development.**

The development of Buzău's Climate Neutrality Action Plan (CNAP) involves a series of strategic stages, some of which have already been completed, while others are ongoing or scheduled for the near future. The plan has been designed in accordance with the methodology established by the **European Commission's Mission on 100 Climate-Neutral and Smart Cities**, as adopted by Romania's **National Hub for the M100 Initiative**.

Accordingly, the lifecycle of the CNAP—**preparation, implementation, and monitoring**—follows the essential stages defined at the European level:

- ✓ **Defining a clear vision to achieve climate neutrality by 2035;**
- ✓ **Establishing a robust governance framework;**
- ✓ **Conducting a GHG emissions assessment and setting quantifiable targets;**
- ✓ **Identifying and implementing the necessary measures;**
- ✓ **Monitoring progress and regularly updating the strategy.**

♦ **COMPLETED STAGES:**

- ✦ **Initial Assessment and Diagnosis:** An analysis of GHG emissions, energy consumption, and climate-related drivers in the municipality was carried out, leading to the identification of key sectors and the establishment of clear emission reduction targets. These were integrated into a comprehensive technical and financial roadmap.

- ✦ **Alignment with Existing Strategies:** The CNAP is anchored in the Integrated Urban Development Strategy and the Sustainable Energy and Climate Action Plan (SECAP), and is supported by other relevant strategic documents, including:
  - ✓ *The Sustainable Urban Mobility Plan (SUMP)*
  - ✓ *The "Green Smart Circular Buzău" framework*
  - ✓ *The Circular Economy Transition Strategy*
  - ✓ *The Smart City Strategy.*

- **Compliance with European Standards**: The CNAP aligns with the methodology and requirements of the EU Climate Mission and the M100 National Hub.

- **Financing Framework Identified**: Potential funding sources have been mapped and include:
  - ✓ *EU programs such as the RRF, LIFE, Horizon Europe, NetZeroCities, and Driving Urban Transitions;*
  - ✓ *EEA & Norway Grants, the Swiss Romanian Cooperation Program;*
  - ✓ *National operational programs (e.g., Southeast Regional Program);*
  - ✓ *Funds managed by the Ministries of Development, Environment, Energy, and Digitalization;*
  - ✓ *Local public and private co-financing mechanisms.*

- **Established Climate Governance**: A strong governance system has been formed through collaboration between public institutions, private companies, and NGOs to ensure successful implementation.

- **Initiation of Strategic Pilot Projects**: Projects already underway include:
  - ✓ *Energy renovation of public and private buildings;*
  - ✓ *Modernization of public transport and deployment of sustainable mobility solutions;*
  - ✓ *Expansion of EV charging infrastructure;*
  - ✓ *Improvement of waste collection and management systems;*
  - ✓ *Rehabilitation of public lighting with smart systems.*

- **Stakeholder Co-Creation and Citizen Engagement**: The development of the *Buzau CNAP* involved **public consultations and collaborations** with experts, NGOs, institutions, and the business sector, in order to ensure a shared vision and a realistic, effective action plan.
  For **the implementation phase**, it is recommended to establish a permanent communication framework with the community and local stakeholders, to consistently apply participatory and cooperative principles, and to uphold high standards of architectural quality and urban value in interventions on the built environment.

- **Educational and Awareness Initiatives Launched**: Programs like *"Green School"* and the *"Dual Technical Education Campus"* aim to prepare future generations for the green transition.

♦ **ONGOING & FUTURE STAGES:**

- **Strategic Update and Final Objective Setting**: The CNAP will be aligned with updated EU climate targets and funding opportunities through 2035.

- **Finalization and Approval of the Action Plan**: All existing and upcoming projects will be integrated into a coherent, approved strategic document.

- **Plan Implementation (2025–2035)**: Implementation will be supported through:
  - ✓ **Public and private financing**, including EU and national funds;
  - ✓ **Ongoing plan updates**, integrating emerging technologies and opportunities.

- **Monitoring, Evaluation, and Learning**: A comprehensive monitoring framework will include:
  - ✓ **Regular evaluation**, with biannual GHG inventory updates and progress indicator reviews
  - ✓ **Continuous improvement**, based on lessons learned and performance outcomes
  - ✓ **Knowledge exchange and training**, including partnerships with other EU cities and M100 peers, and capacity-building for municipal staff and local stakeholders.

- **Progress Reporting**: A structured system for tracking sustainability indicators will provide regular updates and inform necessary policy adjustments.

- **Expansion of Green-Blue Infrastructure**: Continued investments in green spaces, nature-based solutions, and intelligent resource management systems will support resilience and urban well-being.

♦ TIMELINE & KEY MILESTONES FOR FUTURE ITERATIONS:

Timeframe	Key Milestones
Q2 2025	Launch of public consultation on strategic directions and integration of feedback
Q3 2025	Design competitions for green-blue infrastructure and urban mobility solutions
Q4 2025	Finalization and official approval of the Climate Neutrality Action Plan
2026–2030	Phased implementation of strategic projects; continuous monitoring and adjustment

♦ Ensuring the Quality and Sustainability of the Action Plan

To secure long-term impact and institutional effectiveness, the plan's development and implementation are underpinned by the following principles:

- ✓ **Performance-based evaluations** using well-defined indicators;
- ✓ **Innovation and competitiveness** through design competitions focused on emission reduction solutions;
- ✓ **Public consultation and participation** to ensure social acceptance and local ownership

- ✓ **Periodic review and adaptation** in response to regulatory, economic, or technological shifts.

Through this strategic approach, the Municipality of Buzău is affirming its active role in achieving climate neutrality, strengthening its position as a **model city in the transition to a green and sustainable economy**.

The development of the Climate Neutrality Contract for the Municipality of Buzău was a participatory and transparent process, to which the stakeholders listed on page 20 actively contributed. Their involvement took place through public consultations, thematic workshops, and working meetings dedicated to key areas such as urban mobility, energy efficiency, waste management, digitalization, and circular economy.

The academic sector, represented by "*Dunărea de Jos" University of Galați*, provided scientific expertise and innovative solutions, while the local business environment and business organizations contributed by identifying investment opportunities and validating sustainable development directions. Public authorities – the Buzău County Council and the administrative-territorial units (UATs) within the Functional Urban Area – actively participated to ensure coordination at the regional level and to integrate the proposed measures into existing territorial plans.

Civil society, represented by local NGOs and associations, played an essential role in bringing citizens' concerns to the forefront and in shaping a community-centered action framework.

All these contributions were analyzed and integrated into the document based on feasibility, alignment with European and national objectives, and relevance to the goal of climate neutrality. The process was iterative: successive versions of the plan were subject to public debate, and the feedback received was used to improve its content. Moreover, stakeholder involvement does not end with the adoption of the document – they will continue to be part of the local climate governance mechanism, playing an active role in monitoring implementation, updating actions, and expanding partnerships.

Thus, the Climate Neutrality Contract is the result of a collective effort and represents a shared vision for the city's transition toward climate neutrality.

GREENHOUSE GAS EMISSIONS BASELINE INVENTORY

Describe and elaborate on the most recent greenhouse gas (GHG) inventory conducted by the city, in order to establish the baseline emissions and also to identify the emissions gap towards achieving climate neutrality by 2035.

- ➔ **Make sure to also assess the greenhouse gas (GHG) baseline inventory - you can refer to: the sources of data collection and their rationale, the baseline emission conversion factors used, proposed measures for improving future data collection processes etc.**

Table 2. ENERGY CONVERSION FACTORS

ENERGY FORM	EMISSIONS FACTORS [TCO2-ECHIV/MWH]	SOURCE DOCUMENT
Electrical energy 2022	0.265	IRE (determinat)
Thermal Energy	0.189	Calculation tools and guidelines | GHG Protocol
Natural Gas	0.189	Calculation tools and guidelines | GHG Protocol
Diesel	0.267	Calculation tools and guidelines | GHG Protocol
Gasoline	0.249	Calculation tools and guidelines | GHG Protocol
GPL	0.231	Calculation tools and guidelines | GHG Protocol
Biogas	0.121	Calculation tools and guidelines | GHG Protocol

BUILDINGS - 438,600.73 MWh/year energy | 90,004.98 tons CO2/year emissions

- ✓ **Public Buildings:** According to the data collected by Buzău Municipality, public buildings have a total energy consumption of 7,871.94 MWh, respectively 4,014.28 MWh/year of electricity and 3,857.66 MWh/year of thermal energy.
- ✓ **Tertiary Buildings:** According to the data collected by Buzău Municipality, tertiary buildings have a total energy consumption of 342,121.06, of which: 22,450 MWh/year of electricity, 344,82 MWh/year of thermal energy, and 319,326.24 MWh/year of natural gas.
- ✓ **Residential Buildings:** According to the data collected by Buzău Municipality, residential buildings have a total energy consumption estimated at 84,231.73 MWh/year, of which: 62,705 MWh/year of electricity, 20,578.59 MWh/year of thermal energy, and 948.14 MWh/year of natural gas.
- ✓ **Public Lighting:** The Sustainable Energy and Climate Action Plan (page 131) provides an electricity requirement for Public Lighting of 4,376 MWh/year.

TRANSPORT - 26,499.77 MWh/year energy | 7,047.83 tons CO2/year emissions

- ✓ **Public Transport:** According to the data collected by Buzău Municipality, public transport is associated with an energy consumption of 23,721.90 MWh/year, respectively 31.86 MWh/year of gasoline and 23,690.04 MWh/year of diesel.
- ✓ **Private Transport:** According to the data collected by Buzău Municipality, private transport is associated with an energy consumption of 2,504.17 MWh/year, respectively 67.50 MWh/year of electricity, 1,245.39 MWh/year of gasoline, 1,066.84 MWh/year of diesel, and 124.45 MWh/year of LPG.

- ✓ **Municipal Fleet:** According to the data collected by Buzău Municipality, the municipal fleet is associated with an energy consumption of 273.70 MWh/year of diesel.

WASTE - 8,804.07 MWh/ year energy | 2,348.96 tons CO2/year emissions

According to the data collected by the Municipality from the sanitation company, the total energy requirement is 8,804.07 MWh/year, of which 487.70 MWh/year is electricity, 41.82 MWh/year is gasoline and 8,274.55 MWh/year is diesel.

IPPU - 267,892.70 MWh/ year energy | 63,002.31 tons CO2/year emissions

For this sector, data was collected from the following companies in the industry:

- ✓ ***COMPANIA DE APĂ BUZĂU***, with a total energy consumption of 18,688.15 MWh/year;
- ✓ ***S.C. URSUS BREWERIES S.A. Bucharest - Buzău branch***, with a total energy consumption of 61,600.53 MWh/year;
- ✓ ***Voestalpine RAILWAY SYSTEMS ROMÂNIA Buzău***, with a total energy consumption of 8,377.17 MWh/year;
- ✓ ***SISECAM AUTOMOTIVE ROMANIA***, with a total energy consumption of 45,659.80 MWh/year;
- ✓ ***CONFEX COOPERATIVE SOCIETY***, with a total energy consumption of 1,079.52 MWh/year;
- ✓ ***ROMCARBON S.A.***, with a total energy consumption of 31,357.16 MWh/year;
- ✓ ***S.C. URBIS SERV S.R.L.***, with a total energy consumption of 4,954.87 MWh/year;
- ✓ ***S.C. BUNGE ROMANIA S.R.L.***, with a total energy consumption of 26,936.93 MWh/year;
- ✓ ***S.C. GREENTECH S.A.***, with a total energy consumption of 69,238.57 MWh/year.

AFOLU - 327,882.43 MWh/ year energy | 81,922.15 tons CO2/year emissions

For this sector, data was collected from the following companies in agriculture:

- ✓ ***DIRECȚIA SILVICĂ BUZĂU***, with a total energy consumption of 100.13 MWh/year;
- ✓ ***BANCA DE GENE BUZĂU***, with a total energy consumption of 977.21 MWh/year;
- ✓ ***OCOLUL SILVIC BUZĂU***, with a total energy consumption of 326,805.08 MWh/year.

Table 3. FINAL ENERGY USE BY SOURCE SECTORS

- ➔ **Indicate the base year: 2022**
- ➔ **Indicate the used unit: MWh/year**

	SCOPE 1	SCOPE 2	SCOPE 3	TOTAL
BUILDINGS	**-**	**438,600.73**	**-**	**438,600.73**
FUEL TYPE / ENERGY USED	-	Electrical energy: 93,545.28 Thermal energy: 24,781.07 Natural gas: 320,274.38	-	-
TRANSPORT	**26,432.27**	**67.50**	**-**	**26,499.77**
FUEL TYPE / ENERGY USED	Gasoline:1,277.24 Diesel: 25,030.58 GPL: 124.45	Electrical energy: 67.50	-	**-**
WASTE	**8,316.37**	**487.70**	**-**	**8,804.07**
FUEL TYPE / ENERGY USED	Gasoline: 41.82 Diesel: 8,274.55	Electrical energy: 487.70	-	-
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)	**8.072,44**	**259.820,26**	**-**	**267,892.70**
FUEL TYPE / ENERGY USED	Gasoline: 948.97 Diesel: 5,377.39 GPL: 231.19 Biogas: 1,514.89	Electrical energy: 157,726.44 Thermal energy: 99.36 Natural gas: 101,994.46	- - -	- - -
AGRICULTURAL, FORESTRY, AND LAND USE (AFOLU)	**133,925.12**	**193,957.31**	**-**	**327,882.43**
FUEL TYPE / ENERGY USED	Gasoline: 862,74 Diesel: 133,062.38	Electrical energy: 125,286.05 Thermal energy: 106.46 Natural gas: 68,564.8	-	-

Table 4. EMISSION FACTORS APPLIED

- ➔ **Indicate the primary energy type and greenhouse gas (GHG) emission factor in accordance with the methodology used: CO_2**
- ➔ **Indicate the used method, e.g., GPC, IPCC, CRF, national etc.: GHG PROTOCOL**

PRIMARY ENERGY/ ENERGY SOURCE	CARBON DIOXIDE (CO_2)	METHANE (CH_4)	NITROUS OXIDE (N_2O)	F-GASES (HYDROFLUOROCARBONS AND PERFLUOROCARBONS)	SULPHUR HEXAFLUORIDE (SF_6)	NITROGEN TRIFLUORIDE (NF_3)
ELECTRICAL ENERGY 2022 (*1)	0.265	-	-	-	-	-
NATURAL GAS (*2)	0.189	-	-	-	-	-
THERMAL ENERGY 2022 (*3)	0.189	-	-	-	-	-
DIESEL (*4)	0.267	-	-	-	-	-
GASOLINE (*5)	0.249	-	-	-	-	-
GPL(*6)	0.231	-	-			
BIOGAS (*7)	0.121	-	-	-	-	-

Sources for the above-mentioned conversion factors:

1. *IPPC (determinat);*
2. *GHG Protocol*
3. *GHG Protocol*
4. *GHG Protocol*
5. *GHG Protocol*
6. *GHG Protocol*
7. *GHG Protocol*

Table 5. GHG EMISSIONS BY SOURCE SECTORS

- ➔ **Indicate the base year: 2022**
- ➔ **Indicate the unit: tCO_2/year**

	SCOPE 1	SCOPE 2	SCOPE 3	TOTAL
BUILDINGS	0,00	90.004,98	-	**90,004.98**
TRANSPORT	7,029.95	17.89	-	**7,047.83**
WASTE	2,219.72	129.24	-	**2,348.96**
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)	1.909,07	61.093,24	-	**63,002.31**
AGRICULTURAL, FORESTRY AND LAND USE (AFOLU)	35.742,48	46.179,67	-	**81,922.15**
TOTAL	**46.901,21**	**197.425,02**	**-**	**244,326.22**

Table 6. PLANNED ACTIONS BY SOURCE SECTORS

The table categorises emission reductions from each action, based on the scope they affect. For instance, if the covered actions aim to decrease CO2 emissions linked to grid-supplied electricity, values will be assigned to Scope 2.

- ➔ **If the activities are intended to be finalised by 2035, the base year should be adjusted accordingly to 2035.**

BASE YEAR: 2035	SCOPE 1	SCOPE 2	SCOPE 3
BUILDINGS	0	80,705.54	-
Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)	-	448.22	-
Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)	-	330.00	-
Implementing a only LED street lighting system	-	637.80	-
Green energy production through the construction of a photovoltaic	-	2,798.00	-

BASE YEAR: 2035	SCOPE 1	SCOPE 2	SCOPE 3
panel park in Buzău Municipality			
Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property	-	708.90	-
Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings	-	4,137.08	-
Implementation of a waste-to-energy system for organic waste	-	1,100.00	-
New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection-Pilot project	-	44,422.67	-
Urban regeneration of collective housing areas through actions to revitalize interstitial spaces	-	444.23	-
NEB evaluation of on-going projects before construction		1,776.91	-
New residential bio-districts	-	5,330.72	-
Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project	-	444.23	-
Smart building management platform	-	6,219.17	-
Construction of a residential complex for young people in Buzău Municipality nZEB	-	1.776.91	-
Positive Energy Districts	-	5,330.72	-
Climate-smart urban design programme	-	3,000	-
Hydrogen based innovative solutions programme	-	300	-
Centralized information system for management and decision support in strategic development projects	-	1,500	-
TRANSPORT	**6,239.31**	**9.87**	-
Urban Traffic Optimization and Heavy Vehicle Diversion Plan	561.57	2.26	-
Integrated portal for active urban mobility	140.39	0.57	-
A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard	421.18	1.69	-
Expand public transportation infrastructure and services	842.36	3.38	-
Smart Mobility Zone	491.37	1.98	-
Charging stations for electric vehicles in Buzău Municipality	493.35	-	-
New nature-based solutions for stormwater management and the	704.78	-	-

BASE YEAR: 2035	SCOPE 1	SCOPE 2	SCOPE 3
development of a separate infrastructure for wastewater collection- Pilot project			
Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms	320	-	-
New residential bio-districts	140.96	-	-
Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project	130	-	-
Smart building management platform	70.48	-	-
Positive Energy Districts	140.96	-	-
Climate-smart urban design programme	500	-	-
Center of Excellence for Dual-Technical Pre-University and University Education Buzău	281.91	-	-
Hydrogen based innovative solutions programme	1,000	-	-
WASTE	**1,292.66**	**2,129.33**	**-**
Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms	550	-	-
New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection- Pilot project	117.45	-	-
Market & Hub	46.04	0.94	-
Energy Recovery from Waste through Gasification and Molecular Dissociation Projects	223	-	-
Compost city station	180	-	-
Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality	140.94	-	-
New residential bio-districts	15.23	20	-
Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."	-	23.49	-
School workshops for recycling and creation	20	-	-

BASE YEAR: 2035	SCOPE 1	SCOPE 2	SCOPE 3
„Too Good To Go”/”Food Hunt”	-	450.00	-
Center of Excellence for Dual-Technical Pre-University and University Education Buzău	-	234.90	-
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)	**-**	**49,800.00**	**-**
New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection-Pilot project	-	20,000.00	-
Energy Recovery from Waste through Gasification and Molecular Dissociation Projects	-	18,000	-
Center of Excellence for Dual-Technical Pre-University and University Education Buzău	-	3,300.00	-
Hydrogen based innovative solutions programme	-	8,500	-
AGRICULTURAL, FORESTRY AND LAND USE (AFOLU)	**21,900.00**	**35,205.33**	**-**
New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection-Pilot project	5,900.00	-	-
Compost city station	10,000.00	-	-
Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality	6,000	-	-
Urban regeneration of collective housing areas through actions to revitalize interstitial spaces	-	7,000	-
NEB evaluation of on-going projects before construction	-	1,700.00	-
Urban Forest	-	6,900	-
Afforestation of the area adjacent to Buzău Municipality – 13.26 ha	-	4,915.33	-
Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."	-	6,000	-
Local products and service market	-	4,130	-
Center of Excellence for Dual-Technical Pre-University and University Education Buzău	-	4,560.00	-

Table 7. EMISSIONS GAP

	BASELINE EMISSIONS (PERCENTAGE)		BASELINE EMISSIONS REDUCTION TARGET 80% by 2035		EMISSIONS ADDRESSED BY ACTION PLAN		REMAINING RESIDUAL EMISSIONS		EXCEEDING TARGET AMOUNT
	(absolute)	(%)	(absolute)	(%)	(absolute)	(%)	(absolute)	(%)	(absolute)
BUILDINGS	90,004.98	36.84	72,003.98	36.84	80,705.54	40.91	9,299.44	19.77	8,701.56
TRANSPORT	7,047.83	2.88	5,638.27	2.88	6,249.18	3.17	798.65	1.70	610.91
WASTE	2,348.96	0.96	1,879.17	0.96	3,421.99	1.73	-1,073.03	-2.28	1,542.82
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)	63,002.31	25.79	50,401.84	25.79	49,800.00	25.24	13,202.31	28.06	-601.84
AGRICULTURAL, FORESTRY AND LAND USE (AFOLU)	81,922.15	33.53	65,537.72	33.53	57,105.33	28.95	24,816.82	52.75	-8,432.39
TOTAL	**244,326.22**	**100.00**	**195,460.98**	**100.00**	**197,282.04**	**100.00**	**47,044.18**	**100.00**	**1,821.07**

- **Reference Emissions:** Reference emissions represent the emissions from each sector for the year 2022, presented both in absolute values and as percentages.
- **Reference Emission Reduction Target:** The reference target for emission reduction indicates the emissions for each sector under an 80% reduction. This goal sets the necessary reduction for each sector by the year 2035.
- **Emissions Targeted by the Action Plan:** The emissions managed by the action plan include all emission reductions for each sector, according to the objectives set in the current action plan.
- **Residual Emissions:** Residual emissions refer to the emissions remaining for each sector after the implementation of all interventions in the action plan. These remaining emissions must be mitigated by other means.
- **Exceeding the Target Value:** “Exceeding the Target Value” represents the difference between the emission reductions achieved through actions in each sector and the target reduction value.

Thus, after implementing the actions proposed in this plan, the following conclusions can be drawn:

➔ The planned actions for the Buildings sector exceed the 80% reduction target by 8,701.56 tons of CO2.

➔ The planned actions for the Transport sector exceed the 80% reduction target by 610.91 tons of CO2.

➔ The planned actions for the Waste sector exceed the 80% reduction target by 1,542.82 tons of CO2.

➔ The planned actions for the IPPU sector do not reach the 80% reduction target by 601.84 tons of CO2.

➔ The planned actions for the AFOLU sector do not reach the 80% reduction target by 8,432.39 tons of CO2

Consequently, **the actions in the Climate Neutrality Action Plan correspond to a total CO2 reduction of 80.75% by 2035 compared to the year 2022, exceeding the 80% target by 0.75%.**

CURRENT POLICIES AND STRATEGIES

Provide a short contextual presentation and assessment of the policies, strategies, initiatives, and / or regulations at the local, regional and national levels which are relevant to the city's transition towards climate neutrality.

Table 8 - RELEVANT POLICIES, STRATEGIES, INITIATIVES, REGULATIONS

TYPE	LEVEL	TITLE	DESCRIPTION	RELEVANCE	NEED FOR ACTION
STRATEGY	LOCAL	INTEGRATED URBAN DEVELOPMENT STRATEGY FOR 2021-2027	Defines Buzău's vision for sustainable development under the concept of "Buzău – Magnet City", focusing on economic growth, environmental sustainability, and social well-being. It promotes green mobility, energy efficiency, and urban resilience.	Provides the strategic foundation for Buzău's transition to climate neutrality by integrating sustainability into urban planning and infrastructure projects.	Ensure that all urban development initiatives align with climate neutrality targets, particularly in transportation, housing, and public space design.
PROGRAM	LOCAL	"GREEN SMART CIRCULAR BUZĂU" – CONCEPT DEVELOPMENT PLAN	A program aimed at transforming Buzău into a leader in circular economy practices, integrating smart city technologies to reduce waste, optimize resource use, and improve energy efficiency.	Directly supports waste reduction, resource efficiency, and smart urban solutions that contribute to lower emissions and a more sustainable economy.	Strengthen policy enforcement and expand public-private partnerships to accelerate circular economy initiatives, including waste-to-energy solutions and industrial symbiosis.
STRATEGY	LOCAL	STRATEGY FOR TRANSITION TO THE CIRCULAR ECONOMY IN BUZĂU MUNICIPALITY 2020 – 2030	Establishes a roadmap for transitioning Buzău's economy from a linear to a circular model, focusing on recycling, sustainable production, and responsible consumption.	Reduces environmental pressure by minimizing waste, promoting green jobs, and ensuring efficient use of materials and energy.	Increase investment in circular economy infrastructure, particularly in waste separation, composting facilities, and eco-innovation for businesses.
ACTION PLAN	LOCAL	SUSTAINABLE URBAN MOBILITY PLAN (SUMP)	Aims to improve sustainable transport in Buzău	Addresses the city's high reliance on cars, which	Accelerate the implementation of electric public

		BUZĂU 2021-2027	by enhancing public transit, expanding cycling and pedestrian infrastructure, and reducing private car dependency.	contributes significantly to GHG emissions and air pollution.	transport, improve bike lane connectivity, and introduce incentives for sustainable commuting.
STRATEGY	**LOCAL**	**SMART CITY STRATEGY FOR BUZĂU MUNICIPALITY**	Outlines a digital transformation plan for Buzău, integrating smart infrastructure, data-driven governance, and IoT solutions to optimize urban services.	Supports real-time monitoring of emissions, smart energy management, and efficient mobility solutions, all contributing to climate action.	Expand smart sensors for air quality and traffic monitoring, and develop integrated platforms for tracking energy use and CO_2 emissions.
ACTION PLAN	**LOCAL**	**SUSTAINABLE ENERGY AND CLIMATE ACTION PLAN (SECAP) 2021-2027**	Defines Buzău's energy transition strategy, focusing on increasing renewable energy adoption, improving energy efficiency, and reducing carbon emissions in buildings and industry.	Aligns with EU climate targets, ensuring Buzău contributes to national and international commitments for emission reduction.	Enhance funding opportunities for renewable energy projects, increase energy efficiency programs for public and residential buildings, and develop district heating alternatives.
STRATEGY	**COUNTY**	**SUSTAINABLE DEVELOPMENT STRATEGY OF BUZĂU COUNTY 2021–2027**	Framework document defining the county's vision for 2021–2027, sectoral priorities, and strategic objectives. Covers infrastructure, environment, economy, health, education, and rural development. Includes a SWOT analysis and identifies challenges related to climate change, energy, and sustainability.	Sets the strategic county-level framework for environmental and energy policies, including energy efficiency and emissions reduction objectives. Supports green infrastructure and sustainable mobility projects aligned with climate neutrality goals. Creates synergies between municipal and county projects, facilitating funding and integrated implementation of	- Align PANC projects with county strategic directions; - Identify projects eligible for county or EU funding; - Develop monitoring indicators compatible with the county strategy.

				actions.	
STRATEGY	**COUNTY**	**INTEGRATED DEVELOPMENT AND TOURISM PROMOTION STRATEGY OF BUZĂU COUNTY 2021–2030**	Sectoral strategy aimed at sustainable use of natural and cultural heritage, development of tourism infrastructure, and increasing the county's attractiveness. Includes resource analysis, tourist routes, and proposed investment projects for sustainable tourism.	Supports green and eco-tourism initiatives, minimizing environmental impact. Contributes to reducing the carbon footprint of tourism through recommendations for transport and infrastructure. Promotes local community engagement, consistent with participatory principles in PANC.	- Integrate sustainable tourism projects into PANC (e.g., bike lanes, electric transport for tourists); - Collaborate with local tourism agencies and environmental NGOs for joint projects; - Monitor environmental impact of tourism and adjust emission reduction strategies.
STRATEGY	**REGIONAL**	**SOUTH-EAST REGIONAL DEVELOPMENT PLAN (PDR) 2021–2027**	Strategic framework of the South-East Region outlining regional development priorities in economic, social, and environmental domains. Includes territorial needs assessment, infrastructure, environment, tourism, energy, and innovation.	Provides the eligibility framework for regional climate transition projects. Supports green infrastructure, renewable energy, and sustainable mobility projects. Aligns Buzău county and municipality with EU decarbonization and climate neutrality objectives.	- Integrate local projects into the PDR axes to access regional and EU funding; - Align local indicators with regional monitoring requirements; - Identify synergies with other municipalities for joint green infrastructure projects.
OPERATIONAL PROGRAM	**REGIONAL**	**SOUTH-EAST REGIONAL PROGRAM (PR SE) 2021–2027**	Operational program managing EU funds for infrastructure, environment, economy, digitalization, and urban development. Includes eligibility rules and project guidelines for regional and local initiatives.	Main funding source for climate transition projects: energy efficiency, green transport, and urban regeneration. Encourages public-private partnerships and innovative projects.	- Monitor relevant calls for proposals and prepare applications aligned with PANC; - Develop projects meeting sustainability and innovation criteria; - Establish an internal project management system for efficient

					implementation.
STRATEGY	**REGIONAL**	**SOUTH-EAST SMART SPECIALIZATION STRATEGY (RIS3) 2021–2027**	Strategy defining regional priority areas for innovation and competitiveness, including energy, IT, agriculture, and industry. Promotes collaboration among universities, companies, and local authorities.	Supports development of green technologies and smart-city solutions for climate transition. Provides opportunities for private investment and partnerships with academia for innovative projects.	- Integrate innovative projects into PANC (e.g., smart energy solutions, digital mobility systems); - Collaborate with universities and research centers to test and implement green solutions; Promote local clusters in renewable energy and green technologies to attract funding and expertise.
STRATEGY	**NATIONAL**	**NATIONAL INTEGRATED PLAN FOR ENERGY AND CLIMATE CHANGE 2021 – 2030 (NIPECC)**	The National Plan for Energy and Climate Change was adopted in 2019 and was formulated in accordance with the EU energy policy framework, detailing the main objectives for 2030.	According to the Plan, Romania aims to increase its share of energy from renewable sources in the total energy consumption by 2030 by increasing the installed capacity of wind and photovoltaic plants (additional capacities of 6.9 GW from renewable sources compared to 2015), as well as by increasing the number of prosumers.	The Climate Neutrality Action Plan is aligned with the objectives of the NIPECC in terms of reducing GHG emissions and increasing the capacity of renewable energy generation, accelerating the process of achieving the national targets.
POLICY	**NATIONAL**		The first Urban Policy of Romania was adopted in 2021, transposing the new Leipzig Charter through its four objectives	The second priority of the RUP is 'Creating liveable and climate-smart cities, by developing green-	Interventions included in the Action Plan for the transition to climate neutrality are aligned with the objectives and

		ROMANIA URBAN POLICY 2022-2035 (RUP)	(green & resilient, just & inclusive, competitive & productive & well governed cities).	blue infrastructure to mitigate and adapt to urban risks'. The RUP includes a variety of measures related to the climate adaptation and mitigation, reducing air pollution and improving sustainable urban Mobility, with a 2035 target.	priorities of the Urban Policy of Romania.
STRATEGY	**NATIONAL**	**LONG TERM STRATEGY OF ROMANIA**	According to the Romania Neutral scenario, which is the chosen one, Romania aims at becoming climate neutral in 2050, reaching 99% net emission reduction in 2050, compared to the 1990 level.	Romania has already started the decarbonization process by reducing net emissions by 62% in 2019 compared to 1990. However, further efforts are needed for reaching carbon neutrality in 2050, by first reaching the 2030 milestone of 78% emission reduction, relative to the 1990 level.	From the analysed sectors: energy, transportation, buildings, industry, agriculture, LULUCF and waste, only 4 have reached their Sectoral targets and milestones by 2019. The domains that still need to take immediate measures as to ensure the desired goal are: transportation, buildings and waste.

ACTION PORTOFOLIO

For each action aimed at achieving climate neutrality as outlined in this Plan, fill out a sheet using the template provided below.

➔ **Make sure to also include, within this section, the actions pertaining to Organisational and Governance Innovation, as well as the actions related to Social and Other Innovation fields.**

Table 9 - INDIVIDUAL ACTIONS

ACTION TITLE	**Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Public buildings
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings
COVERED INTERVENTIONS	• Thermal insulation upgrade • High-efficiency HVAC systems • LED lighting replacement • Solar photovoltaic system installation • Geothermal heating/cooling systems • Smart energy management systems • Circular economy measures (material reuse, waste reduction)
BRIEF DESCRIPTION	This project proposes a comprehensive approach to improving energy efficiency and implementing non-polluting electricity generation systems in public buildings, including healthcare, educational, cultural, sports, and administrative facilities. The initiative will focus on modernizing infrastructure through the upgrade of thermal insulation, lighting, and HVAC systems, as well as the installation of renewable energy technologies such as solar photovoltaic panels, geothermal systems, and other clean energy solutions. In alignment with the principles of the circular economy, the project will emphasize sustainable resource use throughout all phases of planning, construction, and operation. This includes maximizing material reuse and recycling, minimizing waste generation, and promoting energy and resource efficiency across the lifecycle of the buildings. By reducing greenhouse gas emissions and decreasing dependency on fossil fuels, this initiative aims to create a model for sustainable public infrastructure, contributing to environmental goals, operational cost savings, and long-term resilience of public services. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	The project will result in a significant reduction in energy consumption and greenhouse gas emissions across targeted public buildings, achieved through the adoption of high-efficiency systems and renewable energy sources. Additionally, the integration of circular economy practices will reduce

ACTION TITLE	**Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)**
	material waste and increase the lifespan and sustainability of building components. Public institutions will benefit from lower operational costs, improved indoor environmental quality, and enhanced energy independence. The project will also serve as a replicable model for sustainable public infrastructure, fostering environmental awareness and encouraging similar initiatives at the local, regional, and national levels.
RESPONSIBLE ENTITY / BODY / PERSON	Buzau Municipality **Department of Investment, Procurement, and Externally Funded Programs Department** Responsible for overseeing the technical planning, execution, and supervision of construction, renovation, and installation works in public buildings. This department ensures all infrastructure upgrades meet energy efficiency and sustainability standards. Leads the integration of circular economy principles and environmental compliance. It monitors greenhouse gas emissions, waste management, and resource efficiency throughout the project lifecycle. Coordinates implementation within sector-specific public facilities. This department ensures minimal disruption to services and supports awareness and training initiatives within each facility. Facilitates the integration of smart energy monitoring systems and supports data collection for energy performance and emissions tracking. **Department of Finance and Budget** Manages project funding and cost tracking. It ensures efficient allocation of resources, financial transparency, and coordination with external funding bodies. **Department of Urban Planning and Development** Provides support in aligning building renovations with municipal development plans, zoning regulations, and urban sustainability goals.
INVOLVED STAKEHOLDERS	Public Sector Stakeholders • Municipality (Local Government) – Project owner and main decision-maker. • Relevant Municipal Departments – As previously listed: Public Works, Environment, Finance, etc. • Regional/Provincial Authorities – Oversight, co-financing, or coordination with regional policies. • National Ministries – Ministries of Energy, Environment, Infrastructure, or Economy for regulatory compliance, funding, or technical guidelines. • Public Facility Administrators – Managers of schools, hospitals, cultural centers, etc., where upgrades will be implemented. Technical and Implementation Stakeholders • Engineering and Architecture Firms – Design and planning of energy and structural upgrades. • Construction and Retrofit Contractors – Execution of works. • Renewable Energy System Suppliers – Providers of solar panels, heat pumps, etc. • Energy Service Companies (ESCOs) – May offer performance-based contracting solutions. • Waste Management and Recycling Companies – For material recovery and circular economy

ACTION TITLE	**Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)**
	practices. Financial and Institutional Stakeholders • Funding Agencies / Donors – EU funds, national green funds, climate investment platforms, etc. • Banks and Green Finance Institutions – Loans or green bonds for infrastructure improvements. • Auditors and Monitoring Agencies – For tracking impact, compliance, and financial integrity. Community and Civil Society Stakeholders • Facility Users (students, patients, staff) – End-users of improved infrastructure. • Local NGOs / Environmental Organizations – Supporting community engagement, awareness campaigns, or sustainability oversight. • Citizens and Local Residents – Beneficiaries of improved public services and reduced local pollution. • Local Businesses – Suppliers of sustainable materials or services, potential job creation. Knowledge and Innovation Stakeholders • Universities and Research Institutions – For technical studies, monitoring, and innovation support. • Vocational Training Centers – For workforce development in green construction and maintenance. • Technology Providers – Offering energy management systems, sensors, or data platforms.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	448.22 tCO2/year from the Buildings sector .
% OF TOTAL CO2 REDUCTION	0.18 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	Solar energy
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Buildings: ▪ 566.04 MWh/year of electrical energy (Scope 2); ▪ 1,577.89 MWh/year of thermal energy (Scope 2);
TIMELINE (START AND END)	2024 - 2030

ACTION TITLE	**Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)**
TYPE OF ACTION	Technical intervention

ACTION TITLE	**Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)**
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Public buildings
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings
COVERED INTERVENTIONS	• Thermal rehabilitation (insulation, windows, facades) • Replacement of outdated heating/cooling systems (heat pumps, biomass boilers, renewable integration) • Electrical system modernization • Heating, ventilation, and air conditioning (HVAC) upgrades • Water system renovation (pipes, fittings, water-saving devices) • Integration of smart energy management systems • Circular economy measures (reuse of materials, reduction of waste)
BRIEF DESCRIPTION	Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings refers to a set of coordinated interventions aimed at improving the energy performance, comfort, and sustainability of buildings such as schools, cultural institutions, sports facilities, and administrative offices. Modernization of energy sources: Replacing old, polluting, or inefficient heating and cooling systems with cleaner and more efficient alternatives, such as heat pumps, biomass boilers, or connection to renewable energy sources mainly solar. Upgrading interior installations: Renovating or replacing outdated electrical, heating, ventilation, and water systems to ensure safety, energy efficiency, and better indoor environmental quality. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	Significant Reduction in Energy Consumption Lower Greenhouse Gas Emissions Increased Comfort and Indoor Air Quality Modernized Public Infrastructure Reduced Operational Costs for Public Authorities Support for the Local Green Economy Aligns with national and EU energy performance directives. Supports urban decarbonization, climate adaptation, and smart city development.
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsibilities of the Investment, Procurement, and Externally Funded Programs Department – Buzău Municipality As the lead coordinating body for energy efficiency and modernization projects in public buildings, the department plays a central role throughout the entire project lifecycle. Its core responsibilities include: 1. Strategic Planning and Project Development 2. Funding Acquisition and Management - Identify and secure funding sources from European Union programs, national funds, and other international financing

ACTION TITLE	**Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)**
	sources 3. Public Procurement Coordination- Design and launch transparent procurement procedures for technical design, works, supervision, and equipment supply in accordance with public procurement law 4. Project Implementation Oversight - Coordinate and supervise all stages of project execution, in collaboration with technical teams, contractors, and consultants 5. Facilitate communication among municipal departments, educational and cultural institutions, local communities, and private sector partners 6. Monitoring, Evaluation, and Reporting- Track and report on project progress, performance indicators (e.g., energy savings, emissions reduction), and financial execution
INVOLVED STAKEHOLDERS	The multi-stakeholder approach ensures a coordinated, inclusive, and sustainable implementation of energy modernization projects, aligned with both technical objectives and community needs. **Buzău Municipality** • **Lead authority and project owner.** • Responsible for strategic planning, coordination, and oversight. • Key departments involved: o *Investment, Procurement, and Externally Funded Programs Department* o *Urban Planning and Environment Department* o *Technical Services / Public Works Department* **Public Institutions (Beneficiaries)** • **End users and operational managers** of the buildings targeted for intervention. • Include: o Schools and kindergartens o Cultural centers, libraries, and museums o Sports halls and recreational facilities o Administrative buildings They support project implementation by providing access, data, and operational input. **Contractors and Technical Experts** • **Designers, engineers, construction companies, and technical supervisors** o Responsible for conducting energy audits, preparing technical documentation, executing works, and ensuring compliance with standards. o May include energy service companies (ESCOs), especially in performance-based contracts. **Funding Sources, Bodies and Institutions** • Provide financial resources and oversee compliance with financing rules: o EU funding bodies (e.g., Regional Operational Program, NRRP) o National investment funds (e.g., Ministry of Development, Ministry of Energy) o International financial institutions (e.g., European Investment Bank) **Citizens and Civil Society** • Residents, parent associations, NGOs, and user groups who: o Benefit from improved public infrastructure o Contribute to social acceptance and behavioral change o Participate in consultation and awareness activities

ACTION TITLE	**Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)**
	Academic and Vocational Institutions • May contribute through: o Technical expertise (e.g., energy modeling, smart systems) o Vocational training for workers and building operators o Community outreach or public awareness campaigns **Utility and Energy Providers** • Companies delivering heat, electricity, and energy services to public buildings • Key in coordinating connection to new energy sources or systems (e.g. district heating, solar, smart metering)
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	330 tCO2/year from the public Buildings sector.
% OF TOTAL CO2 REDUCTION	0.14 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Buildings: ▪ 279.25 MWh/year of electrical energy (Scope 2); ▪ 1,354.50 MWh/year of thermal energy (Scope 2);
TIMELINE (START AND END)	ON going End: 2030

ACTION TITLE	**Implementing a only LED street lighting system**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Public street lighting infrastructure
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Urban infrastructure / Public services / Energy
COVERED INTERVENTIONS	• Replacement of ~5,600 existing streetlights with high-efficiency LED luminaires • Installation of smart control systems (dimming, motion sensors, telemanagement) • Development of a solar energy field to fully power municipal infrastructure, including street

ACTION TITLE	**Implementing a only LED street lighting system**
BRIEF DESCRIPTION	lighting • Integration with grid systems and renewable energy management • Expansion of lighting to unserved areas • Decommissioning and recycling of old lighting equipment Implementing an LED-only street lighting system involves replacing traditional streetlights (5600 spots) with high-efficiency LED luminaires across public roads, parks, and public spaces. This upgrade significantly reduces energy consumption, lowers maintenance costs, and improves public safety through better light quality and durability. The system also integrates smart controls—such as dimming, motion sensors, or remote monitoring—enhancing operational efficiency and contributing to the city's climate and energy goals. **Also, street lighting system will be powered by a newly developed solar energy field that will cover the entire electricity demand of the municipal infrastructure.** This combined initiative will drastically reduce the city's energy consumption and carbon footprint by replacing outdated lighting with energy-efficient LED technology, while ensuring that all municipal electricity needs—including public lighting, administrative buildings, and public services—are met through clean, renewable solar energy. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	The main outcome of implementing an LED-only lighting system is a substantial reduction in energy consumption and CO_2 emissions, leading to lower public spending on electricity and maintenance, improved lighting quality and safety in public areas, and enhanced support for the city's environmental and smart city objectives. The outcome is a modern, sustainable, and cost-effective energy system that enhances public safety, supports climate neutrality goals, and strengthens the city's energy independence.
RESPONSIBLE ENTITY / BODY / PERSON	This multi-departmental and multi-actor structure ensures accountability, technical quality, and alignment with Buzău's broader sustainability goals. 1. Buzău Municipality – Lead Authority • General coordination and strategic oversight • Ensures integration into urban development and climate strategies 2. Investment, Procurement, and Externally Funded Programs Department • Project management, procurement, funding applications, and compliance • Coordinates contracts for both the solar field and LED lighting system 3. Technical Services / Public Works Department/ Energy and Environmental Department • Technical supervision of works related to public lighting infrastructure • Manages integration of LED systems into existing lighting network • Oversight of solar field implementation and performance • Monitors energy generation, grid integration, and environmental compliance 4. Contractors and Technical Consultants • Engineering, design, construction, and installation of the solar park and LED lighting • Ensure compliance with energy efficiency and safety standards 5.Funding and Regulatory Bodies o EU programs (e.g., NRRP, Regional Operational Programme) o National environmental or energy agencies o Grid operator (for solar field connection)

ACTION TITLE	**Implementing a only LED street lighting system**
INVOLVED STAKEHOLDERS	Local Community and Residents • End beneficiaries of improved public lighting, safety, and reduced emissions Academic and Innovation Partners (Optional) • Universities or research centers may provide: o Technical validation o Monitoring and data analysis o Training and innovation support Environmental and Urban Sustainability Advocates • Local NGOs or urban development associations may support: o Public communication o Independent monitoring o Alignment with broader climate and sustainability initiatives Electricity Distribution System Operator (DSO) • Facilitates grid connection • Coordinates metering and energy balance • Ensures system stability and compliance with technical standards Contractors and Technical Service Providers • Engineering, design, construction, and commissioning Buzău Municipality • Primary initiator and owner of the project
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	637.80 t CO2/year from the street lighting system.
% OF TOTAL CO2 REDUCTION	0.26%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Street lighting system: 2,406.80 MWh/year of electrical energy (Scope 2);
TIMELINE (START AND END)	On going Project already started in 2023 So far, more than half of the light points in the lighting system have already been replaced and the telemanagement system has been implemented. The end of the complete replacement of the lighting system, which also includes the expansion of the system where it does not exist and the connection to the photovoltaic panel field that will provide power, is the end 2028.

ACTION TITLE	**Green energy production through the construction of a photovoltaic panel park in Buzău Municipality**
TYPE OF ACTION	Technical intervention

ACTION TITLE	**Green energy production through the construction of a photovoltaic panel park in Buzău Municipality**
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	**Municipal Level**: The project will be implemented citywide, covering all public lighting infrastructure and municipal buildings requiring energy. **Energy Generation**: The solar field will be sized to cover the entire energy demand of the municipality's public services, including street lighting, municipal buildings (e.g., schools, administrative offices, sports centers), and public facilities. Municipality's Residents: Public Institutions and Facilities: Energy Service Providers: Government and Regulatory Bodies: Environmental and Civic Organizations: NGOs and Community Groups: Local organizations focusing on sustainability, environmental awareness, or urban development can play a key role in promoting and advocating for the project within the community. • Citizens: Involved through consultations, education campaigns, and raising awareness of the benefits of energy-efficient lighting and clean energy solutions.
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings / Public infrastructure
COVERED INTERVENTIONS	• Construction of a municipal photovoltaic (PV) panel park • Installation of energy storage systems • Grid connection and integration for public services • Supply of renewable energy to public lighting, schools, administrative buildings, sports centers, and other municipal facilities
BRIEF DESCRIPTION	GREEN ENERGY PRODUCTION THROUGH THE CONSTRUCTION OF A PHOTOVOLTAIC PANELS PARK IN THE MUNICIPALITY OF BUZAU" Renewable energy sources and energy storage through investments in new renewable electricity generation capacities for self-consumption for public entities. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	**Newly installed capacity of energy production from renewable sources** = 3.531 [MWp]; **Annual reduction of greenhouse gas emissions (estimated annual decrease in greenhouse gas emissions)** = 4,530 MWhe/year*0.6119 tons CO2/MWhe = 2,771.91 [equivalent tons CO2/year]; **Average electricity production from renewable sources** = 4,530 [MWh/year]; **Total electricity production from renewable sources for the reference period** = 4,530 MWhe/year *20 years = 90,600 [MWh] used 100% for own consumption. **Plant capacity factor** = 4,530/3,531*8,760*100 = 14.64[%].
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality – Lead Authority • General coordination and strategic oversight

ACTION TITLE	**Green energy production through the construction of a photovoltaic panel park in Buzău Municipality**
INVOLVED STAKEHOLDERS	• Ensures integration into urban development and climate strategies 2. Investment, Procurement, and Externally Funded Programs Department • Project management, procurement, funding applications, and compliance • Coordinates contracts for the solar field system 3. Technical Services / Public Works Department/ Energy and Environmental Department • Technical supervision of works • Manages integration of the systems • Oversight of solar field implementation and performance • Monitors energy generation, grid integration, and environmental compliance 4. Contractors and Technical Consultants • Engineering, design, construction, and installation of the solar park • Ensure compliance with energy efficiency and safety standards 5.Funding and Regulatory Bodies o EU programs (e.g., NRRP, Regional Operational Programme) o National environmental or energy agencies o Grid operator (for solar field connection) **This stakeholder structure supports effective implementation, long-term sustainability, and community engagement.** **1.Buzău Municipality** • **Project Owner and Lead Authority** o Oversees the strategic vision, coordinates all phases of project implementation, and ensures long-term operation and integration of the solar park into municipal infrastructure. **Investment, Procurement, and Externally Funded Programs Department (Municipality)** • **Primary Implementing Department** o Manages project preparation, funding applications, procurement procedures, contractor selection, and reporting to financing bodies. **2. Technical and Public Works Department** • Provides technical oversight for site preparation, infrastructure integration, and energy connection works. **3. Solar Energy Design & Construction Contractors** • **Private engineering and construction companies** responsible for: o Technical design and execution of the photovoltaic park o Installation of energy storage systems o Grid connection and compliance with national energy regulations **4. Energy Distribution System Operator (DSO)** • Ensures: o Grid connection approval o Technical compatibility o Monitoring of energy flow and metering for self-consumption setup **5. Funding Agencies and Financial Institutions** • May include: o European Union programs (NRRP) o National public investment funds (Ministry of Energy, Ministry of Environment) **6.Public Entities (Beneficiaries)** • **Municipal institutions that will directly consume the generated electricity**, including: o Schools, kindergartens, administrative buildings o Sports and cultural centers o Public lighting and public service facilities

ACTION TITLE	**Green energy production through the construction of a photovoltaic panel park in Buzău Municipality**
	• These entities will benefit from reduced electricity bills and increased energy resilience. **7. Regulatory Authorities** • **ANRE** (National Energy Regulatory Authority): Provides licensing, compliance oversight, and technical approvals • **Environmental Protection Agency (EPA)**: Ensures environmental impact compliance during construction and operation phases **8. Smart City and IT Department (if applicable)** • May be involved in integrating the energy system into municipal energy monitoring or smart grid platforms. **9. Civil Society and Local Community** • As ultimate beneficiaries, the community gains: o Cleaner air o Reduced municipal energy costs (enabling reinvestment in public services) o Increased awareness of local renewable energy initiatives
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	2,798 t CO2/year from the Public Buildings.
% OF TOTAL CO2 REDUCTION	1.15 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	4.530 MWh/year of electricity could be generated as part of the investment.
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Buildings: Approximately 4.530 MWh/year of electricity under Scope 2
TIMELINE (START AND END)	2025-2026

ACTION TITLE	**Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Public buildings (educational institutions, administrative offices, cultural centers, sports facilities)
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings / Public services / Energy

ACTION TITLE	**Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property**
COVERED INTERVENTIONS	• Installation of smart electricity meters in educational institutions and public buildings • Implementation of energy management software for real-time consumption monitoring • Integration with building management systems (BMS) where applicable • Automatic alerts for abnormal consumption patterns or equipment malfunctions • Data analysis to optimize energy use, improve efficiency, and guide future upgrades
BRIEF DESCRIPTION	The smart monitoring system for electrical consumption in Buzău Municipality's public buildings involves installing advanced metering infrastructure in schools, kindergartens, administrative offices, cultural centers, and sports facilities. These smart meters provide real-time data on energy usage, enabling building managers and municipal authorities to track consumption, detect inefficiencies, and optimize energy use. By integrating the system with centralized energy management platforms, the municipality can conduct detailed analyses, identify saving opportunities, and inform decision-making on retrofits or behavior change programs. This intervention not only improves operational efficiency but also contributes to the city's broader decarbonization and smart city goals. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	• Improved energy management and operational efficiency in public buildings • Reduced electricity consumption and lower energy bills • Decrease in CO_2 emissions from municipal operations • Enhanced ability to detect and resolve inefficiencies or technical issues • Data-driven decision-making for future energy-saving investments • Increased awareness and engagement of building users around energy conservation
RESPONSIBLE ENTITY / BODY / PERSON	1. **Buzău Municipality – Lead Authority** • Oversees integration into citywide energy and sustainability strategies 2. **Investment, Procurement, and Externally Funded Programs Department** • Manages procurement, funding, and compliance processes 3. **Technical Services / Public Works Department / Energy and Environmental Department** • Supervises technical implementation and ensures proper integration • Oversees monitoring system performance, data analysis, and reporting 4. **IT Department / Digital Transformation Unit (if applicable)** • Supports software integration and cybersecurity 5. **Contractors and Technology Providers** • Supply, install, and commission smart meters and related systems • Provide training to municipal staff and building managers
INVOLVED STAKEHOLDERS	• **Public Institution Managers and Staff (End Users)** Provide operational input, respond to alerts, and implement corrective measures • **Building Occupants (Teachers, Students, Public Employees)** Participate in awareness campaigns and behavioral change initiatives • **Technology Providers / Contractors** Deliver smart metering hardware, software, and technical support • **Academic and Innovation Partners** Support data analysis, performance benchmarking, and public reporting • **Utility Companies and DSO** Facilitate data exchange, metering accuracy, and grid coordination

ACTION TITLE	**Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property**
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	708.90 t CO2/year from the Buildings sector.
% OF TOTAL CO2 REDUCTION	0.29%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Buildings: 2,675.08 MWh/year of electrical energy under Scope 2
TIMELINE (START AND END)	2030

ACTION TITLE	**Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Moderate Energy Renovation of 10 Residential Blocks in Buzau Municipality, Integrated Renovation of 30 Residential Blocks in Buzau Municipality is a part of a long process of energy renovation and consolidation of residential buildings in Buzau Municipality. The Municipality of Buzau intends to implement such projects for at least 45% of the number of apartment buildings in the Municipality of Buzau by 2035. Till 2025 we have implemented or we have projects on going for 60 units.
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings / Residential sector / Energy
COVERED INTERVENTIONS	• Thermal insulation of façades, roofs, and basements • Modernization of heating, ventilation, and cooling systems • Installation of energy-efficient windows, doors, and lighting • Deployment of rooftop solar panels and energy storage systems • Installation of electric vehicle (EV) charging infrastructure • Seismic strengthening and in-depth structural consolidation
BRIEF DESCRIPTION	Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings involves upgrading residential structures to reduce energy consumption and environmental impact. This includes thermal insulation of building envelopes, modernization of heating and cooling systems, installation of energy-efficient windows and lighting, and integration of renewable energy sources such as rooftop solar panels and charging stations for

ACTION TITLE	**Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings**
	electric vehicles. The goal is to enhance indoor comfort, lower energy bills, and reduce greenhouse gas emissions, contributing to a cleaner, more sustainable urban living environment. An important element in these projects, considering that Buzau Municipality is located in a seismic risk area, is the strengthening of the building structure through in-depth consolidation. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	Significant reduction in energy consumption • Through improved insulation, efficient systems, and smart energy use in residential buildings. Lower greenhouse gas emissions • Due to the use of renewable energy (e.g., rooftop solar), energy-efficient equipment, and electrification of heating/cooling. Enhanced structural safety and resilience • In-depth consolidation of buildings improves safety and extends the lifespan of housing stock, especially critical in seismic risk zones like Buzău. Improved living comfort and air quality • Better indoor thermal conditions, reduced noise, and healthier environments for residents. Reduced utility costs for residents • Lower heating, cooling, and electricity bills through self-consumption of green energy and more efficient building systems. integration of clean technologies • Includes renewable electricity generation (solar panels), energy storage, and electric vehicle charging infrastructure. Increased value and attractiveness of residential neighborhoods • Contributing to urban regeneration and raising the quality of life. Contribution to municipal and national climate and energy targets • Supporting decarbonization, energy independence, and resilience objectives.
RESPONSIBLE ENTITY / BODY / PERSON	**Buzău Municipality – Lead Authority** **Investment, Procurement, and Externally Funded Programs Department** • Project management, procurement, funding applications, and compliance • Coordinates contracts for the solar field system **Technical Services / Public Works Department/ Energy and Environmental Department** • Technical supervision of works • Manages integration of the systems • Oversight of solar field implementation and performance • Monitors energy generation, grid integration, and environmental compliance **Contractors and Technical Consultants** • Engineering, design, construction, and installation of the solar park • Ensure compliance with energy efficiency and safety standards **Funding and Regulatory Bodies** o EU programs (e.g., NRRP, Regional Operational Programme, National energy consolidation and efficiency program PCCRS) o National environmental or energy agencies o Grid operator (for solar field connection)
INVOLVED STAKEHOLDERS	The main stakeholders include Buzău Municipality, which coordinates and oversees implementation; its technical departments, responsible for planning, procurement, and supervision; residents and

ACTION TITLE	**Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings**
	homeowners' associations, who authorize and benefit from the upgrades; construction and energy service providers, who carry out the rehabilitation and installation works; renewable energy technology suppliers, who provide and maintain clean energy systems; funding and regulatory bodies, which ensure financial support and legal compliance; and local community organizations, which support communication, awareness, and civic engagement throughout the process.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	4,137.08 t CO2/year from the Buildings sector.
% OF TOTAL CO2 REDUCTION	1.69 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	1,440 MWh/year of electricity could be generated as part of the investment.
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Buildings: ▪ 13,584.91 MWh/year of electrical energy (Scope 2); ▪ 2,841.67 MWh/year of thermal energy (Scope 2);
TIMELINE (START AND END)	2023-2035

ACTION TITLE	**Implementation of a waste-to-energy system for organic waste**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scale of the Project • Municipal Scale: o The project will operate across the entire city, integrating into the municipal waste management and energy systems. • Waste Input Scale: o Targets all organic waste streams from households, public institutions, markets, parks, and food service businesses. • Energy Output Scale: o The system will generate enough biogas and electricity to support local facilities (e.g., schools, municipal buildings, or district heating) or feed into the public grid. • Circular Economy Integration: o Combines waste reduction, renewable energy production, and reuse of by-products (e.g., compost or digestate for urban agriculture and urban green spaces). **Target Group (Addressed Entities)** Residents and Households • Key participants in the source separation of organic waste

ACTION TITLE	**Implementation of a waste-to-energy system for organic waste**
	• Indirect beneficiaries through improved waste services and energy savings Public Institutions • Schools, hospitals, administrative buildings, and cultural centers generate significant organic waste • May use the recovered energy or compost for own needs (e.g., heating, green spaces) Local Markets, Restaurants, and Businesses • Major generators of biodegradable waste • Required to comply with separate collection, contributing to consistent feedstock for the energy system Urban Agricultural Sector • May supply organic waste (e.g., crop residues) • Potential users of the compost or digestate produced Municipal Departments • Waste Management Department: Implements separate collection and logistics • Environmental Department: Ensures regulatory compliance and monitors environmental impact • Energy and Infrastructure Departments: Integrate energy output into municipal systems General Public and Civil Society • Beneficiaries of cleaner air, reduced landfill use, and climate action • Targeted by education campaigns to ensure correct waste separation
FIELD OF ACTION	**ENERGY SYSTEMS**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Waste sector • Buildings (via heat/electricity supply) • Energy systems
COVERED INTERVENTIONS	• Collection and separate management of organic waste • Construction of waste-to-energy plant (e.g., anaerobic digestion or thermal treatment) • Production of biogas, electricity, and/or heat • Use of by-products as fertilizer or soil conditioner • Grid connection or integration with municipal energy systems
BRIEF DESCRIPTION	Implementation of a waste-to-energy system for organic waste involves collecting biodegradable waste (such as food scraps, green waste, and other organic materials) and converting it into usable energy—typically electricity, heat, or biogas—through processes like anaerobic digestion or thermal treatment. This approach reduces landfill use, cuts greenhouse gas emissions, and creates renewable energy, contributing to a circular economy and more sustainable urban waste management. This action will also include continuous training programs for municipal staff and systematic collaboration with external experts to support implementation and monitoring.
OUTCOME	Reduces landfill volume and extends landfill lifespan Cuts methane emissions from decomposing organic waste Generates renewable energy (biogas, electricity, heat) for local use Lowers waste management and energy costs for the municipality Produces valuable byproducts, such as organic fertilizer or digestate

ACTION TITLE	**Implementation of a waste-to-energy system for organic waste**
	Supports the circular economy and improves resource efficiency
RESPONSIBLE ENTITY / BODY / PERSON	**1**. Buzău Municipality (Lead Authority) • Overall project coordination and oversight • Ensures alignment with municipal sustainability, waste management, and energy strategies • Facilitates communication between stakeholders and supports decision-making Investment, Procurement, and Externally Funded Programs Department • Responsible for procurement and project funding • Oversees grant applications, tendering processes, and financial management • Ensures compliance with national and EU funding regulations Waste Management Department • Manages the collection and separation of organic waste • Coordinates logistics and ensures that the organic waste is properly segregated and delivered to the waste-to-energy facility • Collaborates with local businesses and residents to implement source separation of organic waste 2.Contractors and Technology Providers • Design, construct, and operate the waste-to-energy facility • Provide and install equipment for waste processing, energy generation (e.g., biogas plants), and energy storage • Responsible for system maintenance and ensuring the facility operates efficiently 3.Environmental Protection and Regulatory Authorities • Ensures environmental compliance with waste treatment and energy production standards • Monitors the facility's environmental impact, including emissions, waste by-products, and resource recovery • Issues necessary permits for the construction and operation of the system 4. Funding and Regulatory Bodies • EU and national programs (e.g., NRRP, European Investment Bank, Ministry of Environment) may provide financial support or oversight • Local, regional, and international stakeholders may contribute funding or expertise 5.Community Stakeholders (Residents, Local Businesses, NGOs) • Community education and participation in organic waste segregation and collection • Local businesses, especially in food service, markets, and agriculture, will also be key partners in waste generation and cooperation
INVOLVED STAKEHOLDERS	Buzău Municipality – Project coordination, integration into waste and energy strategies Waste Management Department – Collection, logistics, and operational oversight, Compliance with environmental and sustainability regulations Technology Providers and Contractors – Design, construction, and operation of the waste-to-energy facility Energy Companies/Utilities – Grid integration and energy distribution Funding Agencies (EU/national) – Financial support and investment oversight Citizens and Local Businesses – Source of organic waste and beneficiaries of cleaner energy and improved waste services Environmental NGOs and Community Groups – Public engagement, awareness, and monitoring
GHG EMISSIONS REDUCTION ESTIMATE	2,500 tCO2/year (1,100 tCO2/year from the Buildings sector | 1,400 tCO2/year from the Waste sector).

ACTION TITLE	**Implementation of a waste-to-energy system for organic waste**
(TOTAL) PER EMISSION SOURCE SECTOR	
% OF TOTAL CO2 REDUCTION	1.02 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Buildings: ▪ 2641.50 MWh/year of electrical energy (Scope 2); ▪ 2116.40 MWh/year of thermal energy (Scope 2); Waste: ▪ 5,283.02 MWh/year of electrical energy (Scope 2);
TIMELINE (START AND END)	2025-2028

ACTION TITLE	**Urban Traffic Optimization and Heavy Vehicle Diversion Plan**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	1. Residents and Commuters in Buzău Municipality o Scale: The entire population of Buzău, particularly those living in or near the city center o Description: Directly impacted by traffic flow improvements, better air quality, and a more sustainable urban mobility system o Objective: To improve the daily commuting experience and quality of life for residents through reduced congestion, improved infrastructure, and better environmental conditions 2. Heavy Vehicle Operators and Transport Companies o Scale: Large vehicles with a maximum authorized weight over 3.5 tons o Description: Those who will be impacted by the new entry fee system for heavy vehicles, as well as the re-routing plan that eliminates their transit through the city center o Objective: To encourage compliance with entry fees, promote safer routes for heavy traffic, and reduce the environmental impact of heavy vehicles in urban areas 3. Local Businesses and Commercial Entities o Scale: Local businesses located in the city center or those reliant on transportation for goods delivery o Description: Will benefit from reduced traffic congestion and improved air quality, enhancing the overall business environment o Objective: To ensure smooth operation of businesses through better traffic conditions and the potential for more pedestrian-friendly spaces 4. Municipal Traffic Management and Law Enforcement o Scale: Traffic police, urban planners, and municipal authorities responsible for managing traffic flow and ensuring compliance with new systems

ACTION TITLE	**Urban Traffic Optimization and Heavy Vehicle Diversion Plan**
	o Description: These entities will manage the traffic re-routing, monitor traffic behavior, and enforce new entry fee systems for heavy vehicles o Objective: To maintain public safety, enforce the traffic policies effectively, and ensure smooth implementation of traffic changes 5. Online Payment System Users o Scale: Vehicle owners, primarily those driving vehicles over 3.5 tons, who will use the new online payment system o Description: Individuals or businesses whose vehicles exceed 3.5 tons and need to pay the entry fee digitally o Objective: To streamline the payment process for vehicle entry into the city and reduce administrative burden 6. Tourists and Visitors o Scale: Visitors to the city, especially those arriving by car or heavy vehicle o Description: They will benefit from a clearer, easier entry system through the online payment application, and reduced traffic congestion will improve the overall experience of the city o Objective: To ensure better urban mobility and ease of access for visitors and tourists, while maintaining a smooth flow of traffic
FIELD OF ACTION	**MOBILITY AND TRANSPORT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Transport • Energy (indirect, through reduced fuel use and congestion) • Air quality (co-benefits on NOx, PM, etc.)
COVERED INTERVENTIONS	• Intelligent traffic management systems • Road and signalization improvements • Rerouting of heavy vehicles • Online payment system for city entry fees • Infrastructure adjustments (e.g., bypasses, signage)
BRIEF DESCRIPTION	This plan focuses on enhancing traffic flow and reducing congestion on the urban road network within Buzău Municipality. It involves analyzing traffic patterns, identifying key areas for improvement, and implementing measures such as better signalization, road expansions, and intelligent traffic management systems to ensure smoother traffic movement and improved safety. Also, Buzau Municipality aims to eliminate transit traffic and heavy vehicles from the city's inner areas. By re-routing transit and heavy vehicle traffic to bypass roads outside the city, the plan will reduce congestion, improve air quality, and increase safety for residents. It will also involve better signage, road adjustments, and enforcement measures to encourage compliance. Through Online Payment Application for City Entry Fees for Vehicles Over 3.5 Tons Buzau Municipality aims to develop an online application allowing vehicles with a maximum authorized weight over 3.5 tons to pay their city entry fees digitally. The system will streamline the payment process, reduce administrative burden, and ensure efficient management of traffic entering the city, particularly for heavy-duty vehicles. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.

ACTION TITLE	**Urban Traffic Optimization and Heavy Vehicle Diversion Plan**
OUTCOME	Improved Traffic Flow: Reduced congestion and smoother traffic movement across the urban road network. Enhanced Road Safety: Fewer accidents and better road conditions due to optimized traffic management. Environmental Benefits: Lower vehicle emissions due to more efficient circulation and less idling in traffic. Time Savings for Commuters: Shorter travel times and increased efficiency in urban mobility. Better Infrastructure Utilization: Optimized use of existing road infrastructure through smart management and traffic control. Reduced Congestion in City Center: The removal of through traffic and heavy vehicles from city streets will reduce bottlenecks in urban areas. Improved Air Quality: Less traffic in the city center will reduce pollution and contribute to better air quality. Enhanced Quality of Life for Residents: Reduced noise and air pollution in residential areas, creating a more livable urban environment. Safety Improvements: Fewer heavy vehicles in the city will reduce the risk of accidents involving pedestrians and smaller vehicles. Rejuvenation of Urban Spaces: Reduced traffic can help in repurposing city center areas for pedestrian-friendly spaces, parks, or community areas. Convenience for Vehicle Owners: Easy online payment system reduces the need for physical visits to city offices, saving time and effort. Efficient Fee Collection: Streamlined payment process ensures that entry fees are collected more efficiently and accurately. Data-Driven Decision-Making: Digital payments enable better tracking of heavy vehicle traffic and revenue generation, facilitating future urban planning. Improved Traffic Management: The system will provide better control over the entry of heavy vehicles into the city, contributing to smoother circulation. Reduced Administrative Burden: Reduced paperwork and manual processing for municipal staff.
RESPONSIBLE ENTITY / BODY / PERSON	1. Buzău Municipality (Lead Authority) o Overall project coordination and oversight o Ensures alignment with the municipality's strategic objectives for urban mobility, road safety, and environmental sustainability 2. Traffic and Public Works Department o Implementation of traffic management measures o Responsible for road infrastructure upgrades, signalization, and coordination of traffic re-routing o Design and implementation of new systems (e.g., online payment platforms) 3. Department of Investments, Procurement, and Externally Funded Programs o Manages the procurement process, including the selection of contractors for traffic infrastructure projects o Oversees the acquisition of funding and ensures compliance with funding regulations and deadlines 4. Police Department (Traffic Police) o Enforcement of traffic laws, particularly for the removal of heavy vehicles and through traffic from urban areas o Manages traffic control during construction or re-routing phases 5. Environmental Department o Monitors the environmental impact of traffic changes, ensuring compliance with air quality regulations o Provides input on sustainability aspects related to the reduction of vehicle

ACTION TITLE	**Urban Traffic Optimization and Heavy Vehicle Diversion Plan**
	emissions and pollution 6. IT and Digitalization Department (for the online payment system) o Develops and maintains the online payment platform for heavy vehicle entry fees o Ensures that the system is user-friendly, secure, and integrates with existing municipal systems
INVOLVED STAKEHOLDERS	1. Residents and Commuters o Key participants in the reduced congestion and improved quality of life resulting from the optimized traffic system and reduction of heavy vehicles in city areas o Will also be the users of the online payment application for heavy vehicles 2. Local Businesses and Commercial Entities o Businesses located in urban centers that will benefit from reduced congestion and improved air quality o Transport companies and heavy goods carriers who will be affected by re-routing and the introduction of entry fees 3. Construction and Engineering Contractors o Responsible for designing and implementing infrastructure changes (e.g., road modifications, new traffic systems, and online payment applications) o Will also provide ongoing maintenance services for new systems or infrastructure 4. Public Transport Providers o Bus operator who will be involved in ensuring public transport lanes are maintained and integrated with the re-routing plans o Will work alongside the municipality to facilitate smooth transitions for public transport users 5. Technology and Payment System Providers o IT companies responsible for designing, deploying, and maintaining the online payment system for heavy vehicles o They ensure secure and efficient payment processes for users entering the city 6. Funding Bodies (EU Programs, National Ministries) o Provide financial support for the infrastructure development and digital transformation required for these plans, especially if the project is funded through EU grants or national funds 7. Traffic and Environmental Regulators o Ensure that all traffic management measures are in compliance with national and EU traffic laws, safety standards, and environmental regulations o Oversee air quality assessments related to traffic changes 8. Citizens' Associations and Local NGOs o Advocate for public consultation and community engagement, ensuring that local residents are informed and involved in the process o Monitor the long-term benefits of reduced congestion and pollution
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	563.83 t CO2/year from the Transport sector.
% OF TOTAL CO2 REDUCTION	0.23%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-

ACTION TITLE	**Urban Traffic Optimization and Heavy Vehicle Diversion Plan**
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport ▪ 1,985.01 MWh/year diesel from Scope 1; ▪ 113.22 MWh/year gasoline from Scope 1; ▪ 14.64 MWh/year GPL from Scope 1; ▪ 8.51 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2025-2030

ACTION TITLE	**Integrated portal for active urban mobility**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Commuters (Residents) • Scale: The entire urban population, particularly those who rely on daily transportation for work, school, or other essential activities. • Description: o Primary Audience: Residents of Buzău who use a combination of public transport, private vehicles, cycling, and other urban mobility solutions. o Needs: They seek convenience, cost-effective solutions, real-time information, and seamless access to various transport services in one integrated platform. o Objective: To improve daily commute experience, reduce dependency on private cars, and encourage sustainable, multimodal transportation choices. Public Transport Users • Scale: All individuals using buses, bicycles, or other public transport services. • Description: o Primary Audience: Buzău residents who regularly depend on buses for commuting within the city. o Needs: Access to real-time updates, multi-route and multi-mode transport options, easy payment systems, and seamless transfers between different transport modes. o Objective: To make public transport more accessible, efficient, and user-friendly through a single app for planning, booking, and paying for trips. Cyclists and Pedestrians • Scale: Urban residents who use bicycles or walk for short-distance trips or leisure activities. • Description: o Primary Audience: People who prefer environmentally friendly travel options such as cycling or walking. o Needs: Information on safe routes, bike-sharing systems, parking, and proximity to public transport stations. Integration of walking and cycling routes into the MaaS platform will offer better navigation and user experience. o Objective: To promote active travel modes, enhance cycling infrastructure, and encourage healthier, environmentally sustainable urban mobility. Drivers • Scale: Residents who own personal vehicles or use car-sharing services • Description: o Primary Audience: Those who drive or rely on car-sharing services for flexible travel within the city. o Needs: Real-time traffic data, availability of car-sharing options, parking management, and seamless integration with public transport routes.

ACTION TITLE	**Integrated portal for active urban mobility**
	o Objective: To offer alternatives to personal car usage, reduce traffic congestion, and provide more sustainable options such as car-sharing. Tourists and Visitors • Scale: Visitors to Buzău, including tourists and short-term residents who require easy access to local transportation. • Description: o Primary Audience: Non-residents who may need to explore the city using a combination of public transport, bike-sharing, or car rental. o Needs: A simple, accessible platform that provides detailed information about available transport modes, booking, and payment services, as well as tourist-specific features like point-of-interest maps. o Objective: To facilitate easy, integrated transport for tourists and visitors to help them navigate the city more efficiently. Local Businesses and Employees • Scale: Businesses located within the city that require employees and customers to commute. • Description: o Primary Audience: Employees, business owners, and managers who use or promote alternative transportation methods to reduce traffic congestion and environmental impact. o Needs: A unified system for employees and customers to access and plan their commuting, including incentive programs for using sustainable transport modes. o Objective: To improve overall transportation efficiency for employees, reduce costs related to parking and congestion, and encourage sustainability through corporate mobility programs. Mobility Service Providers • Scale: All operators providing transport services such as public transport companies, car-sharing services, bike-sharing providers, and ride-hailing apps. • Description: o Primary Audience: Companies that offer transportation services in Buzău (e.g., buses, taxis, bikes). o Needs: Integration into the MaaS platform for better visibility, streamlined booking systems, and more efficient service delivery. o Objective: To improve service efficiency and customer satisfaction by integrating all transport modes into one platform, enabling users to easily switch between services. Urban Planners and Transport Authorities • Scale: Local and regional government agencies responsible for planning and managing urban transportation infrastructure. • Description: o Primary Audience: Municipal authorities and urban planners who design, implement, and monitor the city's transport network. o Needs: Access to data analytics from the MaaS system to understand travel patterns, optimize transport services, and plan future developments based on demand. o Objective: To support data-driven decisions for optimizing the transportation network, improving service delivery, and ensuring sustainable urban development.
FIELD OF ACTION	**MOBILITY AND TRANSPORT**

ACTION TITLE	**Integrated portal for active urban mobility**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Mobility sector emissions
COVERED INTERVENTIONS	• Public transport optimization • Integration of bike-sharing, e-parking, e-ticketing systems • Real-time multimodal travel planning • Smart traffic management • Seamless payment solutions across modes
BRIEF DESCRIPTION	The MaaS initiative aims to streamline and integrate various forms of urban mobility (public transportation, bicycles, parking, etc.) into one accessible, user-friendly digital platform. This system will target a diverse group of city inhabitants, providing them with seamless access to all urban mobility services through a single integrated portal, helping them to make informed, efficient transportation choices. This MaaS initiative is a holistic urban mobility solution that caters to multiple user groups while encouraging sustainable transportation and easing the urban transportation ecosystem. The electronic public transport platform is designed to ensure the integrated management of information used in the public transport sector, including the creation of an urban mobility application for the citizens of Buzău Municipality. The electronic platform will serve to aggregate data from all systems, equipment, and both mobile and fixed applications that are components of the public transport system and associated urban mobility systems. This will support the promotion and development of public transport and alternative mobility solutions. Thus, the electronic platform will integrate data received from at least the following intelligent transport systems: • Public Transport Management System (data on routes, timetables, vehicle fleet, real-time position of public transport vehicles, and the location and facilities of public transport stations); • E-ticketing System (data on system components, passenger numbers per route, time of day, and segments of specific routes, as well as the number of passengers boarding at each public transport station, and other relevant information); • Intelligent Traffic Management System (real-time traffic data, positions of public transport vehicles, and locations where public transport vehicles are given priority); • Bike-Sharing System (data on bike-sharing station locations, number of bicycles per station, number of rentals per station broken down by hour, day, location, and other relevant details); • E-parking System (data on parking areas, available spaces, occupancy rates, and other relevant information). Therefore, the electronic platform plays a crucial role in integrating and analyzing relevant public transport data and will provide outputs that serve both the public authorities and the public transport operator, as well as the citizens of the municipality. It will also act as a decision-support tool, enabling the evaluation of the implementation of specific measures, actions, or projects. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	Sustainability: Reduced carbon emissions due to increased use of shared and non-motorized transport (bikes, walking, car-sharing). Convenience: A seamless and efficient travel experience with a single access point for all mobility services. Cost Efficiency: More cost-effective travel options for users, with potential for reduced personal car

ACTION TITLE	**Integrated portal for active urban mobility**
	use and savings on parking, fuel, and maintenance. Inclusivity: Improved access to mobility services for all demographics, including tourists, elderly, and people with disabilities. Reduced Congestion: With more people adopting multi-modal transport options, there will be a reduction in road congestion and pressure on public transport infrastructure.
RESPONSIBLE ENTITY / BODY / PERSON	These are the core municipal and institutional entities directly responsible for the planning, development, deployment, and management of the platform: 1. Buzău Municipality o Departments Involved: ▪ Department for Investment, Procurement, and Externally Funded Programs ▪ Transport and Mobility Department ▪ IT and Digital Transformation Department o Role: Project owner and coordinator; manages public procurement, external financing, implementation oversight, interdepartmental coordination, and citizen engagement. 2. Public Transport Operator (TransBus) o Role: Provides operational data (routes, vehicles, schedules), manages fleet integration, and oversees ticketing and real-time monitoring systems. 3. Traffic Management Department / Local Police (Traffic Division) o Role: Integrates real-time traffic data, ensures prioritization of public transport, and coordinates smart traffic light systems. 4. Technical Implementation Partner / IT Systems Integrator o Role: Designs, builds, and maintains the digital platform, ensures system interoperability, and provides ongoing technical support. 5. Urban Mobility Planning Monitoring structure o Role: Aligns platform objectives with urban mobility strategies and transport planning.
INVOLVED STAKEHOLDERS	These are the key parties whose activities, data, and interests are either directly involved in or impacted by the project: 1. Citizens of Buzău o End users of the mobility app and beneficiaries of improved services and information access. 2. Public Transport Operators and Drivers o Stakeholders in terms of service optimization, real-time communication, and passenger data analytics. 3. Bike-Sharing and E-Mobility Service o Provide real-time usage data and integrate services into the platform. 4. Private Tech and Mobility Companies o app developers, data aggregators, and providers of IoT devices (e.g., for e-ticketing, sensors, GPS units). 5. Parking Operators (Public or Private) o Integrate parking occupancy data and support digital payment and availability tracking. 6. Retailers, Business Associations, and Commuters o Indirect beneficiaries due to improved access to mobility information, which can boost customer flow and employee punctuality. 7. NGOs

ACTION TITLE	**Integrated portal for active urban mobility**
	o Collaborators in awareness, transparency, accessibility, and inclusive urban mobility. 8. Educational Institutions and Research Bodies o Provide expertise in data analysis, smart mobility, and support pilot testing and innovation. 9. Regional and National Transport Authorities o Ensure coordination with national smart mobility policies and can support through funding or regulation. 10. EU Funding NRRP
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	140.96 t CO2/year from the Transport sector.
% OF TOTAL CO2 REDUCTION	0.06%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport ▪ 496.25 MWh/year diesel from Scope 1; ▪ 28.30 MWh/year gasoline from Scope 1; ▪ 3.66 MWh/year GPL from Scope 1; ▪ 2.13 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2025–2030

ACTION TITLE	**A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	City-wide intervention targeting residents, visitors, businesses, and commuters, particularly in the central area of Buzău
FIELD OF ACTION	**MOBILITY AND TRANSPORT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Transport and Mobility
COVERED INTERVENTIONS	The project involves transforming Nicolae Bălcescu Boulevard into a sustainable urban corridor by prioritizing pedestrian and cyclist mobility, integrating smart urban solutions, and enhancing green infrastructure. Key interventions include: • Expanding pedestrian walkways with diverse textures and smart street furniture

ACTION TITLE	**A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard**
BRIEF DESCRIPTION	• Developing a dedicated, separated bicycle lane with glow-in-the-dark pavement • Constructing a pedestrian underpass to improve connectivity between Crâng Park and the central area • Creating thematic public spaces, including outdoor gyms, an open-air exhibition area, interactive children's playgrounds, and adaptable plazas • Implementing bioswale systems to manage rainwater and promote on-site reuse • Integrating smart urban features such as intelligent lighting, kinetic paving, and digital installations to encourage sustainable urban mobility and social interaction The project aims to create a sustainable, accessible, and vibrant urban corridor along Nicolae Bălcescu Boulevard, enhancing connectivity between Crâng Park and the city center. By prioritizing active mobility, green infrastructure, and smart urban elements, the intervention seeks to reduce car dependency, improve air quality, and offer multifunctional public spaces that encourage outdoor activities and community engagement. Total **existing** intervention area = 42,652.45 sqm, of which: • Carriageway area = 6,843.5 sqm • Pedestrian and cycling area = 8,861.6 sqm • Green space area = 26,947.35 sqm **Proposed solution** reorganizes public space and consists of: • An interactive playground for children with an area of 848 m^2 • An outdoor gym area with an area of 543 m^2 • An open-air exhibition plaza with an area of 282.4 m^2 • An educational plaza focused on sustainability with an area of 633.3 m^2 • A multifunctional public plaza with an area of 1,346.2 m^2 • Pedestrian walkways: 13,036.44 m^2 • Bicycle lanes: 433.10 linear meters • Green spaces: 23,314.82 m^2 • Underground pedestrian passage: 33.9 linear meters This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	A more pedestrian- and cyclist-friendly urban space, reduced car dependency, improved connectivity between Crâng Park and the city center, increased public engagement with outdoor spaces, enhanced green infrastructure, and better management of rainwater runoff.
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality, Department of Urban Planning and Mobility
INVOLVED STAKEHOLDERS	Local government, urban mobility experts, architects and urban planners, environmental organizations, businesses, cultural institutions (Buzău County Museum), residents, and civil society groups
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	422.87 t CO2/year from the Transport sector.

ACTION TITLE	**A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard**
% OF TOTAL CO2 REDUCTION	0.17 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport ▪ 1,488.76 MWh/year diesel from Scope 1; ▪ 84.91 MWh/year gasoline from Scope 1; ▪ 10.98 MWh/year GPL from Scope 1; ▪ 6.38 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2030

ACTION TITLE	**Expand public transportation infrastructure and services**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	• **Scale:** Entire city of Buzău, including suburban and peri-urban areas. • **Target groups and description:** 1. **Citizens and Daily Commuters** o **Primary audience:** Residents commuting daily for work, education, or services. o **Needs:** Reliable, efficient, and clean public transport; access to electric buses; seamless connections at intermodal hubs. o **Objective:** Improve access to sustainable transport, reduce reliance on private cars. 2. **Private Car Users (especially suburban commuters)** o **Primary audience:** Residents from peri-urban areas commuting by car. o **Needs:** Park & Ride facilities, easy transfers to public transport. o **Objective:** Reduce city-center congestion, cut emissions. 3. **Cyclists and Pedestrians** o **Primary audience:** Active mobility users near hubs. o **Needs:** Safe access, bike parking, integration with public transport. o **Objective:** Promote multimodal and active transport. 4. **Local Businesses and Employers** o **Primary audience:** Companies and their employees. o **Needs:** Better employee access, predictable commuting times. o **Objective:** Improve workforce mobility and city connectivity. 5. **Taxi and Ride-Sharing Companies** o **Primary audience:** Operators serving first/last mile. o **Needs:** Integration into transport hubs, designated areas. o **Objective:** Complement public transport, reduce short car trips. 6. **Logistics and Delivery Services** o **Primary audience:** Companies delivering goods in urban areas. o **Needs:** Less congestion, clear transport corridors. o **Objective:** Improve delivery efficiency, reduce environmental footprint. 7. **Public Health Institutions and Environmental NGOs** o **Primary audience:** Advocates for sustainable and healthy cities.

ACTION TITLE	**Expand public transportation infrastructure and services**
	o **Needs:** Reduced air/noise pollution, public engagement. o **Objective:** Improve public health outcomes. 8. **Educational Institutions and Urban Mobility Researchers** o **Primary audience:** Research and academic sector. o **Needs:** Access to transport data, pilot project insights. o **Objective:** Provide analysis, improve policy.
FIELD OF ACTION	**MOBILITY AND TRANSPORT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Transport sector emissions • Air quality improvements • Noise pollution reduction
COVERED INTERVENTIONS	• Acquisition of sustainable vehicles (electric buses, microbuses) • Construction of intermodal transport hub and autobază • Installation of electric charging infrastructure • Park & Ride integration • Fleet management optimization • Smart mobility integration (real-time info, e-ticketing)
BRIEF DESCRIPTION	The Municipality of Buzău defines and implements the medium- and long-term strategy for the expansion, development, and modernization of local public passenger transport services by scheduled routes, taking into account urban planning and territorial development plans, as well as the municipality's socio-economic development programs. This is done based on knowledge of the demand for local public transport and its trends, while aiming to use transport means with low energy consumption and minimal carbon dioxide and pollutant emissions. Municipality has both the right and the obligation to intervene in order to ensure an efficient transport infrastructure that directly contributes to increasing the mobility of people and goods. When correlated with investments in other areas such as health, education, and social services, this contributes to enhancing the overall mobility and adaptability of the population to social needs and the local and regional labor market. Replacing conventional diesel buses with electric buses plays a key role in transforming urban mobility toward a cleaner, quieter, and more energy-efficient transport system. Buzau Municipality intends to replace the main fleet with electric buses till 2035. The total number of buses is in this moment of 135 buses (50 electric, 30 hybrids, 55 diesel). An intermodal transport hub acts as a strategic node where different modes of transport—public buses, bicycles, and personal vehicles—are seamlessly connected. The integration of a Park & Ride facility further enhances its utility. Also ensure a modern facility for the public transport operator. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	• Reduction of Greenhouse Gas Emissions: Electric buses significantly lower CO_2 and pollutant emissions, contributing to improved air quality and climate change mitigation. • Lower Operating Costs: Despite higher initial investment, electric buses have lower maintenance and energy costs over time.

ACTION TITLE	**Expand public transportation infrastructure and services**
	• Improved Public Health: Less air and noise pollution directly benefits public health, especially in densely populated urban areas. • Compliance with EU Sustainability Goals: Supports national and EU targets for sustainable urban mobility and environmental protection. • Enhanced Passenger Experience: Modern electric buses provide quieter, smoother rides, attracting more users to public transport. • Traffic Decongestion: Encourages commuters to leave their personal vehicles outside the city center, reducing inner-city traffic. • Reduced Pollution: Fewer cars in the urban core led to lower emissions and improved air quality. • Better Accessibility and Connectivity: Offers smooth, time-efficient transfers between transport modes, increasing the attractiveness of public transport. • Support for Smart Mobility: Enables digital solutions such as real-time transit information, e-ticketing, and electric vehicle (EV) charging, contributing to smart city development. • Inclusive Urban Development: Facilitates access to jobs, services, and education for a broader segment of the population, including suburban and rural residents.
RESPONSIBLE ENTITY / BODY / PERSON	These entities are directly responsible for planning, implementing, and operating the systems: 1. Buzău Municipality o Departments Involved: ▪ Investment, Procurement, and Externally Funded Programs Department ▪ Transport Department ▪ Urban Planning and Infrastructure Monitoring Structure o Role: Project owner; coordinates implementation, planning, procurement, and stakeholder engagement. 2. Local Public Transport Operator (TransBus) o Role: Operates and maintains the electric bus fleet; manages route planning, driver training, and vehicle scheduling. 3. Technical and Engineering Contractors o Role: Design and construct the intermodal hub and charging infrastructure; supply electric buses and related equipment. 4. Regional Development Agency / Managing Authority (EU-funded ROP) o Role: Provides funding, technical guidance, and ensures compliance with national and EU regulations. 5. Environmental and Energy Agencies (local/national) o Role: Provide guidance on emission
INVOLVED STAKEHOLDERS	These groups are either impacted by or contribute to the success of the projects: 1. Citizens and Daily Commuters o End beneficiaries of better, cleaner, and more accessible transportation options. 2. Private Car Users (especially suburban commuters) o Target group for park-and-ride facilities; key to reducing city-center traffic. 3. Cyclists and Pedestrians o Benefit from safer, integrated mobility infrastructure near hubs. 4. Local Businesses and Employers o Gain from improved employee access and citywide connectivity. 5. Taxi and Ride-Sharing Companies

ACTION TITLE	**Expand public transportation infrastructure and services**
	o May be integrated into the intermodal hub for first/last-mile connections. 6. Logistics and Delivery Services o Benefit from traffic decongestion and clearer priority transport corridors. 7. Public Health Institutions and Environmental NGOs o Advocate for and support clean air, low-emission mobility, and sustainable development. 8. Educational Institutions and Urban Mobility Researchers o Potential contributors to monitoring, data analysis, and policy feedback.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	845.74 t CO2/year from the Transport sector.
% OF TOTAL CO2 REDUCTION	0.35 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport ▪ 2,977.51 MWh/year diesel from Scope 1; ▪ 169.83 MWh/year gasoline from Scope 1; ▪ 21.97 MWh/year GPL from Scope 1; ▪ 12.77 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2023-2027

ACTION TITLE	**Smart Mobility Zone**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	**Pilot Scale (Short-Term)**: In the central business district or areas with high pedestrian traffic, public institutions, and commercial activity — ideal for testing electric buses, e-ticketing, and bike-sharing systems (Along with the mobility corridors _ Unirii Blvd – Transilvaniei Street, Industrial Area) **Intermediate Scale (Medium-Term)**: Extend to major residential neighborhoods, educational hubs, and healthcare centers with integrated mobility services like Park & Ride, e-charging stations, and real-time public transport monitoring (linked with the 4 of the main rural areas near Buzau City) **Citywide Scale (Long-Term)**: Cover the entire urban area with connected mobility nodes, fully integrated multimodal transport, and data platforms that guide public and private transport planning. Target Groups

ACTION TITLE	**Smart Mobility Zone**
	1. General Public / Commuters o Citizens who will benefit from faster, cleaner, more reliable transport options. o Encouraged to shift from private cars to public or shared transport. 2. Students and Young People o High mobility needs; more likely to adopt digital and sustainable travel habits (e.g., bike-sharing, MaaS apps). 3. Elderly and Persons with Reduced Mobility o Benefit from improved accessibility, low-floor buses, and safer infrastructure. 4. Private Vehicle Owners o Key target for modal shift campaigns; Park & Ride solutions and congestion zones incentivize reduced car use. 5. Tourists and Visitors o Simplified navigation through smart apps, mobility maps, and multilingual platforms. 6. Public Transport Operator o Use real-time data for route optimization, energy efficiency, and user experience. 7. Local Businesses and Logistics Providers o Benefit from reduced delivery delays and better transport access for customers and employees. 8. Urban Planners and Policymakers o Use data from the smart mobility zone to inform transport strategies and investments. 9. Technology Providers & Startups o Develop and deploy innovative solutions like mobility apps, sensors, and traffic analysis tools. 10. Environmental and Public Health Institutions • Monitor air quality, emissions, and mobility patterns to support health-focused urban planning.
FIELD OF ACTION	**MOBILITY AND TRANSPORT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Transport • Energy Use in Urban Infrastructure • Public Services and Infrastructure
COVERED INTERVENTIONS	• Introduction of electric buses and vehicles • Smart traffic and mobility management systems • Digital ticketing and mobility apps • Deployment of mobility-as-a-service (MaaS) platforms • Expansion of pedestrian and cycling infrastructure • Construction of charging stations and mobility hubs
BRIEF DESCRIPTION	Smart Mobility Zone refers to a designated urban or peri-urban area where innovative, technology-driven, and sustainable transport solutions are implemented and integrated to improve mobility, reduce congestion, and minimize environmental impact. These zones are designed to optimize the movement of people and goods through the use of intelligent transportation systems (ITS), real-time data, and low- or zero-emission transport options.

ACTION TITLE	**Smart Mobility Zone**
	Key Features of Smart Mobility Zone: • Integrated Multimodal Transport: Seamless coordination between public transport, bike-sharing, walking paths. • Digital Infrastructure: Use of apps, smart sensors, GPS, and IoT to provide real-time information on traffic, parking, vehicle location, and service availability. • Low-Emission and Green Mobility: Promotion of electric vehicles (buses, cars, bikes), pedestrian-friendly infrastructure, and clean energy solutions. • Smart Traffic Management: Use of AI and data analytics to regulate traffic flow, prioritize public transport, and reduce congestion. • Data-Driven Decision Making: Continuous collection and analysis of mobility data to improve services and policy-making. • User-Centric Services: Mobile applications that allow trip planning, digital ticketing, mobility-as-a-service (MaaS), and feedback mechanisms. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	Reduce air pollution and noise in urban areas Improve transport efficiency and accessibility Encourage a modal shift from private cars to sustainable alternatives Support local climate and energy goals Enhance the quality of urban life and public space
RESPONSIBLE ENTITY / BODY / PERSON	These are the entities directly involved in planning, implementing, and managing the Smart Mobility Zone: 1. Buzău Municipality o Investment, Procurement, and Externally Funded Programs Department: Manages funding, tendering, and project oversight. o Coordinates physical infrastructure upgrades (e.g., smart intersections, mobility hubs). o Leads planning and integration of smart mobility solutions. o Responsible for integrating digital platforms, mobile apps, and data collection systems. 2. Local Public Transport Operator (TransBus) o Implements digital systems (e-ticketing, GPS tracking). o Operates electric or low-emission public transport vehicles within the zone. 3. Traffic Police / Local Law Enforcement o Ensures enforcement of traffic regulations, restricted zones, and safe mobility for all users. 4. Regional Development Agency / EU Managing Authority o Provides guidance, monitoring, and financial support
INVOLVED STAKEHOLDERS	These actors influence or are impacted by the implementation: 1. Citizens and Daily Commuters o Primary users of improved public transport, mobility apps, and shared systems.

ACTION TITLE	**Smart Mobility Zone**
	2. Private Transport Users o Targeted for behavior change toward public or shared transport. 3. Cyclists and Pedestrians o Benefit from safer infrastructure and expanded access. 4. Tech and Mobility Startups / IT Providers o Offer solutions for MaaS platforms, smart traffic signals, and sensor systems. 5. Public and Private Transport Providers o May include ride-sharing companies, e-scooter operators, and taxi services. 6. Educational Institutions and NGOs o Contribute to public awareness, behavior change campaigns, and policy feedback. 7. Local Businesses and Retailers o Benefit from better access and foot traffic in low-emission, walkable zones. 8. Environmental and Health Agencies o Monitor environmental impacts and support sustainable development goals. 9. National Authorities (Ministry of Transport, Environment, Digitalization) o May provide strategic alignment, legal frameworks, and technical support.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	493.35 t CO2/year from the Transport sector.
% OF TOTAL CO2 REDUCTION	0.20 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport ▪ 1,736.88 MWh/year diesel from Scope 1; ▪ 99.07 MWh/year gasoline from Scope 1; ▪ 12.81 MWh/year GPL from Scope 1; ▪ 7.45 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2025-2030

ACTION TITLE	**Charging stations for electric vehicles in Buzău Municipality**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	The project will be scaled in two main directions: • Urban-Wide Infrastructure: 45 strategically located public charging stations in high-traffic or high-demand areas. • Residential Integration: Charging stations at each retrofitted apartment block, ensuring residents of energy-efficient buildings have easy access to sustainable mobility solutions. This dual approach creates a citywide EV ecosystem that supports both public use and private ownership.

ACTION TITLE	**Charging stations for electric vehicles in Buzău Municipality**
	Target Groups (Addressed Entities) 1. Residents of Buzău, particularly those in retrofitted housing blocks. 2. Electric vehicle owners and future buyers — by improving charging availability. 3. Private transport users — encouraged to switch from fossil fuel vehicles. 4. Visitors and commuters — able to access charging stations in public areas. 5. Delivery and logistics companies — encouraged to transition to EV fleets. 6. Real estate developers — incentivized to integrate EV readiness in new or renovated properties.
FIELD OF ACTION	**MOBILITY AND TRANSPORT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Transport • Energy Use in Urban Infrastructure
COVERED INTERVENTIONS	• Public EV charging infrastructure development • Integration of EV charging with residential energy retrofit programs • Grid connection and infrastructure upgrades • Digital monitoring and payment platforms • Future integration with renewable energy systems (e.g., solar panels on buildings)
BRIEF DESCRIPTION	The Municipality of Buzău is implementing a strategic project to install 45 electric vehicle (EV) charging stations throughout the city, with additional stations installed for each retrofitted residential block under ongoing energy efficiency projects. This initiative supports the city's transition toward sustainable urban mobility, aligning with national and EU climate goals. Importance of the Project: • Encourages the adoption of electric vehicles by addressing "range anxiety" and improving charging accessibility. • Supports air quality improvement by reducing emissions from traditional vehicles. • Complements broader municipal initiatives in energy efficiency, renewable energy, and smart mobility. • Contributes to building a green and future-ready transport ecosystem in Buzău This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	Expanded EV Charging Infrastructure across the city. Increased Adoption of Electric Vehicles by both residents and visitors. Improved Air Quality and Reduced Carbon Emissions from urban transport. Greater Integration of Sustainable Energy Use, especially when paired with solar power or energy-efficient buildings. Enhanced Urban Attractiveness and alignment with EU Green Deal and Fit for 55 targets.
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality • Investment and Externally Funded Programs Department – Project management and funding oversight. Planning and location strategy. Physical implementation and coordination with utilities.

ACTION TITLE	**Charging stations for electric vehicles in Buzău Municipality**
INVOLVED STAKEHOLDERS	Local Electricity Distribution Company (e.g., Electrica) • Provides grid access and technical support for charging station connection. Contracted Technical Firms / Installers • Responsible for installation, testing, and commissioning of charging stations.
	Citizens & EV Users – End-users of the infrastructure. Residential Associations – Key partners for installation at retrofitted blocks. Automotive Dealers / EV Manufacturers – Benefit from increased demand. Public Transport & Municipal Fleet Operators – May also access EV charging for e-fleet expansion. Local Businesses – May see increased foot traffic near charging stations. Environmental NGOs and Advocacy Groups – Support public awareness and engagement. EU or National Funding Agencies – project is funded via NRRP IT Platform Providers – For station monitoring, payment systems, and mobile app integration.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	493.35 tCO2/year from the Transport sector.
% OF TOTAL CO2 REDUCTION	0.20 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport ▪ 1,755.36 MWh/year diesel from Scope 1; ▪ 97.06 MWh/year gasoline from Scope 1; ▪ 2.16 MWh/year GPL from Scope 1;
TIMELINE (START AND END)	2024-2026

ACTION TITLE	**New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection- Pilot project**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	• Pilot Area: A vulnerable or newly regenerated urban neighborhood (e.g., part of an Urban Integrated Regeneration Area) Micro 14 area • Scale: 1–3 hectares or a defined urban block with significant stormwater/flooding challenges. • Phases: 1. Mapping and planning of green infrastructure. 2. Implementation of NbS and separate wastewater pipelines. 3. Monitoring and community feedback.

ACTION TITLE	**New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection- Pilot project**
	This limited-scale implementation will serve as a demonstration model for replicability citywide. Target Groups: Local Residents in the Pilot Area – Directly benefit from reduced flooding, greener surroundings, and better sanitation. Schools and Public Facilities Nearby – May engage in environmental education or host pilot installations (e.g., green roofs or gardens). Urban Planners and Environmental Engineers – Gain knowledge for future scaling. Future Developers and Contractors – Encouraged to adopt nature-based and separate systems in future projects.
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Water and Wastewater Management • Urban Green Infrastructure / Land Use • Energy Use in Utilities and Flood Control

COVERED INTERVENTIONS	• Nature-based solutions (NbS) for stormwater management:
	  o Rain gardens
	  o Bioswales
	  o Permeable pavements
	  o Green roofs
	  o Retention ponds and infiltration basins
	• Installation of a **dedicated wastewater network** separate from stormwater systems.
	• Upgrades to public infrastructure in pilot areas to increase flood resilience.
	• Real-time monitoring and performance evaluation systems.
	• Citizen engagement and awareness-building campaigns.

BRIEF DESCRIPTION	Buzău Municipality aims to implement a pilot project focused on nature-based solutions (NbS) for stormwater management, alongside the development of a separate infrastructure for wastewater collection. The project will apply green infrastructure practices—such as permeable surfaces, rain gardens, bioswales, and retention areas—to naturally absorb and filter rainwater, reducing urban flooding risks and pressure on the sewer system. Simultaneously, a dedicated and separate wastewater network will be developed to enhance water quality and sanitation. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	• Improved Urban Flood Resilience through reduced surface runoff and natural water absorption. • Enhanced Water Quality by separating clean stormwater from wastewater. • Reduced Pressure on Combined Sewer Systems, lowering overflow events during heavy rainfall. • Biodiversity and Urban Cooling Benefits from green infrastructure. • Demonstration of Sustainable Urban Drainage Systems (SUDS) for broader citywide implementation.

ACTION TITLE	**New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection- Pilot project**
RESPONSIBLE ENTITY / BODY / PERSON	1.Buzău Municipality • Public Works & Infrastructure Department – Oversees civil works and network separation. • Investment and Externally Funded Projects Department – Handles financing, tendering, and reporting. Project coordination, planning, and compliance 2.Buzău Water and Sewerage Company (Compania de Apă Buzău) • Designs and implements the separate wastewater network. • Provides expertise on water flow modeling and system integration. 3.Environmental Protection Agency (Local/Regional) • Ensures regulatory compliance and monitoring of environmental performance.
INVOLVED STAKEHOLDERS	Citizens and Community Associations – End users and contributors to awareness and stewardship. Local NGOs and Environmental Groups – Partners in community engagement and co-design. Urban and Landscape Architects / Engineering Firms – Design and implement NbS features. Educational Institutions – Involved in awareness, research, and local engagement. EU or National Funding Authorities (e.g., PNRR, AFM, POIM) – Potential project co-financers. Local Businesses – Especially those operating in flood-prone areas.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	71,144.90 tCO2/year: ▪ 44,422.67 t CO2/year from Buildings sector; ▪ 704.78 tCO2/year from Transport sector; ▪ 117.45 tCO2/year from Waste sector; ▪ 20,000.00 tCO2/year from IPPU sector; ▪ 5,900.00 tCO2/year from AFOLU sector.
% OF TOTAL CO2 REDUCTION	29.12%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action has not been calculated to eliminate or replace a specific type of energy, but rather to reduce CO_2 emissions from the total generated by the municipality, in direct proportion to the energy requirements of each sector. The estimates were made based on the initial assumptions of the project and its expected impact on reducing energy consumption in the relevant sectors. This allows for an integrated approach to emissions reduction within a more sustainable urban system.
TIMELINE (START AND END)	2026-2030

ACTION TITLE	**Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED	Pilot Area: A selected urban neighborhood or district with high residential density or public engagement potential.

ACTION TITLE	**Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms**
ENTITIES)	Pilot Phases: 1. Smart Bin Installation with IoT sensors and QR code scanners. 2. Setup of Free Recycling Collection Center with collection points for different recyclable materials. 3. Mobile App and QR Code System development for users to track their waste and recycling habits. 4. Data Monitoring & Collection for real-time feedback on waste levels and recycling behavior. Duration: 6-12 months for pilot phase, with monitoring, data collection, and evaluation of results to determine broader citywide application. Target Groups (Addressed Entities) • General Citizens and Households – Primary users of the waste collection and recycling services, benefiting from rewards and improved waste management. • Local Residents in Pilot Area – Early adopters who will experience the new collection system firsthand and influence the project's success. • School and Educational Institutions – Targeted for waste awareness campaigns and as collection hubs for educational programs. • Business Owners and Commercial Establishments – Encouraged to participate in recycling programs, especially those with high waste generation. • Tech-savvy Individuals – Users of the mobile app who actively engage with the system to track waste collection and recycling efforts.
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Waste Management and Recycling • Urban Transport and Logistics (due to optimized collection routes) • Digital Tools for Environmental Governance
COVERED INTERVENTIONS	• Deployment of IoT-enabled smart bins to monitor waste levels. • Use of QR codes for citizen interaction, data tracking, and reward distribution. • Launch of a Free Recycling Collection Center for paper, plastics, electronics, glass, and other recyclable waste streams. • Creation of a mobile application with user accounts, waste tracking, and gamified incentive mechanisms. • Development of data dashboards for municipal waste management departments to adjust routes, improve service efficiency, and plan future actions.
BRIEF DESCRIPTION	The Municipality of Buzău has under implementation a Smart IoT Waste Collection System aimed at optimizing waste collection services through technology. This system will use QR code readers and sensors to monitor waste bins in real-time, notifying waste collection teams when bins are full, and thereby enabling proactive waste collection. In parallel, a Free Recycling Collection Centre will be established, allowing citizens to drop off recyclable materials and receive eco-points via QR code scanning for rewards. All the technical details are already established through a Feasibility Study. This project offers long-term benefits for both the environment and the community, creating a more efficient, greener, and technology-driven urban waste management system.

ACTION TITLE	**Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms**
	This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	Optimized Waste Collection through real-time bin monitoring, reducing unnecessary pickups and improving operational efficiency. Increased Recycling Rates by providing a dedicated, easily accessible recycling hub and rewarding citizens for eco-friendly behavior. Reduction in Carbon Footprint due to fewer collection trips and more efficient logistics. Improved Public Awareness through QR code rewards and incentivized recycling behaviors. Cleaner, Greener City with better waste management and waste diversion to recycling facilities.
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality • Environment and Waste Management Department – Project coordination, planning, and execution. • Public Services & Infrastructure Department – Oversee bin installations, collection routes, and infrastructure setups. Buzău Waste Management Operator (RER SUD) • Waste Collection & Recycling Services – Coordinates the collection process and works with the IoT system for optimized routes and schedules. Technology & IoT System Provider • App Developers and IoT Equipment Suppliers – Responsible for the implementation of QR code systems, sensor technologies, and the mobile platform. Environmental Protection Agency • Ensures compliance with local and national environmental regulations and supports data monitoring for performance evaluation.
INVOLVED STAKEHOLDERS	Local Residents and Households – Primary participants who will benefit from efficient waste collection and recycling rewards. Schools, University, and NGOs – Key players in educational campaigns and promoting sustainable waste management practices. Private Sector Businesses (Retailers, Restaurants, etc.) – Encouraged to engage in recycling and waste reduction efforts, supporting local recycling goals. Local Community Centers & Public Institutions – Facilitate the collection of recyclable materials and community engagement. Technology Companies & Service Providers – Providers of IoT devices, mobile app developers, and QR code infrastructure. Municipal Transport and Logistics Operators – Involved in integrating data from IoT sensors into their collection logistics for optimized routes. EU and National Environmental Funds – NRRP
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	870 tCO2/year (320 tCO2/year from the Transport sector | 550 tCO2/year from the Waste sector).
% OF TOTAL CO2	0.36 %

ACTION TITLE	**Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms**
REDUCTION	
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Transport: ▪ 1,138.58 MWh/year diesel from Scope 1; ▪ 62.96 MWh/year gasoline from Scope 1; ▪ 1.40 MWh/year GPL from Scope 1; WASTE: ▪ 2,018.73 MWh/year diesel from Scope 1; ▪ 44.18 MWh/year gasoline from Scope 1;
TIMELINE (START AND END)	2025-2030

ACTION TITLE	**Market & Hub**
TYPE OF ACTION	Technical and Awareness Intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	City-wide; residents of Buzău, local businesses, entrepreneurs, and circular economy stakeholders
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
SYSTEMIC LEVER	Behavior Change, Technology/Infrastructure, Business Model Innovation
EMISSION DOMAIN(S)	• Waste Management and Recycling • Digital Tools for Environmental Governance
COVERED INTERVENTIONS	• Awareness and educational campaigns on selective waste collection for Buzău residents • Creation of an **Upcycle Mall** with shops, a **Repair Café**, and other circular economy businesses • Development of a hub for local sustainable businesses focused on upcycling, repair, and reuse • Implementation of a waste sorting and repurposing system within the facility • Community engagement through workshops, repair events, and sustainable product sales
BRIEF DESCRIPTION	The **Market & Hub** project integrates two key initiatives to promote a circular economy in Buzău. First, a large-scale awareness campaign will educate residents on selective waste collection, encouraging responsible disposal habits. Second, an **Upcycle Mall** will be established as a center for circular economy businesses, featuring repair workshops, second-hand stores, and sustainable product vendors. This hub will serve as a community space for innovation, education, and green entrepreneurship.

ACTION TITLE	**Market & Hub**
	This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	• Increased awareness and participation in selective waste collection • Reduction of waste sent to landfills through reuse and repair • Economic growth in the circular economy sector • Strengthened local engagement in sustainability practices • New business opportunities for sustainable entrepreneurs
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality • Environment and Waste Management Department – Project coordination, planning, and execution. • Public Services & Infrastructure Department – Oversee bin installations, collection routes, and infrastructure setups. Buzău Waste Management Operator (RER SUD) • Waste Collection & Recycling Services – Coordinates the collection process and works with the IoT system for optimized routes and schedules. Technology & IoT System Provider • App Developers and IoT Equipment Suppliers – Responsible for the implementation of QR code systems, sensor technologies, and the mobile platform. Environmental Protection Agency • Ensures compliance with local and national environmental regulations and supports data monitoring for performance evaluation.
INVOLVED STAKEHOLDERS	1. **Buzău Municipality** o **Department of Environment and Waste Management**: Responsible for overseeing the awareness campaign on selective waste collection, ensuring that the project aligns with local waste management policies and strategies. o Investment and Externally Funded Projects Department Supports the establishment of the Upcycle Mall, focusing on fostering green entrepreneurship and circular economy businesses. Responsible for planning and organizing the location and infrastructure of the Upcycle Mall and its surrounding areas. 2. **Residents of Buzău** o **General Public**: Citizens who will benefit from the awareness campaign on waste collection, engage in sustainable consumption practices, and be actively involved in both upcycling and recycling efforts. o **Local Communities and Neighborhood Associations**: These groups will help mobilize and spread the word, ensuring that residents participate in both the waste collection and the upcycling initiatives. 3. **Circular Economy Businesses & Entrepreneurs** o **Upcycling Businesses**: Entrepreneurs focused on transforming waste materials into new, valuable products. They will play a central role in the **Upcycle Mall**, offering workshops and products made from repurposed materials. o **Repair Shops**: Local businesses specializing in repairing damaged goods (such as electronics, furniture, and clothing) to reduce waste and promote product longevity. o **Second-Hand Stores**: Retail businesses selling pre-owned goods, promoting reuse and reducing consumption of new resources. o **Sustainable Product Vendors**: Retailers of eco-friendly, low-impact products that

ACTION TITLE	**Market & Hub**
	support a circular economy by encouraging sustainable production and consumption. 4. **Educational Institutions and NGOs** o **Schools and Universities**: These institutions will be involved in promoting awareness through educational programs, workshops, and campaigns about waste reduction, recycling, and sustainable practices. o **Environmental NGOs**: Organizations focused on sustainability and environmental protection will help advertise about circular economy practices, organize community activities, and participate in training workshops. 5. **Local and National Environmental Agencies** o **National Environmental Protection Agency**: Overseeing the project's alignment with national environmental goals and providing expertise and potential funding or incentives for circular economy initiatives. o **Environmental Certification Bodies**: They may support businesses that wish to gain eco-certifications, promoting responsible production and consumption. 6. **Private Sector Partners** o **Waste Management Companies**: These companies will be involved in providing waste collection services, ensuring that selective waste collection is implemented efficiently and that recyclable materials are properly managed. o **Green Entrepreneurs & Investors**: Potential investors interested in the Upcycle Mall and other circular economy-related businesses may be involved in financing and supporting innovation in sustainable entrepreneurship. 7. **Local Media & Communications Platforms** o **Social Media Platforms & Local News Outlets**: They will play a key role in promoting the awareness campaign and educating the public about circular economy practices and upcoming initiatives, helping to foster community participation and spread knowledge about sustainable behaviors.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	46.98 tCO2/year from the Waste sector.
% OF TOTAL CO2 REDUCTION	0.02%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	WASTE ▪ 165.39 MWh/year diesel from Scope 1; ▪ 7.55 MWh/year gasoline from Scope 1; ▪ 3.55 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2026-2030

ACTION TITLE	**Energy Recovery from Waste through Gasification and Molecular Dissociation Projects**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Pilot Area: A designated industrial or waste management site within Buzău, possibly near the municipal waste processing facility. Pilot Phases: 1. Installation of Gasification and Molecular Dissociation Systems: The setup of the necessary infrastructure to process waste and recover energy. 2. Waste Collection and Sorting: Collection of segregated waste that is suitable for gasification or molecular dissociation. 3. Energy Production and Monitoring: Start energy production using the gasification technology, monitor performance, and optimize the system. 4. Data Collection and Performance Evaluation: Monitor energy output, waste reduction, and environmental impact for further optimization and scaling decisions. Duration: 12-18 months for the pilot phase, including setup, testing, and monitoring Target Groups (Addressed Entities) • Municipal Waste Management Authorities: Primary stakeholders who will oversee the operation, ensuring that waste streams are properly managed and collected for the project. • Local Residents: Engage in proper waste segregation, contributing waste suitable for energy recovery and benefiting from a cleaner environment. • Energy Consumers: Local public institutions, businesses, and possibly households that will receive energy produced from the waste-to-energy system. • Environmental NGOs and Advocacy Groups: Interested in the environmental impacts of the project, especially its contribution to reducing landfill waste and lowering greenhouse gas emissions. • Waste Processing Companies: Involved in the collection, sorting, and processing of waste materials suitable for gasification.
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• **Solid Waste Emissions** (methane reduction from landfill diversion) • **Energy Sector Emissions** (substitution of fossil fuels with recovered energy) • **Industrial Emissions** (via cleaner processing alternatives)
COVERED INTERVENTIONS	• **Deployment of Advanced Waste-to-Energy Technologies** – Including thermal gasification and molecular dissociation for high-efficiency energy recovery. • **Development of a Segregated Waste Collection System** to ensure input quality for energy processing. • **Installation of Monitoring Equipment** to track emissions, energy output, and waste volumes. • **Integration with Local Energy Grid** to distribute electricity or heat to public buildings and services.
BRIEF DESCRIPTION	Buzău Municipality will implement a pilot project for energy recovery from waste using advanced technologies like gasification and molecular dissociation. These cutting-edge processes convert waste materials into usable energy, reducing reliance on landfills and contributing to a sustainable, circular economy. The project will focus on the efficient conversion of municipal solid waste into energy, which will be used to power local facilities or be fed back into the grid. The pilot aims to

ACTION TITLE	**Energy Recovery from Waste through Gasification and Molecular Dissociation Projects**
	demonstrate the effectiveness of these technologies, which can reduce environmental impact, enhance energy production from waste, and promote sustainable waste management. This pilot project for energy recovery from waste through gasification and molecular dissociation is a crucial step towards sustainable waste management and energy production. The involvement of multiple stakeholders, from municipal authorities to energy providers, ensures a well-coordinated effort to tackle waste challenges while promoting environmental sustainability and creating a cleaner, greener Buzău. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	Energy Recovery: The waste-to-energy system will generate electricity and/or heat, helping to meet the municipality's energy demands and reducing dependence on conventional power sources. Reduced Landfill Dependency: Significantly reduces the amount of waste sent to landfills, contributing to waste minimization and resource recovery. Sustainable Waste Management: Demonstrates a highly efficient, eco-friendly method of managing waste while providing clean energy, supporting the municipality's sustainability goals. Reduction in Greenhouse Gas Emissions: By diverting waste from landfills and using it for energy production, the project will contribute to reducing methane emissions and other harmful pollutants. Public Engagement and Awareness: The project will showcase innovative waste management solutions, educating the community about the benefits of energy recovery from waste.
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality • Department of Environment and Waste Management: Overall project coordination and compliance with environmental regulations. Responsible for integrating the generated energy into the municipal energy grid or local facilities. Waste Management Operator (RER SUD) • Buzău Waste Management Company: Responsible for managing the waste streams, sorting, and supplying waste for the gasification process. Technology and Engineering Companies • Technology Providers for Gasification and Molecular Dissociation: Suppliers of the gasification and molecular dissociation technologies, providing installation, operation, and maintenance. • Engineering and Consultancy Firms: Involved in designing and optimizing the system to ensure efficiency and sustainability. Environmental Protection Agency • Responsible for ensuring regulatory compliance, monitoring emissions, and verifying the environmental impact of the project. Energy Supplier/Operator • Local Power Grid Operator: Will integrate the electricity generated from waste into the local grid or supply it to municipal buildings and services.
INVOLVED STAKEHOLDERS	Local Residents: Active participants in waste segregation, who will be informed about the benefits of the waste-to-energy system and its impact on reducing landfill waste and generating energy. Waste Collection Companies: Collaborate in the logistics of waste sorting and transportation to the gasification facility. Local Businesses: Engage in using the energy generated from the project, which could potentially reduce energy costs or enhance sustainability initiatives.

ACTION TITLE	**Energy Recovery from Waste through Gasification and Molecular Dissociation Projects**
	Energy Providers: They will be involved in managing and distributing the energy produced from the waste-to-energy process. Environmental NGOs and Advocacy Groups: Will be involved in monitoring the environmental impact and ensuring that the project meets sustainability goals. Regulatory Authorities: Government agencies that will provide the necessary permits, ensure compliance with environmental standards, and evaluate the system's performance.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	18,223.00 tCO2/year (223.00 tCO2/year from the WASTE sector | 18,000.00 tCO2/year from the IPPU sector)
% OF TOTAL CO2 REDUCTION	7.46 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action has not been calculated to eliminate or replace a specific type of energy, but rather to reduce CO_2 emissions from the total generated by the municipality, in direct proportion to the energy requirements of each sector. The estimates were made based on the initial assumptions of the project and its expected impact on reducing energy consumption in the relevant sectors. This allows for an integrated approach to emissions reduction within a more sustainable urban system.
TIMELINE (START AND END)	2028-2030

ACTION TITLE	**Compost city station**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Establishment of Compost Stations: Set up a number of collection points for organic waste across the city. These stations will include bins for different types of organic waste, signage, and educational materials on proper waste segregation. Composting Facility Setup: A local composting facility will be established to process the organic waste collected from the stations and produce high-quality compost. Community Engagement & Education: Launch a campaign to educate the public on the benefits of composting, how to properly sort organic waste, and the location of the compost stations. Monitoring & Evaluation: Track the volume of waste collected, compost produced, and community participation to assess the effectiveness Target Groups (Addressed Entities) • Buzău Residents: The primary beneficiaries who will be encouraged to segregate organic waste and use the compost stations for collection. • Local Communities and Neighborhoods: Specific neighborhoods or districts selected for the pilot phase, where residents will be educated and involved in waste sorting and composting. • Urban Gardeners and Green Spaces Managers: These groups will benefit directly from the compost produced, which can be used in city parks, green spaces, and community gardens.

ACTION TITLE	**Compost city station**
	• Schools and Educational Institutions: Could be involved in education and awareness campaigns, teaching students about waste segregation and composting. • Local Businesses (Restaurants, Cafes, etc.): They will be encouraged to participate by providing large amounts of organic waste that can be composted, thus contributing to waste reduction in the city. • Environmental NGOs: These organizations may assist in promoting the initiative, providing expertise on composting practices, and helping with public outreach and education.
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Organic Waste Management • Landfill Methane Reduction • Urban Agriculture and Soil Health
COVERED INTERVENTIONS	• Organic Waste Segregation and Collection Infrastructure • Local Compost Production Facility • Community Awareness Campaigns • Urban Soil Regeneration via Compost Use • Waste Stream Optimization and Reduction
BRIEF DESCRIPTION	Buzău Municipality is set to implement a City-Wide Compost Station Project aimed at promoting sustainable waste management practices through the composting of organic waste. The project will establish dedicated compost stations throughout the city where residents can drop off their organic waste, such as food scraps, yard waste, and other biodegradable materials. The compost produced will be used to enrich local soil, contributing to greener public spaces, urban gardens, and improving overall sustainability. The pilot phase of the project will test the feasibility, logistics, and community participation, before expanding the initiative citywide. The Compost Station Project in Buzău represents a crucial step towards enhancing sustainable waste management and promoting circular economy principles in the city. By diverting organic waste from landfills and transforming it into valuable compost, the project will not only reduce waste but also contribute to healthier urban environments. The collaboration between municipal authorities, waste management operators, local residents, and environmental organizations ensures that the project has a broad, positive impact. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.
OUTCOME	Reduction of Organic Waste in Landfills: By diverting organic waste from landfills and converting it into compost, the project helps reduce the burden on waste management systems and landfills. Soil Enrichment: The compost produced can be used in public gardens, green spaces, parks, and urban farms, enhancing local soil health and promoting sustainable agricultural practices. Promotion of Circular Economy: The project will create a loop where organic waste is turned into valuable resources, supporting sustainable living and a circular economy in Buzău. Public Awareness and Engagement: Encourages residents to engage in environmentally friendly practices, educating them about the benefits of composting and reducing waste. Waste Management Optimization: Helps streamline waste collection processes by reducing the

ACTION TITLE	**Compost city station**
	volume of organic waste that requires traditional waste disposal methods
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsible Bodies 1. Buzău Municipality o Department of Environment and Waste Management/Investment, Procurement, Foreign Funding Department: Responsible for overseeing the project, ensuring its implementation aligns with environmental policies, and managing the overall waste management strategy. Overseeing the establishment of compost stations and ensuring they are integrated into urban spaces for easy access by residents. Will help explore funding options, such as grants or partnerships with environmental organizations, to ensure the sustainability of the project. 2. Waste Management Operator (RER SUD) o Buzău Waste Management Company: Responsible for the collection, transportation, and processing of organic waste at the composting facility. 3. Composting Technology Providers o Specialized Composting Companies: Supply composting technology, provide guidance on best practices, and offer support in setting up the composting process. 4. Local Environmental Agencies o National Environmental Protection Agency: Ensuring that the composting processes comply with environmental regulations and monitoring the impact on local ecosystems. 5. Community Centers and Local NGOs o Environmental NGOs and Local Activists: Support the project by promoting it within the community, providing educational resources, and ensuring active participation from local residents.
INVOLVED STAKEHOLDERS	Main Stakeholders 1. Buzău Residents: Engaged in the sorting and proper disposal of organic waste at the compost stations, contributing to the success of the project. 2. Local Schools and Educational Institutions: Helping with outreach programs, environmental education, and possibly contributing to waste collection and composting activities. 3. Waste Collection and Recycling Companies: Collecting and transporting the organic waste from the stations to the composting facility. 4. Environmental NGOs and Community Groups: Involved in promoting sustainability, spreading awareness about the project, and ensuring community participation. 5. Businesses and Local Enterprises: Particularly those in the food and hospitality sector, which produce a large amount of organic waste and can contribute to the waste collected at compost stations. 6. Public and Private Sector Partners: Involved in funding, technical support, and ensuring the sustainability of the composting infrastructure over time.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	10,180.00 tCO2/year (180 tCO2/year from the WASTE sector | 10,000 tCO2/year from the AFOLU sector)
% OF TOTAL CO2 REDUCTION	4.17 %

ACTION TITLE	**Compost city station**
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action has not been calculated to eliminate or replace a specific type of energy, but rather to reduce CO_2 emissions from the total generated by the municipality, in direct proportion to the energy and emission profiles of the affected sectors. The estimations were based on the initial assumptions of the project and its expected impact on reducing overall emissions in WASTE and AFOLU sectors. This approach allows for a systemic and integrated contribution to urban sustainability and emissions reduction.
TIMELINE (START AND END)	2027-2032

ACTION TITLE	**Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	City-wide initiative targeting residents, businesses, and municipal waste management services
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	• Organic Waste Management • Landfill Methane Reduction • Urban Agriculture and Soil Health
COVERED INTERVENTIONS	The project involves the development of a specialized center for the voluntary collection of various waste types, improving waste separation and recycling efficiency. It includes designated areas for hazardous and non-hazardous waste, sorting facilities, and a composting section. Additionally, a reconditioning workshop and showroom will promote circular economy principles by restoring and repurposing discarded furniture and household items.
BRIEF DESCRIPTION	The project aims to establish an Integrated Center for Separate Waste Collection through Voluntary Contribution, improving waste management efficiency in Buzău Municipality. The center will be developed in two phases. Phase I will include the construction of an administrative building, a hazardous waste laboratory, a furniture reconditioning workshop, a showroom for refurbished items, a mixed waste sorting facility, and a composting area. Phase II will expand the center with a dedicated sorting line for construction and demolition waste. The center will significantly reduce landfill waste, promote recycling, and support a circular economy through reuse and reconditioning initiatives. This action will ensure active and continuous involvement of the local community and stakeholders in the implementation, refinement, and monitoring of the Climate Neutrality Action Plan through a participatory and multi-level governance approach.

ACTION TITLE	**Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality**
OUTCOME	• Improved waste separation and recycling rates • Reduction in landfill waste volume • Increased public participation in circular economy practices • Enhanced environmental sustainability through composting and material recovery • Strengthened local waste management infrastructure
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality, Local Environmental Authorities, and Waste Management Operators
INVOLVED STAKEHOLDERS	The Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality will involve multiple stakeholders, each playing a key role in the project's success. Here's a breakdown of the main stakeholders for the initiative: 1. Buzău Municipality • Environmental Department/Investment, Procurement, Foreign Funding Département: Responsible for overseeing the project, ensuring that it aligns with the city's environmental policies, waste management strategies, and sustainability goals. Ensures that the infrastructure for the waste collection centers is properly integrated into urban areas for easy access by residents. Coordinates with potential funding bodies, grant agencies, and local businesses to secure the financial support needed for the project. 2. Waste Management Operator (RER SUD) • Buzău Waste Management Company: The main body responsible for the collection, transportation, and processing of the waste materials deposited in the separate collection stations. This entity will ensure that the waste is managed according to relevant environmental standards and regulations. 3. Local Residents and Communities • Residents of Buzău: The primary contributors who will voluntarily use the waste collection center to deposit recyclable materials (e.g., plastics, paper, glass, and metal). They are critical for the success of the project, as the initiative relies on active participation and behavioral change. • Local Community Groups and Volunteers: These stakeholders can play a role in encouraging other residents to participate, monitoring the waste collection process, and organizing local events to raise awareness about the initiative. 4. Environmental NGOs and Associations • Local Environmental NGOs: These organizations can support the project by providing educational materials, organizing outreach and awareness campaigns, and encouraging community involvement. They can also assist in setting up environmental education programs related to waste separation and recycling. • National Environmental Protection Agency (ANPM): Provides oversight and ensures that the project complies with national environmental regulations, particularly in terms of waste management and recycling. 5. Local Businesses and Enterprises • Private Sector Stakeholders: Local businesses, particularly those in retail, hospitality, and food industries, may be involved by promoting waste separation at their establishments, offering space for drop-off points, and encouraging their customers to participate in the voluntary waste collection initiative. • Recycling Facilities and Businesses: These entities will be responsible for processing and recycling the collected waste materials once they are dropped off at the centers. 6. Educational Institutions • Schools and Galati University: Local schools can be involved in educating students about the importance of waste segregation and encouraging participation in the initiative. They can

ACTION TITLE	**Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality**
	also serve as collection points and help with organizing educational programs about sustainability. 7. Local Media and Communication Channels • Local News Outlets and Social Media Influencers: These stakeholders are essential for raising public awareness and ensuring that the project reaches a wide audience. Local news channels, websites, and social media platforms can be used to promote the initiative, share progress, and engage the community. 9. Regional and National Government Agencies • Regional Environmental Authorities: These bodies can provide financial support, technical assistance, and regulatory guidance to ensure the project's sustainability and alignment with regional waste management strategies. • National Ministry of Environment, Waters, and Forests: Supports with policy alignment, national regulations, and potential funding opportunities for waste management initiatives. 10. Technology and Service Providers • Waste Collection Technology Providers: Companies that provide the technology for waste tracking, waste collection, and monitoring systems. They might also offer software platforms for waste management, which can help track waste deposited at centers and encourage further participation.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	6,140.94 tCO2/year (140.94 tCO2/year from the WASTE sector | 6,000.00 tCO2/year from the AFOLU sector)
% OF TOTAL CO2 REDUCTION	2.51%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action contributes to CO_2 reduction by diverting organic and recyclable waste from landfill and enhancing material recovery. Although no specific energy source is directly replaced, emissions are avoided by reducing methane generation and the need for virgin material processing and synthetic fertilizers.
TIMELINE (START AND END)	2024-2026

ACTION TITLE	**Urban regeneration of collective housing areas through actions to revitalize interstitial spaces**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Neighborhood scale, targeting residents of collective housing areas, local authorities, and urban planning departments .
FIELD OF ACTION	**GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS**

ACTION TITLE	**Urban regeneration of collective housing areas through actions to revitalize interstitial spaces**
SYSTEMIC LEVER	Urban space reconfiguration, improved quality of life, climate resilience, and energy efficiency through nature-based solutions .
EMISSION DOMAIN(S)	Buildings, land use, and urban environment
COVERED INTERVENTIONS	• Creation and rehabilitation of green spaces between blocks • Installation of permeable surfaces and shaded areas • Green corridors and biodiversity promotion • Improvement of microclimate and reduction of urban heat islands • Installation of urban furniture using sustainable materials.
BRIEF DESCRIPTION	The project involves the reconfiguration and revitalization of interstitial spaces in collective housing areas through the introduction of landscape improvements, nature-based solutions, and pedestrian-friendly infrastructure. These include green surfaces, shaded walking paths, rainwater management systems, and biodiversity corridors. The intervention aims to improve the aesthetic and functional value of neglected urban spaces, promote social interaction, reduce surface runoff, and enhance local microclimates by mitigating the heat island effect. The overall effort contributes to sustainable urban regeneration and climate adaptation at the neighborhood level. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	• Regeneration of approximately **18,000 m² of public and interstitial space**, including pedestrian pathways, green corridors, and social zones. • Creation and rehabilitation of **over 9,800 m² of green areas**, with native vegetation, trees, shrubs, and lawn surfaces, contributing to urban biodiversity and CO_2 sequestration. • Installation of **~3,800 m² of permeable surfaces**, which facilitate rainwater infiltration and reduce the pressure on the sewage system during heavy rainfall. • Planting of over **270 new trees and over 1,300 ornamental shrubs**, contributing to air purification, shading, and cooling of urban microclimate. • Establishment **of over 300 linear meters of pedestrian alleys and over 700 m² of dedicated recreational areas**, enhancing accessibility and encouraging active mobility. • Urban heat island mitigation through increased vegetation cover and shaded zones, potentially reducing local surface temperatures by up to 2–3°C during peak summer months. • Improved public use and social interaction spaces through the installation of urban furniture (benches, bike racks, lighting) using durable and sustainable materials. • Increased quality of life for residents of over **500 nearby apartments**, through improved aesthetics, reduced noise, better stormwater management, and more comfortable outdoor environments.
RESPONSIBLE ENTITY / BODY / PERSON	• Buzău Municipality, through the Urban Planning and Public Works Department • Architectural and Infrastructure Project Teams (external contractors) • Landscape architects and urban designers involved in green space design and NBS implementation
INVOLVED STAKEHOLDERS	• Local residents and neighbourhood associations • Environmental NGOs and urban ecology experts • Municipal maintenance services • Schools and youth organizations (for participatory planting/design) • Construction and landscaping companies

ACTION TITLE	**Urban regeneration of collective housing areas through actions to revitalize interstitial spaces**
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	7,444.23 tCO2/year (444.23 tCO2/year from the Buildings sector | 7,000.00 tCO2/year from the AFOLU sector)
% OF TOTAL CO2 REDUCTION	3.05%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action does not directly replace a specific energy or fuel type, but it contributes to CO_2 reduction by increasing urban vegetation (which sequesters carbon) and improving microclimatic conditions. This leads to reduced energy demand for cooling in adjacent buildings and contributes to passive climate mitigation.
TIMELINE (START AND END)	2025-2030

ACTION TITLE	**NEB evaluation of on-going projects before construction**
TYPE OF ACTION	Policy and Strategic Planning
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Local authorities, urban planners, architects, developers, and project stakeholders in Buzău Municipality
FIELD OF ACTION	**GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS**
SYSTEMIC LEVER	Governance/Planning
EMISSION DOMAIN(S)	Land use, buildings, and urban environment
COVERED INTERVENTIONS	• Implementation of the New European Bauhaus (NEB) principles in urban development projects • Pre-construction evaluation of ongoing projects based on sustainability, aesthetics, and inclusivity criteria • Integration of green infrastructure and nature-based solutions into urban planning
BRIEF DESCRIPTION	This initiative aims to assess all major urban development projects in Buzău before construction begins, ensuring alignment with the New European Bauhaus (NEB) principles. The evaluation will focus on sustainability, energy efficiency, circular economy principles, and the inclusion of green infrastructure. By embedding NEB values early in the planning process, the city will enhance urban resilience, promote biodiversity, and create aesthetically pleasing and people-centered public spaces. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	• Increased integration of sustainable design and green solutions in urban projects • Improved environmental performance of new developments

ACTION TITLE	**NEB evaluation of on-going projects before construction**
	• Greater public engagement in decision-making processes • Higher quality of life for residents through enhanced urban aesthetics and functionality
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality, Urban Planning Department
INVOLVED STAKEHOLDERS	1. Public Authorities & Government Bodies (Municipality, National Ministry, Environmental Agencies) 2. Project Developers and Planners (Designers, Urban Planners, Engineers) 3. Consultants and Evaluation Experts (NEB Evaluators, Environmental, and Social Consultants) 4. Community and Local Stakeholders (Residents, Local Communities, NGOs, Citizen Associations) 5. Financial Stakeholders (Funding Agencies, Banks, and Investors) 6. Contractors and Construction Companies (Construction Firms, Material Suppliers) 7. Research Institutions & Universities (Academic Institutions, Research Bodies) 8. Media and Public Communication Stakeholders (Local Media, Social Media Platforms) These stakeholders are crucial in ensuring that the project aligns with NEB principles of sustainability, inclusivity, and aesthetics before moving forward with construction.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	3,476.91 tCO2/year (1,776.91 tCO2/year from the Buildings sector | 1,700.00 tCO2/year from the AFOLU sector)
% OF TOTAL CO2 REDUCTION	1.42%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This measure does not directly replace a specific type of energy or fuel but contributes indirectly to CO_2 emission reductions by integrating energy efficiency and sustainability principles into future construction projects.
TIMELINE (START AND END)	On going To be finished in 2025

ACTION TITLE	**Urban Forest**
TYPE OF ACTION	Nature-based solution
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	City-wide; residents of Buzău, local businesses, tourists, and environmental organizations
FIELD OF ACTION	**GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS**
SYSTEMIC LEVER	Urban resilience, climate change adaptation, biodiversity conservation, public health, sustainable

ACTION TITLE	**Urban Forest**
	mobility, and environmental education
EMISSION DOMAIN(S)	Land use, forestry, and urban environment
COVERED INTERVENTIONS	• Restoration and regeneration of Crâng Urban Forest • Enhancing biodiversity through native tree planting and habitat creation • Developing eco-friendly recreational spaces within the forest • Implementing smart monitoring systems for forest health and air quality • Improving accessibility and connectivity to encourage sustainable mobility • Establishing educational and awareness programs on urban ecology
BRIEF DESCRIPTION	The project **"Regenerarea Pădurii Urbane Crâng"** aims to preserve and enhance Buzău's natural heritage by transforming Crâng Forest into the largest urban park-forest in Europe. This initiative will focus on ecological restoration, increasing biodiversity, and creating sustainable recreational opportunities. By integrating nature-based solutions, the project will strengthen urban resilience, improve air quality, and provide a green refuge for residents and visitors. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	• Increased green space and improved biodiversity • Enhanced air purification and carbon sequestration • Greater climate resilience through nature-based adaptation • More recreational opportunities for residents and tourists • Strengthened awareness and education on urban ecology
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality
INVOLVED STAKEHOLDERS	1. Local Authorities: Municipality, Urban Planning, Environmental Departments, Public Works, and Infrastructure. 2. Environmental and Sustainability Organizations: NGOs, conservation groups, and green infrastructure associations. 3. Community Stakeholders: Local residents, schools, volunteer groups. 4. Private Sector: Businesses, landscaping companies, sponsors. 5. Researchers: University, ecologists, environmental scientists. 6. Utility Providers: Water, electricity, and waste management services. 7. Tourism and Cultural Authorities: Local tourism boards, event organizers. 8. Government Bodies: EU bodies, National Ministries. 9. Media and Communication: Local media, social media platforms. These stakeholders work together to ensure that the Urban Forest project is successful, sustainable, and beneficial to the community, the environment, and future generations.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	6,900 tCO2/year from the AFOLU sector.
% OF TOTAL CO2 REDUCTION	2.82%

ACTION TITLE	**Urban Forest**
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action does not replace or remove a specific type of energy or fuel, but contributes to CO_2 reduction through increased carbon sequestration capacity in the AFOLU sector.
TIMELINE (START AND END)	2026-2030

ACTION TITLE	**Afforestation of the area adjacent to Buzău Municipality – 13.26 ha**
TYPE OF ACTION	Nature-based solution
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	The Municipality of Buzău has identified, in the adjacent area of Buzău city, lands suitable for afforestation under the conditions specified by the Applicant's Guide. • **Location 1** – CF 75032, NC – 75032, Parcel 102, area 2.772 ha (Buzău, Buzău County, T 20, P 103-110 EXTRAVILAN-LOT 2) • **Location 2** – CF 71601, NC – 71601, Parcel 101, area 1.843 ha (Buzău County, T 20 P 109,110) • **Location 3** – CF 59704, NC – 59704, Parcel 11, area 3.633 ha (Extravilan, Buzău County) • **Location 4** – CF 74127, NC – 74127, Parcel 12, area 5.016 ha (Buzău, Buzău County, T 30, P 270) Target Group: 1. Local Communities and Citizens: o Residents of Buzău Municipality and neighboring areas who will benefit from the improved air quality, enhanced biodiversity, and recreational spaces created by the afforestation project. o Citizens who are actively engaged in community-driven environmental initiatives, such as tree planting or volunteering in green projects. 2. Municipality and Local Government: o The primary beneficiaries will be the urban population, including children and senior citizens, who will benefit from healthier surroundings and new green spaces. o The Municipality of Buzău will also see a reduction in urban heat island effect, noise pollution, and enhanced local aesthetics. 3. Environmental Organizations: o Non-governmental organizations (NGOs) and groups focusing on environmental protection, biodiversity, and urban sustainability. 4. Educational Institutions: o Schools and universities which can be involved in environmental education, and which could use the project area as a practical tool for learning about ecology and sustainability.
FIELD OF ACTION	**GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS**
SYSTEMIC LEVER	Climate adaptation, urban planning, ecosystem services, biodiversity enhancement, health and well-being
EMISSION DOMAIN(S)	Land use, forestry, and other land-based emissions (LULUCF); Urban environment

ACTION TITLE	**Afforestation of the area adjacent to Buzău Municipality – 13.26 ha**
COVERED INTERVENTIONS	• Establishment of new forested areas using native and climate-resilient tree species • Dense planting strategies for fast canopy formation and environmental benefits • Creation of ecological corridors connecting to semi-natural landscapes • Air purification, noise buffering, carbon sequestration, and biodiversity support • Educational and community engagement components for long-term stewardship
BRIEF DESCRIPTION	The project is developed under FORESTS AND BIODIVERSITY PROTECTION, part of Pillar I: Green Transition, and is made to harmonize forest management practices with those aimed at biodiversity conservation and environmental protection, within the context of the European Green Deal, and to ensure the transition to a climate-neutral Europe by creating new forested areas and restoring degraded habitats. The goal of the investment measure is to create new areas covered with forest vegetation located in urban and peri-urban areas. These urban forests will be established using a wide diversity of native tree and shrub species and will be planted with high densities to form “green lungs” that will bring multiple benefits, such as air purification, noise reduction, carbon sequestration, landscape conservation, air temperature reduction, anxiety reduction, and ultimately, improved public health. Urban afforestation will be carried out on the 13.26 ha through a landscape-level approach that contributes to strengthening the connection with natural or semi-natural areas, emphasizing the linkage of habitats through green infrastructure and ecological corridors. The selection of species and ecotypes will consider their role in air purification and the provision of other ecosystem services in urban areas. Only species and ecotypes that are resilient to the anticipated future impacts of climate change will be used, ensuring that they do not have adverse effects on biodiversity. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	1. Creation of 13.26 ha of new urban forest 2. Estimated annual carbon sequestration of 33–40 tons CO_2/year 3. Reduction in urban heat island effect in surrounding areas 4. Noise and air pollution mitigation 5. Increased biodiversity and ecosystem resilience 6. Enhanced water retention and erosion control 7. Recreational and aesthetic value for local communities 8. Public health and well-being improvements 9. Community education and awareness through schools and NGOs 10. Long-term sustainable urban planning model for replication
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsible Bodies: 1. Buzău Municipality: o The Municipality of Buzău will play a central role in planning, funding, and implementing the afforestation project. o This includes land acquisition (or agreement with private landowners), project management, and monitoring the success of the initiative. 2. Local Environmental Agencies and Government Bodies: o Buzau Municipality: has the role in overseeing county-wide land use policies and ensuring compliance with environmental regulations. o Local Environmental Protection Agency (APM Buzău): Will be responsible for ensuring that the afforestation project adheres to environmental regulations and standards. 3. Urban Planning and Development Authorities:

ACTION TITLE	**Afforestation of the area adjacent to Buzău Municipality – 13.26 ha**
INVOLVED STAKEHOLDERS	o Urban planning authorities will be involved in integrating afforestation with broader urban development plans, ensuring that it aligns with land use and zoning regulations. 1. Environmental NGOs and Green Associations: o Local environmental NGOs that advocate for biodiversity, climate action, and green spaces will be key collaborators in promoting, managing, and monitoring the afforestation initiative. o Specialized organizations in urban greening and forest management may also be involved in the planning and technical aspects of the afforestation. 2. Contractors and Specialized Companies: o Private companies specializing in forestry, tree planting, and land management will be involved in the physical implementation of the afforestation project. o These companies will help with planting trees, maintaining the green areas, and monitoring the health of the forested areas over time. o Academia and Research Institutions Universities or research organizations with expertise in environmental science, forestry, or urban ecology may provide valuable data, research, and methodologies for selecting the best native species for planting, as well as methods for monitoring the environmental impact of the afforestation project. o Banca de Resurse Genetice Vegetale pentru Legumicultură, Floricultură, Plante Aromatice și Medicinale (BRGV) Buzău is a public research institution under the coordination of the Ministry of Agriculture and Rural Development. The main role of BRGV Buzău is to preserve, research, and manage the genetic resources of vegetables, flowers, aromatic plants, and medicinal plants, contributing to the development of sustainable agricultural practices, as well as ensuring the conservation and improvement of plant varieties with high economic, ecological, and health benefits. The institution supports agricultural and horticultural innovation by conducting research aimed at improving plant varieties, ensuring food security, and promoting the use of medicinal and aromatic plants in various industries. 3. General Public and Local Communities: o Local residents and community groups can be involved in volunteer efforts, helping with tree planting events or educational campaigns about the benefits of afforestation and green urban spaces. 4. Media and Public Relations: o Local media, social media, and influencers can help raise awareness about the project, its goals, and the benefits for the community, encouraging public support and engagement.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	4,915.33 tCO2/year from the AFOLU sector
% OF TOTAL CO2 REDUCTION	2.01%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-

ACTION TITLE	**Afforestation of the area adjacent to Buzău Municipality – 13.26 ha**
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action does not replace a specific type of energy or fuel but reduces atmospheric CO_2 through increased carbon sequestration capacity in newly afforested areas, contributing to long-term climate mitigation within the AFOLU sector.
TIMELINE (START AND END)	2025-2026

ACTION TITLE	**New residential bio-districts**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scaled Overview and Target Groups 1. Development and Expansion of a Residential Neighborhood in the Tarlaua 33 Area (Sustainable Development Focus) Scale: • Medium to large-scale urban expansion project. • Targeting previously underdeveloped land for structured urbanization. • Includes infrastructure (roads, utilities), green spaces, sustainable transport connections, and services (education, health, commerce). Target Groups: • Young families and first-time homeowners seeking affordable, energy-efficient housing. • Middle-income residents interested in modern housing aligned with sustainability principles. • Private investors and developers aligned with green building standards and urban sustainability. Social Housing Neighborhood in the Transilvaniei Street and Mihai Viteazul Area with Urban Regeneration Scale: • Focused, high-impact social and territorial equity project. • Regeneration of existing urban zones with construction of new social housing and integrated support infrastructure. Target Groups: • Vulnerable and low-income families, including elderly, single-parent households, and people at risk of housing exclusion. • Public authorities and NGOs supporting social inclusion and community development. • Urban planners and housing authorities working to reduce urban disparities and improve quality of life.
FIELD OF ACTION	**BUILT ENVIRONMENT**
SYSTEMIC LEVER	Urban resilience, social equity, affordable housing, green building innovation, smart infrastructure
EMISSION DOMAIN(S)	• Residential energy use • Mobility and transport • Construction and materials • Waste management

ACTION TITLE	**New residential bio-districts**
COVERED INTERVENTIONS	• Construction of energy-efficient housing with low-emission materials and insulation • Integration of smart mobility solutions (e.g., bike lanes, EV infrastructure) • Deployment of renewable energy systems (solar panels, heat pumps) • Installation of waste separation and recycling systems • Use of green roofs, rainwater harvesting, and permeable surfaces • Urban green space development and climate-adaptive landscaping
BRIEF DESCRIPTION	The projects aim to develop and regenerate urban residential areas in Buzău through the creation of new, sustainable housing neighborhoods. The first initiative focuses on the development and expansion of a residential district in Tarlaua 33, emphasizing sustainable urban planning, energy efficiency, and the integration of green and digital infrastructure. The second initiative, P85, targets the construction of social housing in the Transilvaniei and Mihai Viteazul areas, with a strong focus on social inclusion, urban regeneration, and improving access to basic services for vulnerable groups. Both projects align with principles of sustainable development, smart urban growth, and climate resilience, contributing to the municipality's long-term vision of inclusive, livable, and green urban environments. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	Main Outcomes • Increased housing availability, both for middle-income residents and socially vulnerable populations. • Improved urban infrastructure and services in newly developed and regenerated areas. • Enhanced energy efficiency and sustainability, through eco-friendly construction and smart infrastructure. • Social inclusion and equity, offering dignified living conditions for disadvantaged groups. • Urban revitalization, transforming underutilized or degraded zones into vibrant, functional neighborhoods. • Support for local economy and construction sector, creating jobs and stimulating investment.
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality – Overall project coordination, planning approvals, funding allocation, and integration into urban development strategy. - Urban Planning and Territorial Development Department – Coordinates zoning, land use, and sustainable design guidelines. - Public Works and Infrastructure Department – Ensures technical infrastructure development (roads, utilities, drainage, etc.). - Social Services Department – Manages the allocation of social housing units and oversees social inclusion measures. - Department for EU and Externally Funded Programs – Manages funding applications and project monitoring under national/EU programs.
INVOLVED STAKEHOLDERS	Key Involved Stakeholders 1. Construction Companies and Real Estate Developers – Responsible for execution of residential infrastructure and housing units. 2. Local Utility Providers – Ensure water, electricity, gas, waste collection, and internet services. 3. Environmental Protection Agency – Evaluates environmental impact and ensures

ACTION TITLE	**New residential bio-districts**
	compliance with sustainability criteria. 4. Civil Society & NGOs – Especially those advocating for social inclusion, housing rights, and urban regeneration. 5. Local Communities and Residents' Associations – Participatory role in design, feedback, and long-term community management. 6. Financial Institutions – May support public-private partnerships or affordable housing finance models. 7. Educational and Healthcare Institutions – Ensure access to key services in newly developed neighborhoods.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	5,506.91 tCO2/year (140.96 tCO2/year from the Transport sector | 5,330.72 from the Buildings sector | 35.23 from waste sector)
% OF TOTAL CO2 REDUCTION	2.25 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	TRANSPORT: ▪ 374.53 MWh/year diesel from Scope 1; ▪ 164.50 MWh/year gasoline from Scope 1; BUILDINGS ▪ 15,094.34 MWh/year electrical energy from Scope 2; ▪ 2,645.50 MWh/year thermal energy from Scope 2; ▪ 4,395.35 MWh/year natural gas from Scope 2; WASTE ▪ 75.47 MWh/year electrical energy from Scope 2; ▪ 52.91 MWh/year diesel from Scope 1; ▪ 27.67 MWh/year gasoline from Scope 1;
TIMELINE (START AND END)	2026-2035

ACTION TITLE	**Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Pilot Project on the Use of Wastewater from the Buzău Municipality Treatment Plant for the Enhancement of the "IAZUL MORILOR" Gravity Canal and the Establishment of an Irrigation System The project is part of the Buzău River Basin and is bordered by:

ACTION TITLE	**Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."**
	• The rural and urban areas of Vernești commune • The rural and urban areas of Buzău municipality • The rural areas of the communes Țintești, Smeeni, Gălbinași, and Cilibia Target Group Local Farmers and Agricultural Producers • Benefit: Access to a sustainable source of irrigation water. • Impact: Increased agricultural productivity, reduced dependency on rainfall, and improved crop resilience during droughts. 2. Residents of Buzău Municipality and Neighboring Communes (e.g., Vernești, Țintești, Smeeni, Gălbinași, Cilibia) • Benefit: Improved environmental conditions, creation of green spaces, and better microclimate. • Impact: Enhanced quality of life and reduced heat island effects. 3. Local Authorities and Administrations • Benefit: Tools for climate adaptation and water management. • Impact: Better infrastructure planning and resource use in line with sustainability goals. 4. Environmental and Biodiversity Groups • Benefit: Restoration of wetland habitats and biodiversity. • Impact: Re-establishment of natural ecosystems and better conservation practices. 5. Educational and Research Institutions • Benefit: Opportunity for environmental monitoring and applied research. • Impact: Increased knowledge in the fields of circular economy, sustainable agriculture, and climate adaptation.
FIELD OF ACTION	**BUILT ENVIRONMENT**
SYSTEMIC LEVER	Nature-based solutions (NbS), Circular water use and resource efficiency, Green-blue infrastructure for climate resilience, Agricultural innovation and adaptation to climate change
EMISSION DOMAIN(S)	• Wastewater treatment and reuse • Agricultural emissions (indirect reduction via decreased fertilizer use) • Energy use in public infrastructure • Land use and biodiversity restoration
COVERED INTERVENTIONS	• Use of semi-treated wastewater for environmental reuse and irrigation • Restoration of dried lakes and natural water bodies • Passive water purification via reed filtration and natural aeration • Installation of irrigation infrastructure linked to the Iazul Morilor canal • Rewilding and biodiversity zone reactivation • Stormwater management via natural retention and canal systems
BRIEF DESCRIPTION	The use of water from wastewater treatment plants to refill dried-up lakes and ponds—caused by climate change and desertification effects—in the southeastern area of Buzău County represents a sustainable and efficient solution for restoring lost biodiversity habitats in affected areas. The need to restore these biodiversity zones is becoming increasingly evident in the context of climate change and more frequent droughts.

ACTION TITLE	**Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."**
	The project offers a solution to ensure suitable environmental conditions for the development of biodiversity specific to wetland areas, a beneficial microclimate for the population, agriculture, spontaneous flora and fauna, and more—all under increasingly unstable climate conditions. The importance of the *Iazul Morilor* gravity channel lies in transporting semi-treated water from the Buzău municipal wastewater treatment plant, ensuring natural purification through aeration, reed filtration, and appropriate dilution. Importantly, it also increases the water flow needed to refill as many nearby lakes as possible. From these lakes, farmers in adjacent areas can draw water to irrigate significant agricultural land areas. Promoting investments in green-blue infrastructure refers to networks of green spaces (parks, gardens, urban forests) and blue spaces (rivers, lakes, canals, water systems) that improve quality of life in cities and contribute to achieving climate neutrality. Through the promotion of nature-based investments, the Municipality of Buzău aims to achieve climate neutrality by 2035. A natural infrastructure for managing stormwater and wastewater, such as retention basins, restored rivers, and open channels, helps manage polluted waters. These nature-based solutions are more efficient and sustainable than traditional 'grey' infrastructure. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	**Key Benefits:** • Reduction in electricity costs: By bypassing the biological treatment stage—which is highly energy-intensive (approx. 1,600,000 kWh)—significant savings in electricity consumption can be achieved. • Pollution reduction: Reusing water from wastewater treatment plants will substantially reduce discharges into rivers and lakes, thereby decreasing aquatic pollution. • Soil fertility improvement: Treated water may contain nutrients beneficial for agricultural crops, reducing the need for chemical fertilizers. • Cost reduction: Using semi-treated water (taken after the mechanical stage) and completing treatment naturally—through aeration and reed filtration—eliminates the need for the biological stage, which is energy-intensive. • Increased crop yield through irrigation: Farmers near these areas can obtain larger and higher-quality harvests due to reliable irrigation. • Urban and peri urban economic development: Irrigating crops using water from the *Iazul Morilor* canal and nearby lakes will contribute to job creation and stimulate related economic activities.
RESPONSIBLE ENTITY / BODY / PERSON	Municipality of Buzău: The local government, led by Mayor Constantin Toma, is the primary inititor and coordinator of the project. The municipality has taken steps to integrate the Iazul Morilor canal into its administration, facilitating its enhancement and utilization for irrigation purposes. Compania de Apă Buzău: This water utility company is responsible for the treatment of wastewater at the Buzău Municipality Treatment Plant. The treated water will be repurposed for irrigation, reducing waste and supporting agricultural activities. Agenţia Naţională de Îmbunătăţiri Funciare (ANIF): Initially overseeing the Iazul Morilor canal, ANIF has transferred its administration to the Municipality of Buzău to facilitate the project's implementation. Government of Romania: The central government, through the Ministry of Investments and European

ACTION TITLE	**Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."**
	Projects, is involved in supporting and monitoring the project. Secretary of State Roxana Mînzatu has highlighted the project's alignment with national strategies for water reuse and sustainable agriculture.
INVOLVED STAKEHOLDERS	**Key Stakeholders** • **Local Agricultural Communities**: Farmers and agricultural enterprises in the affected communes are direct beneficiaries of the irrigation system, which will provide a reliable water source, especially during periods of drought. • **Environmental Organizations**: Groups focused on environmental conservation are stakeholders, as the project aims to enhance green spaces and improve water quality in the region. • **European Union**: As the project will be monitored by the European Commission, the EU plays a role in ensuring that the initiative aligns with broader environmental and sustainability goals. • **Israeli Experts**: Specialists from Israel, recognized for their advanced irrigation technologies, have been consulted to provide expertise and guidance in implementing the project. This collaborative effort aims to create a sustainable and efficient irrigation system, transforming wastewater into a valuable resource for agriculture and contributing to the region's environmental and economic
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	6,023.49 tCO2/year (6,000 tCO2/year from the AFOLU sector | 23.49 from the WASTE sector)
% OF TOTAL CO2 REDUCTION	2.47%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	AFOLU: ▪ 22,641.51 MWh/year electrical energy from Scope 2; WASTE: ▪ 88.64 MWh/year electrical energy from Scope 2;
TIMELINE (START AND END)	2025-2032

ACTION TITLE	**Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project**
TYPE OF ACTION	Technical and Digital Intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	City wide project Scaling Considerations for the Project: To successfully scale the project, the following considerations were made: • Geographic Expansion: o We have started with Buzău Municipality area. Over time, we will extend the project to neighboring regions or even to other cities in Romania based on lessons learned and system functionality. • Technology Integration: o We have ensured that the air quality and environmental monitoring systems are scalable, integrating them with national or European environmental monitoring initiatives. This allows for cross-border data sharing and monitoring. • Data Access and User Adoption: o We have Increased the accessibility to the monitoring platforms by ensuring that data is presented in user-friendly formats. This includes mobile apps, social media integration, and easy-to-understand dashboards that cater to a variety of users, including non-experts. • Engagement Strategies: o Develop targeted outreach campaigns to engage residents in understanding and using the monitoring platforms. This involves partnerships with local community organizations, educational campaigns, and incentives for using the platforms (e.g., improving air quality awareness, participating in feedback surveys). • Public Awareness and Education: o To foster a wider sense of environmental responsibility, we will develop educational campaigns on the importance of air quality, sustainable practices, and climate change mitigation will help build public support for the project. Primary Target Group: • Residents of Buzău Municipality: o Urban Residents: People living in the city center and surrounding urban areas, who will directly benefit from real-time air quality and environmental information through the digital platform and social media updates. o At-Risk Populations: Individuals with respiratory issues, children, elderly residents, and other vulnerable groups who are more sensitive to pollution and environmental hazards. Secondary Target Group: • Public Institutions and Educational Buildings: o Schools, university, and government buildings within Buzău that will have monitoring systems in place to assess environmental quality. This group will be critical for piloting smart city solutions and ensuring they are tested in high-traffic public spaces. Tertiary Target Group: • Local Government Authorities: o Buzău Municipality and other local government bodies responsible for urban planning, disaster management, and policy-making. They will use the data from the environmental monitoring systems to make informed decisions and adapt the city's development and disaster response plans. Additional Target Groups: • Environmental and Climate Action NGOs:

ACTION TITLE	**Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project**
	o Local and national environmental organizations and activists who focus on sustainable development, biodiversity conservation, and climate change mitigation. These groups will be important for raising awareness and ensuring the environmental solutions are impactful. • Technology Developers and Platform Providers: o Companies and tech organizations responsible for building, maintaining, and improving the digital platforms for monitoring air quality, collecting data, and providing real-time information to the public. • Academia and Research Institutions: o Galati University focused on urban sustainability, climate change, environmental science, and smart city technologies. They will be instrumental in analyzing data, validating the effectiveness of interventions, and ensuring long-term sustainability. Potential External Stakeholders: • Tourists and Visitors to Buzău: o Although a secondary group, tourists visiting Buzău for its cultural and natural attractions will benefit from the improvements in air quality and environmental management, contributing to the city's image as a sustainable and green destination.
FIELD OF ACTION	**BUILT ENVIRONMENT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Air Quality / Urban Pollution / Public Health
COVERED INTERVENTIONS	• Air quality monitoring infrastructure in public and institutional spaces • Integration with digital platforms (e.g., websites, mobile apps) • Data collection and processing systems for environmental indicators • Public awareness campaigns and educational content • Disaster risk monitoring and early warning system integration • Correlation of air quality data with traffic for urban planning
BRIEF DESCRIPTION	The development, expansion, and evolution of the city of Buzău must be carried out in the spirit of protecting the environment, biodiversity, and decarbonization. Climate change can lead to urban development measures that have a negative impact on the natural environment. Addressing environmental issues and climate change from the outset in the development of the smart city of Buzău can enable the identification of smart city solutions that enhance the positive effects and reduce the negative impact on the environment. The specific objective of this project is Environmental Monitoring – to identify solutions with a real impact on the environment, it is very important to monitor natural processes and phenomena through indicators (for example, air pollution levels). The measurement of these indicators will be carried out before and after the implementation of certain measures to accurately determine the impact of those measures. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	Development of air quality and environmental monitoring systems in open urban spaces, as well as

ACTION TITLE	**Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project**
	in buildings of public institutions and educational facilities (e.g., CityAir). Establishment of a set of environmental quality indicators and the collection, storage, and processing of data to determine the values of these environmental indicators (through a digital platform). Creation of a website or web page (including on social media) with real-time information on environmental quality within the Municipality of Buzău. Development of a digital platform that includes an action plan for monitoring disaster risks, the identified solutions, and risk monitoring. Development of a digital platform for air quality monitoring and integration with existing platforms that provide real-time information to residents (websites or dedicated applications). This will allow correlation of air quality data with traffic data to support decision-making for mobility and traffic management.
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsible Bodies: • Buzău Municipality (Local Government): o The Municipality of Buzău is the main body responsible for the overall coordination, implementation, and management of the project. The local government ensures the alignment of the project with the city's development goals, sustainability strategies, and local regulations. o The Mayor and the municipal council play key roles in the decision-making process, securing necessary funding, and ensuring that the project is integrated into the city's infrastructure planning. • Buzău Environmental Protection Agency (EPA): o The Buzău EPA will monitor and regulate the environmental aspects of the project. It will ensure that the air purification system meets legal environmental standards and performs effectively in reducing pollutants. • Buzău Public Health Authority (DSP Buzău): o The Public Health Authority plays a role in ensuring that the air purification system aligns with public health goals, especially in terms of reducing air pollution's impact on the health of the population.
INVOLVED STAKEHOLDERS	The key stakeholders are: • Local residents and urban communities • Environmental NGOs • Private Sector Partners (Corporate Sponsors or Investors) • Tourism Sector: • Air purification technology providers • Academic and research institutions • Public transport authorities • EU and international funding bodies • Local media and Public Communication Platforms • Traffic and transport authorities
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	574.23 tCO2/year (130.00 etCO2/year from the Transport sector | 444.23 from the Buildings sector)

ACTION TITLE	**Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project**
% OF TOTAL CO2 REDUCTION	0.24%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action does not directly replace a specific type of energy or fuel, but it facilitates indirect reductions in fossil fuel consumption and energy use by optimizing mobility and energy-related behavior.
TIMELINE (START AND END)	2024-2027

ACTION TITLE	**Smart building management platform**
TYPE OF ACTION	Technical and Digital Intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scaling the Smart Building Management Platform 1. Scalability in Architecture: o The platform will be scalable to support multiple buildings, from small single-tenant spaces to large multi-building complexes or entire districts. o It will allow seamless integration with existing building management systems, IoT devices, and sensors. o The system will be modular, allowing the addition of new features, such as integrating new technologies (e.g., electric vehicle chargers, renewable energy sources, or smart grid integration). 2. Expansion to Various Building Types: o Initially, the project will focus on a specific building type (e.g., office buildings, residential complexes, or industrial sites) and then expand to include other sectors as the system matures. o It can be scaled to different geographical regions, adapting to local regulatory, energy, and technological requirements. 3. Interoperability: o The system will be compatible with various IoT devices, including third-party hardware and sensors. o Ensure that the platform can communicate with existing smart city infrastructure for broader integrations. Target Group for the Smart Building Management Platform Project 1. Building Owners and Managers: o Owners and facility managers of existing buildings who are interested in retrofitting or upgrading their buildings to become smarter, more energy-efficient, and easier to manage. 2. Occupants and Tenants: o Both residential and commercial tenants benefit directly from enhanced comfort, energy efficiency, and security. o For office buildings, tenants who prioritize energy efficiency, sustainability, and advanced workplace technologies will be key users. 3. Construction Companies and Contractors:

ACTION TITLE	**Smart building management platform**
	o Those involved in building new smart structures or retrofitting existing ones. They may partner with technology providers to implement and install the smart building systems. 4. Buzau Municipal Authorities: o involved in urban development, sustainable building practices, or smart city initiatives may be interested in supporting or funding such projects. o They may also use the platform's data for urban planning and policy-making. 5. Service Providers (Maintenance, HVAC, Security, etc.): o These include specialized service providers (e.g., HVAC technicians, security companies) who will benefit from real-time data on system performance, enabling predictive maintenance and service optimization. 6. Technology Providers: o Companies that offer sensors, IoT devices, or software solutions for building automation and data analytics. o Software developers that can provide applications, dashboards, and user interfaces for building managers and occupants. 7. Sustainability and Energy Management Organizations: o Organizations focused on energy efficiency, sustainability, and reducing carbon footprints will be important partners for promoting smart building solutions.
FIELD OF ACTION	**BUILT ENVIRONMENT**
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Building Energy Use / Indoor Environmental Quality / Operational Emissions
COVERED INTERVENTIONS	• Energy monitoring and HVAC optimization • Lighting and environmental automation • Smart safety and security integration • Predictive maintenance and fault detection • Data analytics for resource and energy use • Tenant-facing control apps for comfort settings • Integration with renewable energy systems
BRIEF DESCRIPTION	Smart Building Management Platform (SBMP) is an integrated system designed to enhance the operation, efficiency, and sustainability of buildings through advanced technologies like the Internet of Things (IoT), automation, artificial intelligence (AI), and data analytics. The primary goal of such a platform is to optimize the building's performance in terms of energy consumption, security, occupant comfort, and operational efficiency. Key Components of a Smart Building Management Platform: 1. Energy Management: Optimizing energy use for heating, ventilation, air conditioning (HVAC), lighting, and other systems to reduce consumption and costs. 2. Building Automation: Automating tasks like lighting control, climate control, security systems, and other operational aspects based on real-time data and predictive algorithms. 3. Security and Safety: Integrating advanced security systems (e.g., access control, surveillance) and safety features (e.g., fire alarms, emergency systems).

ACTION TITLE	**Smart building management platform**
OUTCOME	4. Data Analytics and Reporting: Collecting data from various building systems, analyzing it, and presenting actionable insights to improve operational efficiency, detect issues, and predict maintenance needs. 5. User Interaction and Control: Offering building occupants (residents or employees) control through mobile apps or web interfaces to adjust lighting, temperature, or request maintenance. A Smart Building Management Platform offers a promising solution to optimize building operations, improve energy efficiency, enhance occupant comfort, and contribute to sustainability goals. By targeting a wide range of stakeholders, including property developers, building managers, tenants, and technology providers, this project can have a significant positive impact on urban environments, driving innovation in building management and contributing to smarter cities. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions. Main Outcomes of the Smart Building Management Platform Project 1. Energy Efficiency: o Significant reduction in energy consumption by optimizing HVAC, lighting, and other systems. o Real-time energy monitoring and alerts to encourage energy-saving behaviors and decisions. 2. Improved Operational Efficiency: o Automation of daily building management tasks to reduce human error and improve response times. o Predictive maintenance to minimize downtime and maintenance costs by identifying issues before they become critical. 3. Enhanced Comfort and Productivity: o Ensuring that occupants' comfort (e.g., temperature, air quality, lighting) is optimized according to their preferences and usage patterns, leading to increased satisfaction and productivity in commercial or residential settings. 4. Cost Savings: o Lower operational costs due to energy savings, reduced maintenance costs, and optimized use of resources. o Efficient building operations can lead to a reduction in overall management costs for property owners or tenants. 5. Sustainability: o Contribution to sustainability goals through reduced energy usage and a smaller carbon footprint. o Integration with renewable energy systems (solar panels, wind turbines) for greener operations. 6. Data-Driven Decision-Making: o Access to real-time data on building performance for informed decision-making, such as energy consumption patterns, occupancy data, and system efficiency. 7. Security and Safety Enhancements: o Improved security through smart surveillance, real-time alerts, and automated responses. o Enhanced safety features, including automated emergency response systems and real-time hazard detection (e.g., fire, gas leaks).

ACTION TITLE	**Smart building management platform**
RESPONSIBLE ENTITY / BODY / PERSON	Buzau Municipal Departments • Responsible for overseeing the project, ensuring its alignment with local regulations, and managing its budget and timeline. Building Management and Operations Teams: • In charge of operating and maintaining the platform post-implementation, ensuring its smooth functioning, and troubleshooting issues. Technology Providers/Contractors: • Companies providing hardware (IoT devices, sensors) and software development services for the platform. Energy Regulators/Authorities: • Regulatory bodies ensuring compliance with local energy standards, building codes, and environmental regulations.
INVOLVED STAKEHOLDERS	Stakeholders for the Smart Building Management Platform 1. Building Owners: o Interested in maximizing operational efficiency, reducing costs, and increasing the attractiveness of their properties to tenants. 2. Tenants (Commercial/Residential): o The end-users who benefit from a smarter, more comfortable, and energy-efficient environment. 3. Buzau Municipality: o Local authorities interested in promoting sustainability, reducing the city's carbon footprint, and improving urban living conditions. 4. Energy Providers and Utility Companies: o Collaborating for data sharing, smart grid integration, and improving energy efficiency across the city or region. 5. Technology Providers (IoT, AI, Data Analytics): o Companies that supply sensors, software platforms, AI tools, and data analytics services for building automation. 6. Construction and Retrofit Contractors: o Contractors involved in the physical installation and retrofitting of building systems and infrastructure. 7. Service Providers (HVAC, Security, Facility Management): o Third-party service providers responsible for maintaining building systems (e.g., HVAC, security) who will benefit from predictive maintenance and data insights. 8. Academia: o Universities or research organizations focused on building science, environmental sustainability, or smart city solutions may partner in the project's research and development phase.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	6,289.65 tCO2/year (6,219.17 tCO2/year from the Buildings sector | 70.48 tCO2/year from the Transport sector)
% OF TOTAL CO2 REDUCTION	2.57%
GENERATED RENEWABLE ENERGY	-

ACTION TITLE	**Smart building management platform**
(IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	BUILDINGS: ▪ 18,867.92 MWh/year electrical energy from Scope 2; ▪ 6,450.65 MWh/year natural gas from Scope 2; TRANSPORT: ▪ 224.72 MWh/year diesel from Scope 1; ▪ 42.09 MWh/year gasoline from Scope 1;
TIMELINE (START AND END)	2026-2030

ACTION TITLE	**Construction of a residential complex for young people in Buzău Municipality nZEB**
TYPE OF ACTION	Technical and Digital Intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scaling the Project 1. Expansion to Other Communities: o After the successful implementation of this project, the model can be expanded to other areas of Buzau, providing affordable, energy-efficient housing to young people in various municipalities across Romania. o Future developments could include increasing the number of residential blocks or expanding to mixed-use complexes, incorporating schools, community centers, and retail spaces in the same sustainable environment. 2. Replicating the Design: o The nZEB design can be replicated in other housing projects across the country, especially in urban areas where housing demand is high, and energy efficiency is a priority. o The project's design can serve as a template for future residential developments, leveraging similar energy-efficient technologies and architectural strategies. 3. Integration with Smart City Initiatives: o The residential complex can be integrated into a smart city network, enabling real-time energy management, waste reduction, and improved infrastructure. The building's energy systems (e.g., solar, geothermal) could be connected to local grids or smart energy solutions to optimize usage and reduce costs. 4. Sustainability Certification: o The project could be scaled further by gaining international sustainability certifications like LEED or BREEAM for future developments, raising the profile of the initiative and attracting additional investments. The primary target group for the residential complex will be young people who are facing financial challenges in securing decent housing. Specifically: 1. Young People (18-35 years): o This group includes young adults starting their careers, those pursuing higher education, or individuals seeking affordable housing due to economic circumstances. o Priority will be given to young people with low incomes or those from disadvantaged backgrounds, helping to reduce housing inequality and create opportunities for social inclusion. 2. Students and Recent Graduates:

ACTION TITLE	**Construction of a residential complex for young people in Buzău Municipality nZEB**
	o Students from local universities or young professionals who have recently graduated and are starting to build their careers in Buzău. Affordable housing options will allow them to focus on their careers without the burden of high rent. 3. Low-Income Families: o Young individuals or families facing financial difficulties due to unemployment, underemployment, or other socio-economic challenges. 4. Socially Vulnerable Groups: o The project can target specific vulnerable groups within the young population, such as those who have faced homelessness, individuals with disabilities, or other marginalized groups.
FIELD OF ACTION	**BUILT ENVIRONMENT**
SYSTEMIC LEVER	Technology / Infrastructure / Social Inclusion
EMISSION DOMAIN(S)	Building Energy Use / Residential Sector Emissions / Urban Carbon Footprint
COVERED INTERVENTIONS	• Construction of 24 nZEB residential units • Integration of renewable energy sources (e.g., solar, geothermal) • Implementation of advanced insulation and energy-saving technologies • Smart energy and water management systems • Affordable housing aligned with sustainability goals • Social inclusion through housing access for vulnerable groups
BRIEF DESCRIPTION	The project involves the construction of a residential complex for young people (24 units) in Buzău Municipality, with a focus on nearly Zero Energy Buildings (nZEB). The complex will consist of four blocks designed specifically for low-income young people, providing affordable, sustainable, and energy-efficient housing. The main goal is to address housing needs for young people while also prioritizing sustainability and energy efficiency through the implementation of nZEB standards. nZEB (nearly Zero Energy Buildings) are buildings that require very little energy to operate, thanks to the integration of energy-efficient systems, renewable energy sources (such as solar panels or geothermal heating), and advanced building techniques. These buildings are designed to have minimal environmental impact by optimizing energy use, reducing carbon emissions, and providing occupants with lower utility costs. This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	24 NZeb units for young people coming from marginalized families with long term environmental impact and improved quality of life
RESPONSIBLE ENTITY / BODY / PERSON	Buzău Municipality (Local Government): • The municipality is the primary responsible body for managing the implementation of the project. This includes overseeing the planning, development, and coordination of resources, ensuring compliance with local building codes, and securing necessary funding or subsidies. Construction Companies (Contractors): • A construction company specializing in sustainable building practices will be responsible for the actual construction of the residential blocks, ensuring that nZEB standards are met during construction and installation.

ACTION TITLE	**Construction of a residential complex for young people in Buzău Municipality nZEB**
INVOLVED STAKEHOLDERS	Energy Efficiency and Sustainability Experts: • Consultants or engineering firms specializing in energy-efficient buildings and nZEB standards will ensure that the design, materials, and systems implemented meet the necessary energy performance targets. Local Utility Providers (Energy, Water): • Collaboration with local energy and water providers will be necessary to ensure that the buildings are connected to the grid in a way that optimizes energy use and reduces waste. Key Stakeholders 1. Young People (Primary Beneficiaries): o The primary stakeholders will be the young people who will live in the residential complex. Their needs for affordable housing and access to energy-efficient living spaces are central to the project. 2. Local Community (Residents of Buzău): o The broader local community will benefit from the development of a new residential area that adheres to sustainable practices and contributes to the local economy. 3. Municipal Departments: o Authorities responsible for urban development, planning, and zoning will have a significant role in approving the project and ensuring it meets local regulations. 4. Construction and Real Estate Developers: o Developers will be involved in the planning, design, and construction of the project. They will also ensure that the building meets energy standards and incorporates nZEB principles. 5. Environmental NGOs and Sustainability Groups: o These organizations will be key supporters of the project, as it directly contributes to sustainability goals, reducing carbon emissions, and promoting energy-efficient living. 6. Technology Providers (Renewable Energy Companies): o Companies that supply solar panels, geothermal systems, or other energy-efficient technologies will be crucial for the installation of renewable energy solutions in the buildings. 7. Public Health Authorities: o Local health authorities will have an interest in the project as it promotes healthier living conditions, thanks to energy-efficient, well-insulated buildings that enhance comfort and air quality. 8. Educational Institutions: o Local university and vocational schools will partner with the project to provide training, research, and education on sustainable building practices, energy efficiency, and green technologies.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	1,776.91 tCO2/year from the Buildings sector.
% OF TOTAL CO2 REDUCTION	0.73 %
GENERATED	-

ACTION TITLE	**Construction of a residential complex for young people in Buzău Municipality nZEB**
RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	BUILDINGS: ▪ 2,004.44 MWh/year electrical energy from Scope 2; ▪ 532.22 MWh/year thermal energy from Scope 2; ▪ 6,864.97 MWh/year natural gas from Scope 2;
TIMELINE (START AND END)	2023-2026

ACTION TITLE	**Positive Energy Districts**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Spatial Scale • Pilot Districts: 1–2 selected urban regeneration zones (e.g., former industrial zones, public housing clusters, mixed-use areas as defined in the PIRU (Buzau Urban Regeneration Integrated Plan) • City-Wide Expansion: Gradual replication in additional districts — prioritizing those undergoing redevelopment, having public buildings, or strong business interest. Functional Scale • Energy Infrastructure: Rooftop solar, battery storage, smart grids. • Mobility: Integration of electric mobility (electric busses, EV charging stations, e-bike infrastructure, low-emission zones). • Circular Economy Systems: Local reuse/recycling centers, sustainable construction practices, green procurement platforms as defined in Buzau Circular Economy Strategy • Digital Systems: Smart meters, building energy management systems, open energy data dashboards. TARGET GROUPS (ADDRESSED ENTITIES) 1. Public Sector Entities • Buzau Municipal Departments (Urban Planning, Environment, Infrastructure, Finance, Investment, Procurement and Externally Funded Programs Department) • Public Institutions (schools, hospitals, administrative offices within regeneration areas) • Development Authorities (SE Development Agency /Governmental Agencies • Local Utilities / Energy Providers 2. Private Sector Actors • Real Estate Developers and Construction Companies: for retrofits, new builds, and sustainable urban design. • Renewable Energy Companies: For supplying, installing, and maintaining solar, geothermal, wind systems. • Technology Providers: IoT, smart grid, and energy monitoring platforms. • Financial Institutions: banks, green investment funds, insurance companies, impact investors. • Waste Management and Circular Economy Companies: Local and regional material recovery, eco-construction products, circular startups.

ACTION TITLE	**Positive Energy Districts**
	3. Knowledge & Research Institutions • Universities and Technical Institutes: Research, innovation pilots, monitoring, and training (Galati University) • Vocational Training Centers: Upskilling workers for green jobs and PED maintenance roles. (Buzau Dual Educational Consortium) 4. Civil Society and Community • Citizens and Local Residents: Participants in co-design, behavior change, energy cooperatives. • Neighborhood Associations & NGOs: Advocates for inclusivity, social cohesion, and environmental equity. • Facility Managers and Public Building Operators: Key in implementing energy-saving measures and managing systems.
FIELD OF ACTION	**BUILT ENVIRONMENT**
SYSTEMIC LEVER	Infrastructure / Governance / Data & Digitalization / Finance
EMISSION DOMAIN(S)	Urban Energy Use / Mobility / Construction and Demolition Waste / Public Infrastructure Emissions
COVERED INTERVENTIONS	• Deep retrofits and energy-positive buildings • Smart grid and renewable energy systems • Circular economy practices (green procurement, reuse centers) • Deployment of EV charging stations and e-bike networks • Integration of smart meters and open energy data platforms • Co-creation with residents, energy cooperatives • Vocational training for green jobs • Pilot-to-scale PED deployment with urban planning integration
BRIEF DESCRIPTION	Establishing Positive Energy Districts (PEDs) through our Urban Regeneration Integrated Plan is an ambitious and impactful initiative of Buzau Municipality A successful PED implementation requires strategic planning, multi-stakeholder collaboration, and phased development. Below is a tailored Middle- and Long-Term Implementation Plan structured in three phases (Preparation, Deployment, and Scaling) over a 10-year timeline. PHASE 1: PREPARATION & STAKEHOLDER ENGAGEMENT (Years 1–3) Objectives: • Define PED vision and governance • Identify and mobilize key stakeholders • Conduct technical, social, and financial feasibility studies Key Actions: 1. Set Up PED Taskforce o Interdepartmental municipal team with clear mandates o Include departments: Environment, Infrastructure, Urban Planning, Economy 2. Stakeholder Mapping & Engagement o Identify businesses, utilities, developers, academia, NGOs, citizens' groups

ACTION TITLE	Positive Energy Districts

- Organize co-creation workshops to align goals and collect input

3. Define Target Areas and Use Cases
   - Select 1–2 pilot regeneration zones for initial PED implementation
   - Prioritize mixed-use or civic areas for higher impact
4. Feasibility Studies and Baseline Mapping
   - Energy demand and production potential (solar, etc.)
   - Building stock assessment and retrofit needs
   - Socioeconomic and regulatory barriers
5. Create Investment & Business Model Options
   - energy cooperatives, PPPs.
   - Engage private real estate and energy developers in early planning
6. Secure Funding
   - Apply for EU (e.g., Regional Operational Program, ELENA, national financing programs, or development bank funding
   - Seek co-investment from private sector partners

PHASE 2: PILOT DEPLOYMENT & LEARNING (Years 4–6)

Objectives:

- Implement first-generation PEDs
- Test technologies, governance, and financing models
- Refine replicable frameworks

Key Actions:

1. Launch Pilot PED Projects
   - Begin deep retrofits and renewable installations
   - Implement smart energy systems (microgrids, storage, energy management platforms)
   - Ensure energy-positive performance monitoring
2. Involve Business Actors Directly
   - Invite local firms to co-develop infrastructure (e.g., rooftop PV, EV networks)
   - Attract startups/SMEs in green tech and circular economy sectors to operate in the district
   - Offer incentives: tax breaks, innovation hubs
3. Implement Circular Economy Practices
   - Use reclaimed materials, promote local green procurement
   - Partner with recycling businesses and social enterprises
4. Engage the Community & Build Capacity
   - Offer training for residents, facility managers, and local workers
   - Establish neighborhood energy cooperatives if feasible
5. Monitor, Evaluate, and Share Results
   - Define and track KPIs (energy balance, GHG reduction, cost savings)
   - Collect lessons learned and adjust frameworks

PHASE 3: SCALE-UP & INTEGRATION (Years 7–10)

Objectives:

- Expand PEDs city-wide as standard in regeneration

ACTION TITLE	**Positive Energy Districts**
	• Institutionalize PED approaches in urban development • Attract broader private sector investment Key Actions: 1. Formalize PED Strategy in City Planning Instruments o Integrate PED targets into the Urban Plan, building codes, and permitting processes 2. Scale to Additional Districts o Use successful pilots as models for replication o Encourage private-led PEDs in new developments (residential, commercial parks, etc.) 3. Strengthen Business Ecosystem o Create green innovation districts or PED hubs o Provide grants or low-interest loans for SMEs that contribute to PED goals 4. Create Public-Private Investment Platform o Establish a PED fund combining municipal, national, and private capital o Attract ESG-aligned investors (banks, insurers, different investment funds) 5. International Collaboration & Promotion o Partner with EU PED networks (e.g., EU PED Innovation Cluster) o Promote your city as a model for energy-positive urban regeneration Cross-Cutting Enablers Throughout All Phases • Policy and Regulation: Advocate for enabling national legislation (e.g., energy sharing, grid access) • Data and Digitalization: Create an open energy data platform for real-time monitoring • Communication Strategy: Showcase successes to maintain political and community support • Inclusive Design: Ensure low-income and marginalized groups benefit equitably This action will apply the principles and values of the New European Bauhaus to ensure that sustainability, aesthetics, and inclusiveness are embedded in all relevant interventions.
OUTCOME	Reduced emissions, lower operating costs, enhanced reputation for the Municipality New market opportunities, innovation leadership, green investment returns for business Improved comfort, energy savings, better air quality, community empowerment for citizens & residents of the areas. Resilient infrastructure, budget relief, educational and healthcare environment gains for Public Institutions and citizens Living labs for research, training, and real-world application for Research & Academia bodies involved
RESPONSIBLE ENTITY / BODY / PERSON	This multi-actor governance model ensures shared responsibility, inclusive decision-making, and efficient resource mobilization. By clearly defining the roles and contributions of all parties involved, the Municipality aims to build a strong foundation for replicable, scalable, and climate-resilient Positive Energy Districts across the city. Municipality (All Departments) • Lead and coordinate all planning and implementation phases • Conduct feasibility studies, data modelling, and energy optimization • Manage stakeholder engagement and approvals • Ensure integration with urban policies and environmental targets • Monitor progress and ensure transparency

ACTION TITLE	Positive Energy Districts
INVOLVED STAKEHOLDERS	Private Sector (Developers, Utilities and Energy Providers) • Design and implement technical solutions (retrofits, renewables, smart systems) • Co-invest or deliver under EPC/PPP models • Provide innovation in construction, digitalization, and circular economy Academic and Research Institutions (Galati University) • Develop tools for impact assessment and forecasting • Offer training, support innovation labs, and monitor KPIs Citizens, NGOs • Co-create solutions and participate in behavioral programs • Support inclusive planning and local feedback • Help raise awareness and ensure equity in benefits Financial Institutions • Provide funding and financing instruments • Support risk mitigation and investment planning • Monitor financial accountability
	Key Stakeholders for Establishing Positive Energy Districts (PEDs) in Buzău Municipality The Establishment of Positive Energy Districts (PEDs) is a transformative initiative that aims to generate more renewable energy within a district than it consumes, contributing to sustainable urban development and energy resilience. To successfully implement this project, multi-stakeholder collaboration is essential, with active involvement from government bodies, private entities, research institutions, and the local community. Local Government and Municipality (Buzău Municipality) • Role: The Municipality will play a leading role in the project as the primary decision-maker, ensuring alignment with local urban planning, regulatory frameworks, and sustainability goals. o Responsibilities: ▪ Oversee project planning and governance. ▪ Secure funding, including from national and EU sources. ▪ Facilitate public-private partnerships. ▪ Ensure regulatory and zoning compliance. ▪ Coordinate communication and public engagement. • Departments Involved: all depatments National Government and Ministries • Ministry of Energy: o Role: Support the implementation of energy policies, renewable energy integration, and energy efficiency goals. o Responsibilities: ▪ Provide technical guidelines for PEDs. ▪ Facilitate financial support mechanisms (subsidies, grants). ▪ Set national energy and sustainability targets. • Ministry of Development, Public Works, and Administration: o Role: Oversee urban regeneration projects and infrastructure development. o Responsibilities: ▪ Integrate PEDs into urban regeneration strategies at the national level. ▪ Ensure compliance with national building codes and regulations. • Ministry of Environment, Waters and Forests: o Role: Ensure that environmental regulations are adhered to in the creation of PEDs.

ACTION TITLE	Positive Energy Districts

- Responsibilities:
  - Promote sustainable construction practices.
  - Monitor and protect biodiversity and ecosystems.

Urban Planning and Design Experts

- Role: Architects, urban planners, and sustainability consultants are crucial to designing energy-efficient and sustainable urban spaces.
  - Responsibilities:
    - Conduct feasibility studies and site assessments.
    - Develop blueprints for district-level energy systems.
    - Create zoning and master plans that integrate renewable energy solutions, green spaces, and energy-efficient buildings.
    - Design infrastructure for smart grid integration.

Energy Providers (Electricity, Gas, and Renewable Energy Suppliers)

- Role: Energy providers, including both conventional and renewable energy companies, will play a key role in supplying energy to the PEDs and contributing to the district's energy autonomy.
  - Responsibilities:
    - Supply and manage energy needs for the district, including renewable energy sources (e.g., solar, wind).
    - Integrate smart grids and energy storage systems for efficient energy distribution.
    - Facilitate energy exchange with national grids where required.

Technology and Infrastructure Providers (Smart Grid and IoT Solutions)

- Role: Technology companies will provide the necessary infrastructure for energy management, automation, and data analysis, including smart grid systems and IoT devices.
  - Responsibilities:
    - Develop and deploy smart meters for real-time energy consumption monitoring.
    - Provide the digital platform for energy management, optimization, and reporting.
    - Implement technologies to ensure seamless integration of renewable energy sources and efficient energy storage.

Construction and Engineering Companies

- Role: Construction companies will be responsible for the physical construction of buildings, infrastructure, and energy-efficient systems within the PEDs.
  - Responsibilities:
    - Build energy-efficient buildings and homes to comply with PED standards (including nZEB standards).
    - Implement renewable energy systems, such as solar panels and geothermal heating.
    - Ensure high construction standards in line with sustainability, resilience, and energy performance targets.

Research and Educational Institutions

- Role: Galati University will provide the technical knowledge, innovation, and research needed to ensure the project's success.
  - Responsibilities:
    - Conduct research on smart city technologies, energy storage, and renewable energy solutions.

ACTION TITLE	**Positive Energy Districts**
	▪ Provide educational programs and training for local communities and workers. ▪ Assist in monitoring the environmental and economic impact of the PEDs. Community and Local Residents • Role: The local community and residents of the PEDs will be key stakeholders, as they will directly benefit from improved living conditions, lower energy bills, and a sustainable environment. o Responsibilities: ▪ Engage in community consultations to ensure their needs are met. ▪ Participate in the management and maintenance of energy-efficient practices. ▪ Adopt sustainable behaviors, such as waste reduction and energy conservation. Environmental NGOs and Sustainability Advocates • Role: Environmental organizations will support the project by ensuring that it meets environmental sustainability targets and fosters green living practices. o Responsibilities: ▪ Monitor the environmental impact of the project. ▪ Advocate for eco-friendly building materials, energy-saving technologies, and waste reduction practices. ▪ Promote community awareness about the environmental benefits of PEDs. National and International Sustainability Networks • Role: National and international organizations dedicated to sustainable urban development, energy efficiency, and climate action will provide guidance, best practices, and international collaboration opportunities. o Responsibilities: ▪ Provide access to global knowledge on energy-efficient building techniques and smart grid technology. ▪ Assist in meeting international climate targets ▪ Share experiences from other PED implementations globally to ensure best practices.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	5,471.68 tCO2/year (5,330.72 tCO2/year from the Buildings sector | 140.96 tCO2/year from the Transport sector)
% OF TOTAL CO2 REDUCTION	2.24%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	BUILDINGS: ▪ 5,555.56 MWh/year electrical energy from Scope 2; ▪ 532.22 MWh/year thermal energy from Scope 2; ▪ 19,312.17 MWh/year natural gas from Scope 2;

ACTION TITLE	**Positive Energy Districts**
	TRANSPORT ▪ 374.53 MWh/year diesel from Scope 1; ▪ 164.50 MWh/year gasoline from Scope 1;
TIMELINE (START AND END)	2025-2035

ACTION TITLE	**Centralized information system for management and decision support in strategic development projects**
TYPE OF ACTION	Digital Transformation / Smart Governance
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Buzau Municipality Target Group Local Government Authorities (Municipality of Buzău): • The primary users of the system are municipal officials and departments responsible for strategic development projects, including urban planning, infrastructure, environment, housing, and finance. • Decision-makers such as the Mayor, City Council, and senior managers will rely on the system for data-driven insights to guide policy and project execution. Project Managers and Coordinators: • This includes both municipal staff and external consultants responsible for overseeing the day-to-day implementation of strategic development projects. • They will use the system to track progress, manage resources, and address challenges in real-time. Departmental Staff: • Departments involved in development projects (urban planning, public works, environmental management, etc.) will use the system for data sharing, project coordination, and reporting. • Staff can access specific project details and collaborate effectively across departments. Contractors and External Consultants: • Contractors working on specific urban development projects will use the system to receive updates, manage deliverables, and ensure project milestones are met. • External consultants may also provide technical assistance in data analysis, forecasting, and reporting. Investors and Funding Agencies: • Investors and funding bodies involved in the development projects will benefit from the transparency provided by the system, which allows them to monitor project performance and assess the return on investment. • They will be able to evaluate whether projects are meeting financial and environmental sustainability targets. Residents and the Local Community: • The local community, including businesses and residents, may be indirectly impacted by the project through enhanced transparency and communication. The system can also be used to share relevant information with the public about ongoing developments and urban regeneration efforts. • Community feedback can be integrated into the system, facilitating better engagement with citizens and ensuring that development aligns with local needs.

ACTION TITLE	**Centralized information system for management and decision support in strategic development projects**
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Governance, Digitalization, Institutional Capacity Building
EMISSION DOMAIN(S)	Cross-sectoral (Urban Planning, Energy, Transport, Waste, Air Quality, Green Infrastructure)
COVERED INTERVENTIONS	• Real-time monitoring and reporting tools • Digital project management dashboards • Stakeholder and citizen engagement portals • Decision support for strategic climate neutrality projects • Transparency and accountability tools • Integration of climate and urban development data
BRIEF DESCRIPTION	The Centralized Information System for Management and Decision Support in Strategic Development Projects is a forward-thinking initiative aimed at enhancing the efficiency, transparency, and data-driven decision-making processes within the municipality. The system acts as a comprehensive, integrated platform that centralizes key data, information, and tools necessary for the strategic management of various urban development projects. It is designed to support the decision-making process at all stages of development, from planning and design to execution and monitoring. By consolidating data and facilitating real-time access, this centralized system allows the municipality and its departments to make informed, timely decisions that contribute to the efficient use of resources, streamlined project management, and long-term urban sustainability. The system integrates various data sources (economic, environmental, social, etc.) and provides actionable insights for both local authorities and other stakeholders involved in urban development. The Centralized Information System for Management and Decision Support in Strategic Development Projects is not just a tool for urban development; it will play a critical role in supporting and implementing all projects related to the M100 Neutrality Climate Programme. This program, which aims to drive Buzău Municipality toward carbon neutrality by 2035, requires an integrated, data-driven approach to ensure that sustainability targets are met effectively across multiple sectors. The Centralized Information System will serve as the main instrument for managing and coordinating projects that are aligned with the M100 Climate Neutrality objectives, ensuring that every action taken is monitored, measured, and optimized for environmental sustainability. The system will act as the core platform for managing all climate neutrality projects within the M100 program, including renewable energy initiatives, energy efficiency improvements, green infrastructure, and climate resilience projects. By consolidating real-time data and progress reports from each project, the platform will help municipal authorities track the overall progress toward carbon neutrality and ensure that all actions are on track to meet targets. This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability.
OUTCOME	Integration of Climate Data:

ACTION TITLE	**Centralized information system for management and decision support in strategic development projects**
	• The system will be integrated with tools and modules that track climate-specific indicators, such as CO2 emissions, energy consumption, air quality, and waste reduction. This will enable the Municipality of Buzău to measure progress in real time, ensuring that the climate neutrality initiatives are moving in the right direction and making a tangible impact on emissions reduction. Optimizing Resource Allocation for Climate Projects: • As the platform centralizes data from various sources, it will facilitate better resource management, enabling decision-makers to prioritize projects that will have the greatest climate impact. For instance, funds can be directed towards high-impact initiatives such as green building projects, electric mobility infrastructure, and sustainable energy systems based on real-time performance data. Tracking and Reporting of M100 Targets: • The platform will be essential for reporting to both local and national stakeholders on the progress of the M100 Neutrality Climate Programme. This includes tracking milestones, completing environmental impact assessments, and quantifying emissions reductions for every project under the M100 program. The transparency provided by the system will be key to ensuring accountability and fostering trust with the public, investors, and regulatory bodies. Real-Time Decision Support for Climate Policies: • Decision-makers can rely on the system's real-time analytics to make data-driven decisions about new policies and strategies for achieving climate neutrality. By offering insights into the performance of ongoing climate projects, the platform helps optimize policies related to energy efficiency, sustainable transport, waste management, and urban green spaces. Stakeholder Collaboration for Climate Goals: • The system will enable inter-departmental collaboration and stakeholder engagement throughout the M100 programme's lifecycle. It allows municipal departments, external partners, contractors, and citizens to access and share data relevant to climate neutrality, ensuring that everyone is aligned with the overarching goal of carbon neutrality by 2050. Public Engagement in Climate Initiatives: • The platform will also serve as a communication channel for engaging with the public on climate-related projects. Residents, local businesses, and stakeholders can access detailed updates on M100 program milestones, track emissions reduction efforts, and receive real-time information about ongoing sustainability initiatives, fostering community involvement in climate action.
RESPONSIBLE ENTITY / BODY / PERSON	**Buzău Municipality**: Investment, Procurement, Foreign Financing and Development and Implementation Department
INVOLVED STAKEHOLDERS	Key Stakeholders • Municipal Departments and Local Authorities: • Technology Partners (Software Developers and IT Providers): o Technology firms or consultants specializing in information systems will play a crucial role in designing, implementing, and maintaining the platform. They ensure that the system is user-friendly, scalable, and secure. • Construction and Engineering Firms: o Contractors working on development projects will have access to the system to manage timelines, track project stages, and submit reports on progress. • Investors and Funding Institutions: o Investors, banks, or development agencies who provide financial resources for the

ACTION TITLE	**Centralized information system for management and decision support in strategic development projects**
	projects will use the system for financial monitoring and reporting purposes, ensuring that funds are properly allocated and used. • External Consultants and Auditors: o These entities may provide specialized services, including data analysis, quality control, and system audits, to ensure that the project stays on track and adheres to best practices. • Community Engagement Groups: o NGOs, local advocacy groups, and community leaders may help in gathering feedback from the public and ensuring that the system is transparent and accessible for residents. • Public Communication and Media: o The system can also be used to enhance communication with the public, sharing progress updates, project milestones, and news regarding strategic development initiatives.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	1,500.00 tCO2/year from the Buildings sector.
% OF TOTAL CO2 REDUCTION	0.61%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action has not been calculated to eliminate or replace a specific type of energy, but rather to support the coordination, monitoring, and optimization of carbon-reduction initiatives implemented across multiple sectors. While it does not result in a direct reduction in energy consumption (MWh), it serves as a strategic enabler for more effective and data-driven emissions reduction planning.
TIMELINE (START AND END)	The system already exists but requires adjustments and updates These updates will be made in 2025

ACTION TITLE	**6.2. Local products and service market**
TYPE OF ACTION	Soft intervention / Local economic development / Environmental awareness / Sustainable agriculture promotion
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scaling the Project with BRGV's Involvement 1. Expanding the Range of Local Products: o With BRGV's collaboration, the range of products available at the market can be expanded over time to include more varieties of heritage plants, medicinal herbs, and other locally grown crops that are less commonly available. This will allow the market to attract a wider audience interested in unique, sustainable products. 2. Research and Development of New Plant Varieties: o As BRGV continues its research into plant genetics, the project can benefit from the

ACTION TITLE	**6.2. Local products and service market**
	introduction of new, climate-resilient crop varieties that are specifically adapted to the local environment. This will improve the market's offerings and ensure that local agriculture remains competitive and sustainable in the face of climate change. 3. Increasing Digital Engagement: o As the market grows, it can scale digitally with the development of an online platform that highlights the benefits of the products sourced through the BRGV's research efforts. This platform could feature educational content on the importance of genetic diversity, provide virtual tours of the BRGV's conservation efforts, and sell local products online, reaching a wider consumer base. 4. Regional Expansion: o Beyond Buzău, the project can scale to neighboring regions, utilizing BRGV Buzău's network to introduce their conservation practices and promote local plant species in markets throughout the area. This would help develop a regional network of sustainable product markets. Target Group 1. Local Producers and Farmers: o Small-scale local farmers and artisans, especially those involved in organic farming or heritage plant cultivation, will benefit from the support provided by the project and BRGV's research into sustainable plant varieties. 2. Consumers: o Local residents and tourists who are interested in purchasing fresh, organic, and sustainably sourced products will be the primary consumers. Additionally, individuals seeking to support local businesses and learn about sustainable living will also be attracted to the market. 3. Educational Institutions: o Schools, university, and research institutions will be important stakeholders in terms of educating the younger generation about plant genetics, biodiversity conservation, and the importance of local products in reducing environmental impacts. 4. Environmental and NGOs: o NGOs will be key stakeholders in promoting the project's educational and environmental messages. 5. BRGV Buzău and Ministry of Agriculture and Rural Development: o As primary collaborators, BRGV Buzău will play a vital role in the project's success, offering expertise in plant genetics and biodiversity. The Ministry of Agriculture and Rural Development will also provide oversight and support for this partnership.
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Sustainable Local Economies / Biodiversity Conservation / Local Food Systems / Knowledge Sharing and Education
EMISSION DOMAIN(S)	Agriculture and Land Use / Food Systems / Transport / Consumer Behavior
COVERED INTERVENTIONS	Promotion of local and eco-friendly products Support for biodiversity through heritage crop cultivation Digitalization of local product access and educational content Public awareness campaigns on plant genetic diversity and sustainability

ACTION TITLE	**6.2. Local products and service market**
	Reduction of food miles by encouraging local sourcing Resource-efficient packaging and reduced waste generation
BRIEF DESCRIPTION	The Local Products and Service Market project in Buzău Municipality is an innovative initiative aimed at promoting local businesses, fostering economic growth, and supporting environmental sustainability by connecting consumers with locally sourced products and services. In collaboration with the Banca de Resurse Genetice Vegetale pentru Legumicultură, Floricultură, Plante Aromatice şi Medicinale (BRGV) Buzău, this project will prioritize the inclusion of local agricultural resources, including vegetables, flowers, aromatic and medicinal plants, and other sustainable products cultivated in the region. The BRGV Buzău is a public research institution under the Ministry of Agriculture and Rural Development, focused on the exploration, inventorying, collection, research, development, and conservation of phytogenetic resources. By partnering with BRGV Buzău, the project will integrate their expertise in genetic resource conservation to enhance the market's offerings, making it a key platform for promoting local biodiversity and sustainable agriculture practices. Through this collaboration, the market will not only serve as a platform for local businesses and artisans but also as a showcase for environmentally sustainable practices in agriculture, floriculture, and medicinal plants. BRGV Buzău's involvement ensures that the products offered at the market meet high standards of sustainability, biodiversity conservation, and environmental stewardship, which will foster a deeper understanding of the importance of genetic resources and plant diversity for local communities. This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability.
OUTCOME	Stronger Local Economy with Environmental Sustainability: Promotion of Eco-friendly Products and Services: Reduction of Packaging Waste and Resource Efficiency: Support for Sustainable Agriculture and Local Food Systems: Promotion of Renewable Energy and Green Services: Enhancement of Urban Green Spaces and Eco-tourism: Educational Opportunities and Raising Awareness of Environmental Issues By collaborating with BRGV Buzău, the project will help support the conservation of genetic resources, promoting the cultivation of heritage plants, including traditional vegetables, flowers, and medicinal plants that are often underrepresented in mainstream markets. This partnership will ensure that the market supports sustainable agriculture and highlights biodiversity conservation through the promotion of native species and eco-friendly farming practices.
RESPONSIBLE ENTITY / BODY / PERSON	Local NGO/Media Parners Buzau Municipality – Investment, Procurement, Project Development and Implementation Department BRGV Buzău
INVOLVED STAKEHOLDERS	**Key Stakeholders** • **Local Farmers and Artisans**:

ACTION TITLE	**6.2. Local products and service market**
	○ Essential participants in the market, contributing to the supply of **sustainable, organic**, and **locally produced goods**. • **Consumers**: ○ Local residents, tourists, and individuals interested in purchasing **eco-friendly** and **sustainably produced goods**. • **Environmental NGOs**: ○ Advocates for **sustainability**, **biodiversity**, and **conservation** practices, who will support the project's educational efforts. • **Educational Institutions**: ○ Schools and universities, helping educate the community on the **importance of sustainability** and the **preservation of genetic resources**. • **Investors and Sponsors**: ○ Private sector partners who may help fund the project or provide **infrastructure** and **marketing support**.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	4,130 tCO2/year from the AFOLU sector.
% OF TOTAL CO2 REDUCTION	1.69 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	This action has not been designed to directly eliminate or replace a specific type of energy, but it indirectly supports the substitution of fossil fuels used in long-distance food transport and industrial agriculture.
TIMELINE (START AND END)	2026-2028

ACTION TITLE	**6.3. School workshops for recycling and creation**
TYPE OF ACTION	Educational Campaign / Community Engagement / Circular Economy and Climate Awareness Initiative
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	While the project will start in all schools from Buzău City, it can scale to include more schools across the urban areas in the functional zone. By partnering with local educational authorities, the project can be extended to additional schools, encouraging wider participation in climate-neutral initiatives. Incorporate Digital Tools and Resources: • The project can also scale digitally by offering online workshops, tutorials, and virtual challenges for schools to participate in. This will allow the project to reach a larger audience, including students from rural areas or those unable to attend physical workshops. Broaden the Scope of Recycled Materials and Upcycling Projects: • Over time, the scope of materials used in the workshops can be expanded to include more diverse products and materials, such as e-waste, clothing, or furniture. This will allow students to learn about different types of recycling and the importance of reusing and

ACTION TITLE	**6.3. School workshops for recycling and creation**
	repurposing materials across various sectors. Partnership with Businesses and Local Organizations: • The project can scale by involving local businesses and NGOs, which can donate materials, sponsor workshops, or provide expert guidance on sustainable production methods. This partnership would strengthen the practical aspects of the workshops and make them more impactful. **Target Groups** 1. Primary and Secondary School Students: o The primary target group will be primary and secondary school students in Buzău Municipality. Engaging this age group ensures that they develop a strong foundation in environmental consciousness and sustainable behavior from a young age. 2. Teachers and School Staff: o Teachers and school staff will be involved in the workshops and will benefit from training in environmental education and waste management. They will also play a crucial role in reinforcing the concepts taught in the workshops. 3. Parents and Families: o By encouraging students to share their new knowledge with their families, the project can have a multiplier effect. Parents and families will be encouraged to adopt recycling practices, reducing household waste and supporting climate neutrality in their daily lives. 4. Local Communities: o The project will target the broader community by hosting open events, exhibitions, or public challenges related to recycling and creative reuse. This ensures that the project extends its impact beyond the school walls and encourages community-wide participation. 5. Local Authorities and Educational Institutions: o Local authorities, including the Buzău Municipality, will play an important role in supporting and facilitating the project's implementation. Educational institutions will also be involved in ensuring that the workshops are integrated into the curriculum.
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Behavioral Change / Environmental Education / Circular Economy / Youth Engagement
EMISSION DOMAIN(S)	Waste / Education / Consumer Behavior / Indirect emissions from production and disposal
COVERED INTERVENTIONS	Hands-on recycling and upcycling workshops in schools Education on climate neutrality and sustainability Digital expansion through online platforms Community events and public exhibitions Collaboration with local businesses and NGOs Measurement and reporting of recycling impacts
BRIEF DESCRIPTION	The School Workshops for Recycling and Creation project is an educational initiative aimed at promoting climate neutrality among students by engaging them in hands-on activities focused on recycling, upcycling, and the creative reuse of materials. The workshops will educate students on the

ACTION TITLE	**6.3. School workshops for recycling and creation**
	importance of reducing waste, promoting sustainable practices, and contributing to climate change mitigation through practical, fun, and innovative activities. The project will be implemented in collaboration with local schools in Buzău Municipality and aims to foster environmental awareness and climate-conscious behavior at an early age. By focusing on creative recycling and resourcefulness, the project will encourage students to view waste as a resource for new, eco-friendly products, thereby reinforcing the values of a circular economy and sustainability. This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability.

OUTCOME	Main Outcomes
	- Enhanced Environmental Awareness and Climate Neutrality:
	  - Students will gain a deeper understanding of climate change and carbon emissions through engaging workshops that highlight the role of recycling in reducing carbon footprints. By learning about resource efficiency and waste reduction, participants will become advocates for climate-neutral living in their families and communities.
	- Increased Recycling and Upcycling Practices:
	  - Through practical workshops, students will be taught how to recycle common materials (such as plastic, paper, metal, and glass) and creatively upcycle waste materials into useful products. This will help reduce overall waste in the community and encourage a shift from a linear to a circular economy, where products are reused, repurposed, and recycled, contributing to climate neutrality.
	- Community Engagement and Participation:
	  - The workshops will not only involve students but also encourage parents, teachers, and local communities to participate in recycling and upcycling activities. This creates a ripple effect, where families and neighbors are inspired to act towards a more sustainable, climate-neutral lifestyle.
	- Development of Green Skills:
	  - By engaging students in creative activities that involve green skills, such as using recycled materials to create art, tools, or functional items, they will develop practical skills that align with environmentally friendly practices. These activities will help nurture a generation of innovators who are equipped to solve future environmental challenges creatively and resourcefully.
	- Promotion of Waste Reduction Culture in Schools:
	  - The project will embed a waste reduction culture within local schools, establishing recycling stations, providing educational resources, and organizing events that focus on the importance of reducing waste. Students will understand the environmental impact of waste and the role of individual responsibility in achieving climate neutrality.
	- Environmental Impact Measurement:
	  - The project will track the success of the workshops by monitoring the amount of waste recycled, the number of items upcycled, and the reduction in the carbon footprint of participating schools. Data collection will also provide insights into the long-term behavior change among students regarding waste management and recycling.

RESPONSIBLE ENTITY / BODY / PERSON	Environmental and Sustainability NGOs: • NGOs specializing in environmental education, climate change, and waste management will

ACTION TITLE	**6.3. School workshops for recycling and creation**
	partner with schools to provide expert guidance, create educational materials, and support workshop implementation. • Responsible for overseeing the project, ensuring that local schools and communities are engaged, and providing logistical support and resources to facilitate the workshops. School Boards and Local Education Authorities: • Responsible for coordinating the involvement of schools, ensuring that teachers are trained, and integrating the project into the school's calendar. They will also assist with promoting the workshops and involving local stakeholders. Educational Institutions and Teachers: • Teachers will be the front-line facilitators of the workshops. They will help in the implementation of recycling projects, monitoring outcomes, and providing feedback for improving future workshops. Buzau Municipality • The municipality will track the project's progress and provide funding and policy support.
INVOLVED STAKEHOLDERS	Key Stakeholders 1. Local Businesses and Recycling Companies (eg. GREEN GROUP) o Local businesses that produce recyclable materials or are involved in recycling efforts can become stakeholders by sponsoring workshops, providing materials for upcycling projects, and offering expertise in recycling and sustainability. 2. Parents and Community Volunteers: o Parents and community volunteers will be essential in helping with the execution of the workshops, gathering materials for upcycling, and assisting in organizing community outreach activities. 3. Corporate Sponsors (local business – Buzau Municipality Parners) o Companies committed to sustainability could sponsor the project and provide recycling equipment, materials for upcycling, or financial support to ensure the workshops' success and scalability. 4. Media and Local Press: o Media partners can help spread the message about the workshops and the importance of climate neutrality, helping to generate community interest and encourage broad participation.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	20 tCO2/year from the WASTE sector.
% OF TOTAL CO2 REDUCTION	0.01%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Substitution of waste disposal methods by encouraging recycling, upcycling, and reducing landfill use. This results in lower GHG emissions associated with waste management.

ACTION TITLE	**6.3. School workshops for recycling and creation**
TIMELINE (START AND END)	2025-2035

ACTION TITLE	**6.4. „Too Good To Go"/"Food Hunt"**
TYPE OF ACTION	Digital Innovation / Circular Economy Initiative / Food Waste Reduction Programme
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scaling Potential: • Short Term: Launch a pilot in the urban center with 10–15 partner businesses. • Medium Term: Expand to surrounding communes (Vernești, Ținteşti, Gălbinaşi, etc.) and public institutions (schools, hospitals). • Long Term: Regional expansion across Buzău County and integration with national or European food-sharing platforms. Target Groups: • Local businesses: supermarkets, restaurants, bakeries, producers. • Consumers: environmentally conscious citizens, students, families, vulnerable groups. • Nonprofits and food banks: distribution of donated food. • Schools and youth organizations: education on food waste and digital solutions. • Public sector institutions: integration with school and hospital canteens.
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Circular Economy / Digital Transition / Sustainable Consumption and Production
EMISSION DOMAIN(S)	Food Systems / Waste / Commerce / Transport (indirect)
COVERED INTERVENTIONS	Digital platform for surplus food redistribution Food donation mechanisms to charities and food banks Discounted food sales to prevent waste Data tracking and analytics for food waste reduction Public awareness and education campaigns Compliance with food safety standards
BRIEF DESCRIPTION	The project aims to develop and implement a digital platform/app at the level of Buzău Municipality to reduce food waste, inspired by successful models like "Too Good To Go" and "Food Hunt." The application will connect local businesses (restaurants, supermarkets, bakeries, food producers) with consumers, enabling them to offer surplus food at reduced prices or donate it to those in need. By reducing avoidable food waste, the initiative directly contributes to climate neutrality, given that food waste is a major contributor to greenhouse gas emissions throughout the food supply chain. This innovative digital solution aligns with Buzău's broader environmental goals under the M100 Climate Neutrality Platform and supports the transition to a circular and sustainable urban food system. This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability.
OUTCOME	Main Outcomes: Reduction of Food Waste at Municipal Level: o Diverts surplus food from landfills, decreasing methane emissions.

ACTION TITLE	**6.4. „Too Good To Go”/”Food Hunt”**
	○ Extends the lifecycle of food products and optimizes consumption. Contribution to Climate Neutrality Goals: ○ Lower carbon footprint associated with food production, transport, and disposal. ○ Supports the reduction of Scope 3 emissions for local businesses. Social Inclusion and Food Accessibility: ○ Offers low-cost food options to low-income groups. ○ Encourages local donations to food banks and vulnerable communities. Digital Transformation of the Local Food Ecosystem: ○ Promotes innovation in urban sustainability through a mobile-friendly, easy-to-use platform. ○ Provides real-time analytics for food recovery, emissions saved, and user engagement. Increased Environmental Awareness: ○ Educates both businesses and consumers about the environmental and ethical implications of food waste.
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsible Bodies: • Local NGO overall project coordination/ Media partners • Buzău Municipality digital infrastructure support. • Department Investment, Procurement, Projects Development and Projects Implementation climate alignment and data monitoring. • Local IT providers or startups – app development and maintenance. • Local Food Safety Authority (DSVSA) – compliance and hygiene standards.
INVOLVED STAKEHOLDERS	Key Stakeholders: 1. Local Businesses and Chains – food contributors and beneficiaries of reduced waste disposal costs. 2. Nonprofit Organizations redistribution of unsold food to vulnerable populations. 3. Chamber of Commerce / Business Associations – mobilization and promotion within the business community. 4. Educational Institutions – partners in awareness campaigns and workshops. 5. Consumers and Citizens – active users, community advocates. 6. Media Partners – support communication and engagement campaigns. 7. Environmental NGOs and Green Tech Startups – promote and scale the sustainability impact. 8. Banca de Resurse Genetice Vegetale Buzău (BRGV) – potential collaboration for local seasonal produce and educational activities.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	450.00 tCO2/year from the WASTE sector.
% OF TOTAL CO2 REDUCTION	0.18 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-

ACTION TITLE	**6.4. „Too Good To Go”/”Food Hunt”**
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Indirect substitution of energy and resources used in food production, transportation, and waste management. By reducing food waste, the demand for new food production, processing, and transportation is decreased, thus saving energy and reducing GHG emissions associated with food waste disposal and transportation.
TIMELINE (START AND END)	2026-2030

ACTION TITLE	**6.5. Climate-smart urban design programme**
TYPE OF ACTION	Integrated Urban Development / Climate Adaptation and Mitigation Program
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Project Scaling The programme can be implemented in phases, allowing for scalable development across Buzău Municipality and surrounding areas: Phase 1 – Pilot Projects (Short Term, 1–2 years) • Focus on one or two urban districts in Buzău. • Implement small-scale climate-resilient infrastructure: permeable pavements, green roofs, bioswales, etc. • Pilot energy-efficient public buildings or schools built to NZEB or Passive House standards. Phase 2 – Municipal Expansion (Mid Term, 3–5 years) • Expand to cover the entire urban area of Buzău. • Integrate climate-smart principles into zoning plans, building permits, and transport planning. • Launch urban heat island mitigation projects (urban tree planting, cool roofs). Phase 3 – Regional Replication (Long Term, 5–10 years) • Replicate the programme in surrounding communes: Vernești, Țintești, Gălbinași, etc. • Connect smart urban design with regional climate strategies and carbon budgeting tools. • Link with the broader M100 Climate Neutrality Platform for policy integration and funding alignment. Target Groups • Urban residents – direct beneficiaries of healthier, greener, and safer environments. • Young families and vulnerable communities – through improved housing and access to public green spaces. • Urban planners, architects, engineers – empowered to apply climate-resilient design principles. • Real estate developers and construction firms – incentivized to adopt green building standards. • Students and youth – through awareness programs and participation in design labs. • Transport users – benefitting from safer, low-carbon, and more connected infrastructure.
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Urban Infrastructure Transformation / Spatial Planning and Built Environment / Behavioral Change
EMISSION DOMAIN(S)	Buildings, Transport, Land Use, Energy, Waste

ACTION TITLE	**6.5. Climate-smart urban design programme**
COVERED INTERVENTIONS	Green infrastructure (green roofs, rain gardens) Energy-efficient and NZEB building retrofits Urban heat island mitigation (tree planting, cool roofs) Sustainable mobility (bike lanes, electric transport) Digital urban governance tools (climate data platforms) Renewable energy integration in urban design
BRIEF DESCRIPTION	The Climate-Smart Urban Design Programme focuses on creating resilient, sustainable, and energy-efficient urban areas by integrating climate adaptation and mitigation strategies into urban planning and development. This programme aims to design and implement solutions that address climate change challenges, such as extreme weather events, rising temperatures, and resource scarcity, while promoting green infrastructure, renewable energy use, and sustainable transportation systems. It encourages the development of eco-friendly buildings, urban green spaces, and water-efficient technologies, with an emphasis on improving the quality of life for residents. By fostering collaboration between local authorities, urban planners, and communities, the programme strives to create cities that are both adaptable to future climate conditions and capable of reducing their environmental impact. This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability.
OUTCOME	**1.** Increased Urban Climate Resilience • Buzau City will be better equipped to withstand extreme weather events (heatwaves, heavy rains, droughts). • Improved stormwater management through green infrastructure (green roofs, rain gardens, permeable surfaces). • Enhanced capacity of public authorities to adapt urban planning to changing climate conditions. 2. Reduction in Urban Carbon Emissions • Implementation of low-carbon and NZEB buildings reduces energy consumption in the built environment. • Integration of renewable energy systems (solar panels, heat pumps) into residential and public infrastructure. • Encouragement of non-motorized and electric transport modes lowers emissions from the mobility sector. 3. Improved Air and Environmental Quality • Expansion of urban green spaces and planting of native vegetation reduces the urban heat island effect and improves air quality. • Reduced emissions and pollution from construction, energy, and transport sectors through sustainable materials and clean technology. • Encourages nature-based solutions that provide both climate and ecological benefits. 4. Enhanced Quality of Life for Residents • More walkable, bike-friendly, and human-centered public spaces that promote physical and mental well-being. • Access to cool, shaded areas, improved air, and cleaner environments, especially for children, elderly, and vulnerable populations. • Empowerment of communities to co-design and participate in maintaining climate-smart spaces. 5. Economic and Social Innovation • New green jobs and upskilling opportunities in sustainable construction, smart mobility, landscape design, and renewable energy. • Attraction of green investment and innovation through public-private partnerships. • Stronger local economies due to sustainable urban revitalization and improved

ACTION TITLE	**6.5. Climate-smart urban design programme**
	infrastructure performance. 6. Digital and Data-Driven Urban Governance • Use of digital tools and climate data to support evidence-based planning and real-time environmental monitoring. • Integration of urban platforms (traffic, energy, pollution) enables smarter decision-making at municipal level. 7. Alignment with the M100 Climate Neutrality Platform • This programme acts as a pillar of Buzău's path to climate neutrality, contributing concrete emissions reductions in urban development. • Supports compliance with EU Green Deal objectives and positions the city for future climate and sustainability funding.
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsible Bodies • Buzău Municipality– Lead coordinator and policymaker; ensures regulatory alignment and budget allocation. • Department for Urbanism and Spatial Planning – Integrates climate-smart principles into urban design regulations. • Department Investment, Procurement, Projects Development and Projects Implementation Aligns this project with city-wide decarbonization and adaptation strategies. Oversees the technical design and implementation of built environment upgrades. • Environmental Protection Agency (APM Buzău) – Environmental monitoring and compliance oversight.
INVOLVED STAKEHOLDERS	Local & Regional Stakeholders • Urban Planning and Architectural Firms – Design and execution of climate-resilient projects. • Universities and Technical Schools (e.g., UAUIM, UTCB) – Partners for education, research, and innovation. • BRGV Buzău (Banca de Resurse Genetice Vegetale) – Expertise on green infrastructure, native plant use in urban settings. • Utility companies (electricity, water, heating) – Integration of resource-efficient technologies. Private Sector • Construction and real estate developers – adoption of NZEB standards, smart materials, green certification. • Renewable energy providers – integration of solar panels, energy storage systems. • Mobility service providers – development of low-carbon public and micro-mobility systems. Community & Civil Society • Neighborhood associations and citizen groups – co-designing and maintaining public spaces. • Environmental NGOs and advocacy groups – monitoring, awareness, and feedback. • Media and communication partners – raising public awareness and supporting behavior change. Institutional & Policy Stakeholders • Ministry of Development, Public Works, and Administration • Ministry of Environment, Waters and Forests • European Commission / Green Deal Missions – potential co-financing and alignment with EU policy frameworks.

ACTION TITLE	**6.5. Climate-smart urban design programme**
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	3,500 tCO2/year (3,000 tCO2/year from the BUILDINGS sector | 500 tCO2/year from the TRANSPORT sector)
% OF TOTAL CO2 REDUCTION	1.43 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Indirect substitution of energy and resources through the promotion of energy-efficient urban design, green infrastructure, and sustainable transportation. By reducing energy demand in buildings and promoting low-carbon transport solutions, the need for fossil fuel-based energy and resource-intensive transport is reduced, leading to lower greenhouse gas emissions.
TIMELINE (START AND END)	2025-2035

ACTION TITLE	**6.6. Center of Excellence for Dual-Technical Pre-University and University Education Buzău**
TYPE OF ACTION	Capacity Building, Education Reform, and Industry-Education Collaboration
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Regional Target Group 1. High School Students (Vocational and Technical Education) o Especially those enrolled in dual education programs. o Students from Buzău Municipality and the wider South-East Region seeking practical and employment-oriented education. 2. Young People from Vulnerable Backgrounds o Including NEETs (Not in Education, Employment, or Training) or those at risk of early school dropout. o The project offers them structured educational and career pathways. 3. Teachers and Vocational Training Staff o Benefiting from training, upskilling, and exposure to industry-relevant equipment and curricula. 4. Employers in Key Economic Sectors o Access to a skilled, job-ready workforce, tailored to their production and innovation needs. 5. Local and Regional Communities o Indirect beneficiaries through increased employment, reduced youth unemployment, and stronger local economies.
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Education and Skills Transition; Institutional Innovation
EMISSION DOMAIN(S)	Cross-cutting (Indirect impact on all sectors: industry, mobility, buildings)

ACTION TITLE	**6.6. Center of Excellence for Dual-Technical Pre-University and University Education Buzău**
COVERED INTERVENTIONS	Curriculum integration of green skills and sustainability modules; capacity-building for teaching staff; development of dual education infrastructure with energy-efficient and circular technology training equipment; direct industry engagement in shaping vocational pathways; pilot projects for smart buildings, sustainable logistics, and energy management
BRIEF DESCRIPTION	The Administrative-Territorial Unit (ATU) of Buzău Municipality, as the lead partner, has signed the financing contract for the investment objective 'CENTER OF EXCELLENCE FOR DUAL TECHNICAL PRE-UNIVERSITY AND UNIVERSITY EDUCATION BUZĂU', together with its 11 partners." According to the Partnership Agreement for the Establishment of the Consortium for Dual Education "Center of Excellence for Dual Technical Pre-University and University Education Buzău", the project is submitted within a partnership formed of 12 members: • The Administrative-Territorial Unit of Buzău Municipality (Lead Partner) • "Dunărea de Jos" University of Galați • "Dimitrie Filipescu" Technological High School of Buzău • SC GREENTECH S.A. • SC Voestalpine Railway Systems Romania S.A. • SC TRANS BUS S.A. • SC URSUS BREWERIES S.A. • SC AQUA SYSTEM PLUS S.A. • SC URBIS SERV S.R.L. BUZĂU • SC ROWATER NET S.A. • SC ROMCARBON S.A. • SC BENCOMP S.R.L. The consortium is based on the experience of Buzău Municipality in running technical dual education training programs. Buzău Municipality, as part of its commitment to the M100 Climate Neutrality Programme, is building a strong and long-term partnership with the 11 organizations that form the Consortium for Dual Technical Education. These institutions are not only key partners in workforce development but also among the largest employers and sustainability supporters in the region. Purpose of the Collaboration To align educational, industrial, and environmental objectives by: • Integrating climate neutrality goals into vocational and higher education programs • Supporting green skills development for future professionals • Leveraging the technological and sustainability leadership of private partners • Co-developing and implementing low-carbon, circular, and energy-efficient solutions Key Sectors Represented by the Partners The consortium includes industry leaders from sectors critical to Buzău's transition to climate neutrality: • Circular Economy & Recycling: o *SC GREENTECH S.A.* – a European leader in PET recycling o *SC ROMCARBON S.A.* – materials innovation and circular manufacturing o *SC BENCOMP S.R.L.* – composite materials from recycled plastic and wood • Public Transport & Mobility: o *SC TRANS BUS S.A.* – operator of Buzău's municipal transport system

ACTION TITLE	**6.6. Center of Excellence for Dual-Technical Pre-University and University Education Buzău**
OUTCOME	*SC URBIS SERV S.R.L.* – infrastructure and maintenance services - Water & Utilities Management: *SC AQUA SYSTEM PLUS S.A.* *SC ROWATER NET S.A.* – water services and smart water solutions - Green Industry & Manufacturing: *SC Voestalpine Railway Systems Romania S.A.* – rail systems with a sustainability focus *SC URSUS BREWERIES S.A.* – national beverage company with green transition commitments - Education & Research: *"Dunărea de Jos" University of Galați* – higher education partner for sustainable innovation *"Dimitrie Filipescu" Technological High School* – vocational training focused on dual education This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability. The development of an Integrated Professional Campus, fully equipped at the level of the South-East Region, in Buzău Municipality, aims to enhance practical training efficiency by ensuring a proper balance between theory and practice. This will be achieved through equipping school workshops with high-quality equipment, ensuring the proper training of specialized school staff, and establishing clear relationships between educational institutions and potential employers. Additionally, it will provide educational spaces where students can become familiar with the entire complete professional pathway in a dual education system. Shared Vision and Outcomes The collaboration supports a whole-city approach to climate neutrality by: Creating a green-skilled workforce aligned with the needs of climate-neutral industries. Joint development of innovation projects in energy efficiency, resource use, and sustainable logistics. Participation in pilot projects for zero-emissions transport, smart buildings, and clean production. Knowledge transfer and capacity building between education, government, and business. Establishing climate neutrality as a shared value between institutions, citizens, and companies Buzău as a Climate-Neutral Innovation Hub Through this strategic partnership, Buzău aims to become: - A national model for climate-smart local development - A center of excellence for low-carbon innovation in education and industry - A resilient and inclusive city where environmental sustainability supports economic opportunity
RESPONSIBLE ENTITY / BODY / PERSON	Buzau Municipality and partners
INVOLVED STAKEHOLDERS	Main Stakeholders - Buzău Municipality (UAT Buzău) – Lead institution - Responsible for project coordination, infrastructure, and institutional integration.

ACTION TITLE	**6.6. Center of Excellence for Dual-Technical Pre-University and University Education Buzău**
	2. Ministry of Education & Ministry of Labor and Social Solidarity o Oversight, regulatory support, and alignment with national dual education and workforce policies. 3. Dunărea de Jos University of Galați o Higher education partner providing academic alignment and progression pathways from vocational to university-level programs. 4. Technological High Schools (e.g., Dimitrie Filipescu Technological High School) o Core education providers involved in dual training delivery and student preparation. 5. Private Sector Companies (Consortium Members) Including: o Greentech S.A., Voestalpine Railway Systems Romania, ROMCARBON S.A., URSUS Breweries, BENCOMP, etc. o These companies provide internships, real-world learning environments, and future employment opportunities. 6. Chambers of Commerce and Industry & Employers' Associations o Help align training programs with regional labor market needs. 7. Civil Society & NGOs (focused on youth inclusion, education access, and employment) o Can contribute with outreach, mentorship, and support programs for disadvantaged students.
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	8,376.81 tCO2/year: ▪ 281.91 tCO2/year from the transport sector; ▪ 234.90 tCO2/year from the waste sector; ▪ 3,300.00 tCO2/year from the IPPU sector; ▪ 4,560.00 tCO2/year from the AFOLU sector.
% OF TOTAL CO2 REDUCTION	3.43%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	Indirect substitution of fossil fuel-based energy and resource-intensive industrial processes through the promotion of green skills, circular economy practices, and sustainable technologies. The Center fosters energy-efficient, low-carbon solutions in transport, manufacturing, utilities, and waste management by integrating climate neutrality into technical education and industrial collaboration.
TIMELINE (START AND END)	2023-2026

ACTION TITLE	**6.7. Hydrogen based innovative solutions programme**
TYPE OF ACTION	Demonstration and Capacity-Building Programme
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Scale of the Project: • Local pilot phase: Implementation in Buzău Municipality with demonstration infrastructure

ACTION TITLE	**6.7. Hydrogen based innovative solutions programme**
	• Regional scalability: Expansion across the South-East Region in collaboration with other municipalities and industries • National and EU alignment: Scalable model for replication under Romania's and EU's hydrogen roadmaps Target Groups: 1. Local authorities & public utilities: Transitioning municipal fleets, buildings, and services toward hydrogen use 2. Transport and logistics companies: Adoption of hydrogen-powered fleets and infrastructure 3. Industrial companies: Seeking clean alternatives to fossil fuels for production processes 4. Students and professionals: Engaged in green energy, technical training, and research 5. Local residents: Benefiting from improved air quality, innovation, and green jobs
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
SYSTEMIC LEVER	Technology and Infrastructure Deployment; Multi-Stakeholder Innovation
EMISSION DOMAIN(S)	Transport, Industry, and Built Environment
COVERED INTERVENTIONS	Deployment of renewable hydrogen production systems; development of hydrogen mobility infrastructure (buses, utility fleets, refueling stations); integration of hydrogen into municipal energy systems; public-private-academic partnerships for R&D and education; green procurement policies for hydrogen solutions
BRIEF DESCRIPTION	The Hydrogen-Based Innovative Solutions Programme aims to position Buzău Municipality as a regional hub for the development, testing, and implementation of clean hydrogen technologies. As the world transitions toward decarbonization, hydrogen offers a versatile and sustainable energy source to reduce emissions in transport, industry, heating, and power generation. The programme will foster public-private-academic collaboration to introduce pilot projects, develop a green hydrogen ecosystem, support capacity-building, and integrate hydrogen infrastructure into local energy and transport systems. This initiative aligns with Buzău's M100 Climate Neutrality Programme and supports both Romania's Hydrogen Strategy and the EU Green Deal. This action will also include indicators reflecting not only technical progress but also the level of community and stakeholder involvement, ensuring transparency and accountability.
OUTCOME	Main Outcomes: Deployment of pilot hydrogen projects (e.g., hydrogen-powered buses, public utility vehicles, or heating systems) Development of local hydrogen production capacity using renewable energy sources (e.g., solar or wind-powered electrolysis) Establishment of hydrogen refueling stations and integration into sustainable mobility planning Creation of educational and research partnerships on hydrogen technologies Reduction of GHG emissions from the transport and industrial sectors Increased energy independence and diversification of energy sources New green jobs and skills development in the hydrogen economy
RESPONSIBLE ENTITY / BODY / PERSON	Main Responsible Bodies: • Buzău Municipality (Project coordination and implementation) • Ministry of Energy & Ministry of Environment (Policy and regulatory alignment) • Romanian Hydrogen Energy Association (ARPEE/ROHYDROGEN)

ACTION TITLE	**6.7. Hydrogen based innovative solutions programme**
	• South-East Regional Development Agency (ADR Sud-Est) • National Authority for Energy Regulation (ANRE) – for technical and legal compliance
INVOLVED STAKEHOLDERS	Key Stakeholders: • Research & Academia: o *"Dunărea de Jos" University of Galați* o *Technical universities and R&D centers* specializing in energy and chemistry • Industry Partners: o *ROMCARBON S.A., URBIS SERV, Voestalpine, TRANS BUS, BENCOMP* – potential early adopters of hydrogen tech • Utility and Energy Companies: o *Local energy distributors, green hydrogen producers, and electrolysis system providers* • Transport Sector: o *TRANS BUS* and private logistics firms interested in hydrogen mobility • Environmental NGOs & Innovation Hubs: o *Supporting outreach, awareness, and open innovation*
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	9,800.00 tCO2/year: ▪ 300.00 tCO2/year from the Buildings sector; ▪ 1,000.00 tCO2/year from the Transport sector; ▪ 8,500.00 tCO2/year from the IPPU sector;
% OF TOTAL CO2 REDUCTION	4.01 %
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	-
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	BUILDINGS: ▪ 1,587.30 MWh/year natural gas from Scope 2; TRANSPORT ▪ 2,996.25 MWh/year diesel from Scope 1; ▪ 803.21 MWh/year gasoline from Scope 1; IPPU ▪ 44,973.54 MWh/year natural gas from Scope 2;
TIMELINE (START AND END)	2027-2035

Present the targeted actions grouped together according to each field of action. Use one sheet for each distinct field of action, following the template provided below.

➔ **Make sure to also include within this section the actions pertaining to Organisational and Governance Innovation, as well as the actions related to Social and Other Innovation fields.**

Table 10- PORTOFOLIO OF ACTIONS

FIELD OF ACTION	**ENERGY SYSTEMS**
LIST OF COVERED ACTIONS	▪ Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative) ▪ Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative) ▪ Implementing a only LED street lighting system ▪ Green energy production through the construction of a photovoltaic panel park in Buzău Municipality ▪ Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property ▪ Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings ▪ Implementation of a waste-to-energy system for organic waste

FIELD OF ACTION	**MOBILITY AND TRANSPORT**
LIST OF COVERED ACTIONS	▪ Urban Traffic Optimization and Heavy Vehicle Diversion Plan ▪ Integrated portal for active urban mobility ▪ A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard ▪ Expand public transportation infrastructure and services ▪ Smart Mobility Zone ▪ Charging stations for electric vehicles in Buzău Municipality

FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
LIST OF COVERED ACTIONS	▪ New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection ▪ Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms

	▪ Circular Market & Hub ▪ Energy Recovery from Waste through Gasification and Molecular Dissociation Projects ▪ Compost city station ▪ Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality

FIELD OF ACTION	**GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS**
LIST OF COVERED ACTIONS	▪ Urban regeneration of collective housing areas through actions to revitalize interstitial spaces ▪ NEB evaluation of on-going projects before construction ▪ Urban Forest ▪ Afforestation of the area adjacent to Buzău Municipality – 13.26 ha

FIELD OF ACTION	**BUILT ENVIRONMENT**
LIST OF COVERED ACTIONS	▪ New residential bio-districts ▪ Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor." ▪ Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project ▪ Smart building management platform ▪ Construction of a residential complex for young people in Buzău Municipality nZEB ▪ Positive Energy Districts

FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
LIST OF COVERED ACTIONS	▪ Centralized information system for management and decision support in strategic development projects ▪ Local products and service market ▪ School workshops for recycling and creation ▪ „Too Good To Go”/”Food Hunt” ▪ Climate-smart urban design programme ▪ Center of Excellence for Dual-Technical Pre-University and University Education Buzău ▪ Hydrogen based innovative solutions programme

To address the need for clarity regarding the evolution of actions, we emphasize that the Climate Neutrality Action Plan is structured in phases, with clear implementation deadlines and associated monitoring mechanisms.

1. Short term (2024–2026)

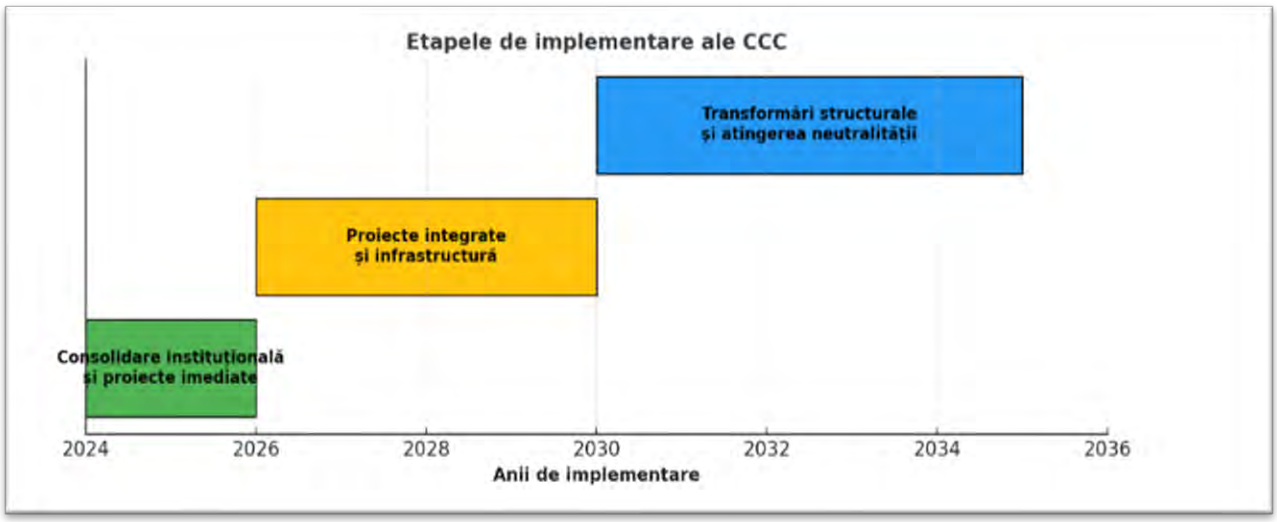
- Projects with immediate and visible impact for the community will be implemented, such as optimizing urban traffic, developing green mobility corridors, digitalizing municipal services, and circular economy initiatives (e.g., organic waste recovery).
- This stage also focuses on institutional preparation measures: strengthening administrative capacity, creating local governance mechanisms, and expanding partnerships with academia, civil society, and the private sector.

2. Medium term (2026–2030)

- The emphasis will be on integrated projects, such as developing infrastructure for electric public transport, creating low-emission zones, regenerating Crâng Forest, and expanding nature-based solutions for stormwater management.
- In parallel, energy efficiency programs will be implemented in both public and private buildings, with a focus on achieving the nZEB standard, in line with national and European legislation.

3. Long term (2030–2035 and beyond)

- Structural transformation projects of the city will be consolidated, including smart buildings with low energy consumption, local energy networks based on renewable sources, and waste-to-energy recovery systems.
- At the same time, this stage aims at achieving climate neutrality indicators by aligning municipal investments with European, national, and private funding.



A visual representation was also created, in the form of a simplified Gantt chart, showing the phased evolution of the Climate Neutrality Contract (CNC):

- **2024–2026:** institutional consolidation and immediate projects,
- **2026–2030:** integrated projects and infrastructure,
- **2030–2035:** structural transformations and achievement of neutrality.

Monitoring and updating:

The Action Plan will be periodically evaluated through annual reports and strategic reviews every 2–3 years, in order to integrate new technologies, funding sources, and contributions from local stakeholders. As a living document, the CNC will evolve alongside the city and remain aligned with European climate neutrality objectives through 2050.

IMPACT PATHWAYS

Provide a brief description of the theory of change you will use to achieve climate neutrality.

- ➔ **Use both textual and visual elements, as appropriate, to illustrate the impact pathways, which will be furtherly presented in the subsequent table.**
- ➔ **Make sure to also include within this section the actions pertaining to Organisational and Governance Innovation, as well as the actions related to Social and Other Innovation fields.**

Table 11- IMPACT PATHWAYS

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
ENERGY SYSTEMS	Technology / infrastructure	Modernizing the infrastructure of public buildings by improving the energy efficiency of buildings.	Reducing CO_2 emissions and decreasing dependency on fossil fuels, contributing to the creation of a sustainable public infrastructure model.	Reduce CO2 emissions by 448.22 tons over 2022	Reducing operational costs through energy savings Promoting a sustainable public infrastructure model Improving the long-term resilience of public services
	Technology / infrastructure	Improvement of energy efficiency in public buildings through thermal rehabilitation and modernization of installations.	Reduction of energy consumption in public buildings in the long term	Reduce CO2 emissions by 330 tons over 2022	Reduction of operational costs through energy savings. Improvement of thermal comfort and working conditions for occupants of public buildings.
	Technology / infrastructure	Functional urban and street LED lighting system	Highly energy-efficient public lighting system	Reduce CO2 emissions by 637.80 tons over 2022	• Lower power consumption • Better lighting quality
	Technology / infrastructure	Increase in green energy production within the municipality.	Reduction of dependence on fossil energy.	Reduce CO2 emissions by 2,798 tons over 2022	Long-term sustainability.

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
	Technology / infrastructure	Installation of monitoring systems. Real-time consumption data collection.	Optimization of consumption based on collected data. Implementation of energy efficiency measures.	Reduce CO2 emissions by 708.90 tons over 2022	Reduction of energy costs. Increase in operational efficiency.
	Technology / infrastructure	Energy audits, identification of target buildings, initiation of rehabilitation works	Completion of thermal rehabilitation, reduction of energy consumption	Reduce CO2 emissions by 4,137.08 tons over 2022	Lower energy bills. Increased thermal comfort for residents.
	Technology / infrastructure	Procurement of equipment, signing of operating contracts	Reduction of biodegradable waste	Reduce CO2 emissions by 2,500 tons over 2022	Circular economy New jobs created
MOBILITY & TRANSPORT	Technology / Infrastructure	Traffic flow analysis Redesign of routes and traffic signals	Reduced congestion Heavy vehicle rerouting fully implemented	Reduce CO2 emissions by 563.83 tons over 2022	Improved air quality Lower noise Reduced travel time Increased road safety and comfort
	Technology / Infrastructure	Awareness and outreach campaigns	Increased use of alternative transport (walking, cycling) Reduced dependency on personal vehicles	Reduce CO2 emissions by 140.96 tons over 2022	Healthier lifestyles Local emission reductions Sustainable urban mobility
	Technology / infrastructure	Implementation of sustainable mobility infrastructure and integration of smart urban solutions Creation of thematic public spaces	Increased use of alternative transport (bikes, walking) Reduction of car traffic in the area	Reduce CO2 emissions by 422.87 tons over 2022	Improvement of air quality Promotion of an active and healthy lifestyle Reduction of noise pollution
	Technology / infrastructure	Implementation of a medium- and long-term strategy for the expansion,	Replacement of conventional diesel buses with electric buses. Increasing urban	Reduce CO2 emissions by 845.74 tons over 2022	Improvement of urban air quality and promotion of more sustainable public transport.

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
		development, and modernization of local public passenger transport services.	and regional mobility through the development of more efficient and environmentally friendly public transport.		Reduction of road traffic and congestion, contributing to better mobility for residents.
	Technology / infrastructure	Creating digital infrastructure and implementing an integrated multimodal transport system (public transport, bike-sharing, pedestrian pathways).	Optimizing traffic flow, reducing congestion, and improving mobility through smart traffic management.	Reduce CO2 emissions by 493.35tons over 2022	Improved urban air quality Reduced noise pollution and road congestion Increased accessibility and efficiency of urban transport Encouragement of an active and healthy lifestyle through eco-friendly mobility infrastructure
	Technology / infrastructure	Implementation of electric vehicle charging stations in Buzău Municipality.	Increasing the number of electric vehicle charging stations in strategic locations within the municipality, facilitating access to charging for electric vehicle users.	Reducing CO_2 emissions by 493.35 tons over to 2022	Reducing urban air pollution Improving ecological mobility Increasing the number of electric vehicles on the road Encouraging the adoption of a sustainable lifestyle
WASTE AND CIRCULAR ECONOMY	Technology / infrastructure	Implementation of infrastructure for rainwater collection, planting vegetation for water absorption	Creation of green areas and natural drainage solutions, reduction of flood risks	Reduce CO2 emissions by 71,144.90 tons over 2022	Reduction of flood risks, improvement of water quality
	Technology / infrastructure	Implementation of QR code readers, installation of sensors on waste collection platforms	Optimization of collection routes, increase in recycling rates, and citizen engagement through the eco-points system	Reduce CO2 emissions by 870 tons over 2022	Increased environmental awareness and responsibility within the community

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
	Behavior Change, Technology/Infrastructure, Business Model Innovation	Awareness campaign on waste sorting; launch of a dedicated space for repair and reuse	Full development of the circular economy center and operationalization of commercial and educational activities for the community	Reduce CO2 emissions by 46.98 tons over 2022	Support for green entrepreneurship, sustainability education, and expansion of responsible consumption models
	Technology / infrastructure	Initiation of equipment procurement; public awareness campaigns on the benefits of the process	Commissioning of the facility, energy production from waste, and reduction of landfilled waste	Reduce CO2 emissions by 18,223.00 tons over 2022	Reduction of soil and air pollution, promotion of the circular economy
	Technology / infrastructure	Increase in public awareness regarding composting	Significant reduction in the amount of organic waste sent to the landfill	Reduce CO2 emissions by 10,180.00 tons over 2022	Reduction of soil and water pollution by avoiding the disposal of organic waste in landfills
		Construction of the administrative center and sorting and composting facilities	Expansion of the center with a sorting line for construction waste	Reduce CO2 emissions by 6,140.94 tons over 2022	Increase in public awareness and citizen engagement in recycling
GREEN INFRASTRUCTURE & NATURE-BASED SOLUTIONS	Urban space reconfiguration	Creation of green spaces and installation of pedestrian-friendly infrastructure	Improvement of the local microclimate and reduction of the urban heat island effect	Reduce CO2 emissions by 7,444.23 tons over 2022	Improvement of quality of life and promotion of social interaction within the community
	Governance/ Planning	Evaluation of ongoing projects according to NEB criteria before construction	Ensuring compliance with NEB principles, improving planning and project implementation	Reduce CO2 emissions by 3,476.91 tons over 2022	Increase in transparency and accountability in managing public projects

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
	Urban resilience, climate change adaptation, biodiversity conservation, public health, sustainable mobility, and environmental education	Ecological restoration of Crâng Forest and implementation of nature-based solutions	Increase in biodiversity, improvement of air quality, and provision of sustainable recreational opportunities	Reduce CO2 emissions by 6,900 tons over 2022	Increase in urban resilience, reduction of urban stress, improvement of physical and mental health of residents
	Climate adaptation, urban planning, ecosystem services, biodiversity enhancement, health and well-being	Creation and preparation of the land for planting, selection of tree species	Increase in forested area, improvement of biodiversity, and restoration of degraded habitats	Reduce CO2 emissions by 4,915.33 tons over 2022	Contribution to climate neutrality, reduction of CO_2 emissions, improvement of air quality, and promotion of a healthier environment for the community
BUILT ENVIRONMENT	Urban resilience, social equity, affordable housing, green building innovation, smart infrastructure	Planning and design of bio-districts for residential areas, creation of basic infrastructure	Development and integration of bio-districts, increasing energy efficiency of buildings, and promoting sustainable transportation	Reduce CO2 emissions by 5,506.91 tons over 2022	Reduction of carbon footprint, improvement of quality of life, energy savings, and protection of local biodiversity Encouraging behavioural changes
	Nature-based solutions (NbS), Circular water use and resource efficiency, Green-blue infrastructure	Implementation of an innovative pilot project for the reuse of treated wastewater	Creation of biodiversity zones by revitalizing dried lakes, promoting healthy ecosystems, and protecting local biodiversity	Reduce CO2 emissions by 6,023.49 tons over 2022	Increase in biodiversity, improvement of the surrounding environmental quality, promoting sustainable water resource management
	Governance and Digital Transformation	Construction of a structural system for the air purification unit	Improving air quality in Buzău through the implementation of a high-performance purification system	Reduce CO2 emissions by 574.23 tons over 2022	Reducing air pollution, improving public health, enhancing the quality of life for residents.

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
	Governance and Digital Transformation	Implementation of a smart building management platform	Optimizing energy consumption and improving the energy performance of buildings	Reduce CO2 emissions by 6,289.65 tons over 2022	Reducing operational costs, increasing energy efficiency, improving resident comfort.
	Governance and Digital Transformation	Commencement of construction of the residential complex for young people, in accordance with nZEB standards	Reducing energy consumption in homes, utilizing renewable energy sources	Reduce CO2 emissions by 1,776.91tons over 2022	Improving accessibility for young people in the housing market, reducing CO_2 emissions, promoting a sustainable lifestyle.
	Governance and Digital Transformation	Beginning the implementation of Positive Energy Districts by integrating renewable energy solutions	Reducing dependence on traditional power grids	Reduce CO2 emissions by 5,471.68 tons over 2022	Reducing energy costs, promoting sustainability in communities, improving quality of life through clean energy.
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	Governance, Digitalization, Institutional Capacity Building	Creating and implementing a centralized information system for managing strategic projects	Improving decision-making efficiency, monitoring project progress	Reduce CO2 emissions by 1,500.00 tons over 2022	Increasing transparency and accountability in project management, promoting more efficient resource management
	Sustainable Local Economies / Biodiversity Conservation / Local Food Systems / Knowledge Sharing and Education	Creating the local market for products and services	Supporting the local economy by promoting local products and services	Reduce CO2 emissions by 4,130 tons over 2022	Reducing the carbon footprint by supporting local products, improving community cohesion, stimulating the circular economy
	Behavioral Change / Environmental Education / Circular Economy /	Implementing school workshops for recycling and creation	ncreasing awareness among younger generations about recycling and sustainability	Reduce CO2 emissions by 20 tons over 2022	Developing sustainable habits among students, educating future generations about the importance of the circular economy

FIELDS OF ACTION	SYSTEMIC LEVERS	EARLY CHANGES (1-2 YEARS)	LATE OUTCOMES (3-4 YEARS)	DIRECT IMPACTS (EMISSION REDUCTIONS)	INDIRECT IMPACTS (CO-BENEFITS)
	Youth Engagement				
	Circular Economy / Digital Transition / Sustainable Consumption and Production	Launching the "Too Good To Go"/"Food Hunt" platform to reduce food waste	Reducing food waste and supporting responsible consumption	Reduce CO2 emissions by 450 tons over 2022	Reducing food waste, saving resources, promoting a sustainable and responsible lifestyle
	Urban Infrastructure Transformation / Spatial Planning and Built Environment / Behavioral Change	Creating an urban design program adapted to climate change	Reducing the urban environmental impact through ecological and energy-efficient solutions	Reduce CO2 emissions by 3,500 tons over 2022	Creating a healthier urban environment, increased resilience to climate change, improving urban life quality
	Education and Skills Transition; Institutional Innovation	Creating a Center of Excellence for dual technical pre-university and university education	Improving education quality and training highly skilled professionals for the job market	Reduce CO2 emissions by 8,376.81 tons over 2022	Reducing the technical skills gap, supporting youth employability, and developing the local economy
	Technology and Infrastructure Deployment; Multi-Stakeholder Innovation	Developing a program for innovative hydrogen-based solutions	Implementing hydrogen-based technologies to reduce CO_2 emissions and diversify energy sources	Reduce CO2 emissions by 9,800 tons over 2022	Promoting clean energy and sustainable transport, creating new green industries, reducing dependence on fossil fuels

Figure 2- ESTIMATED TOTAL CO_2 REDUCTIONS BY FIELD OF ACTION (2022 BASELINE) in tons

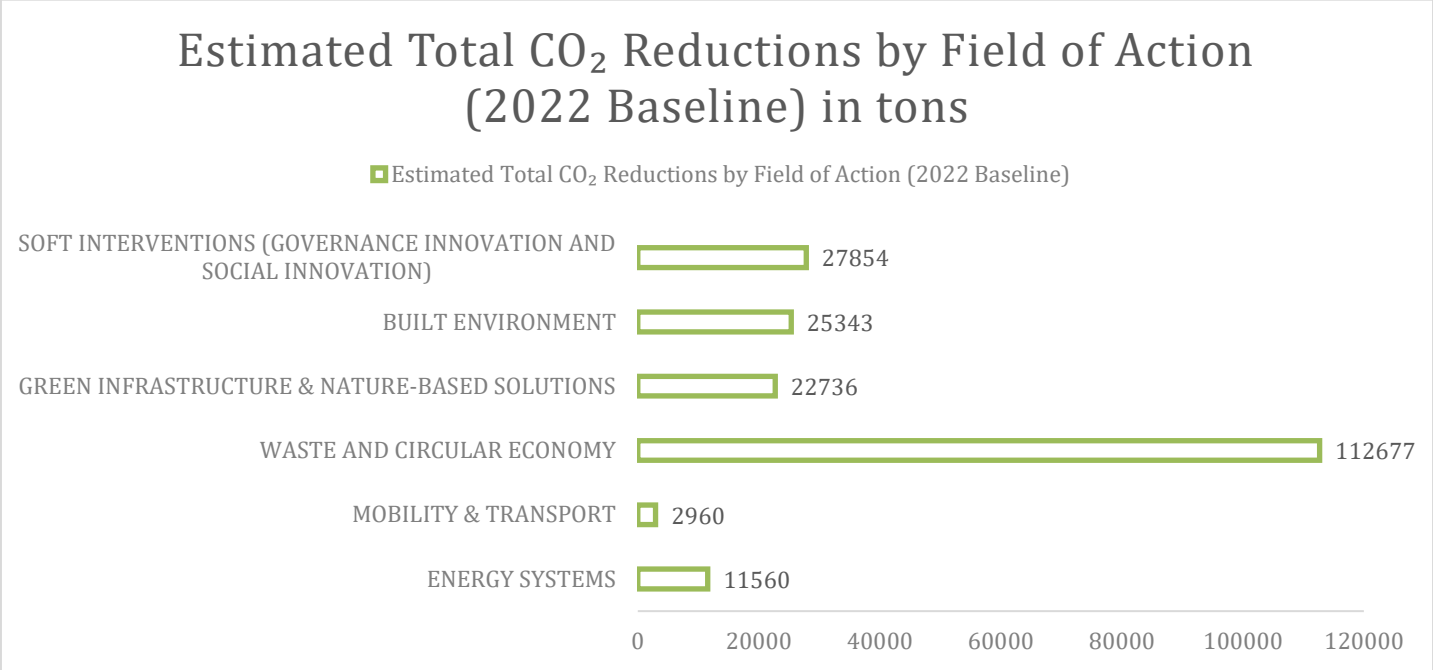


Figure 3 - IMPACT PATHWAYS: ENERGY SYSTEMS

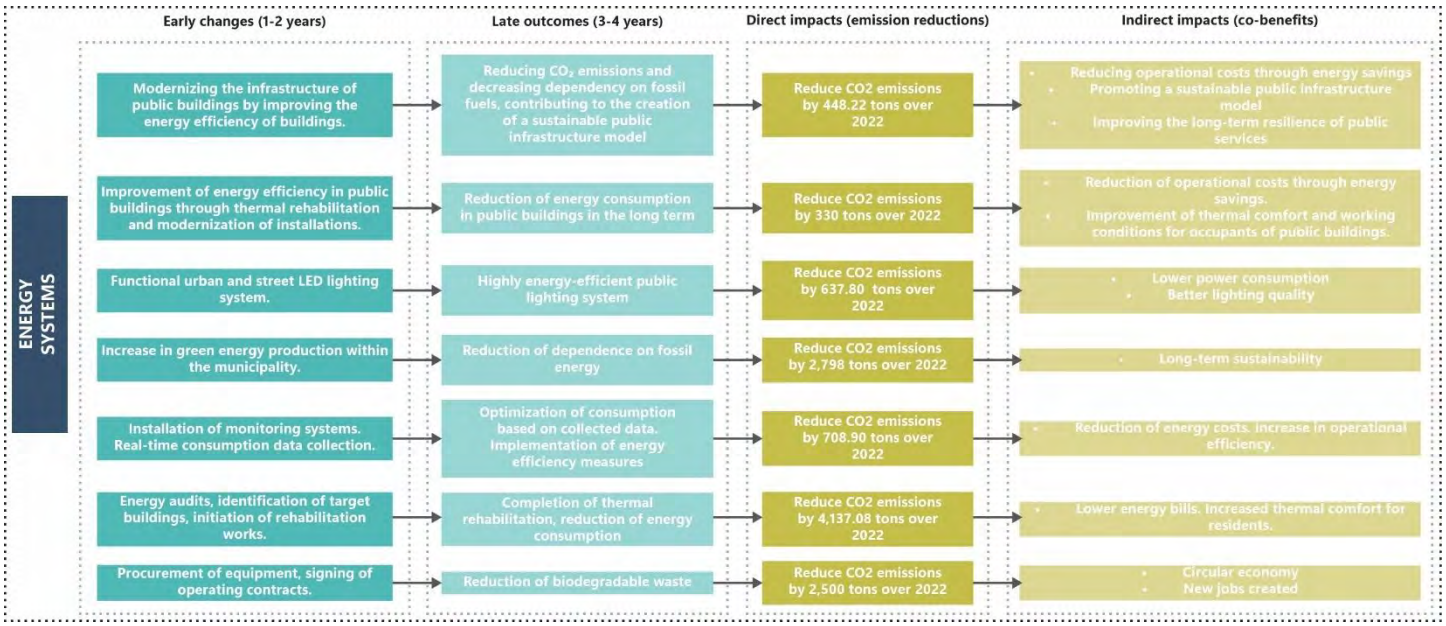


Figure 4 - IMPACT PATHWAYS: MOBILITY & TRANSPORT

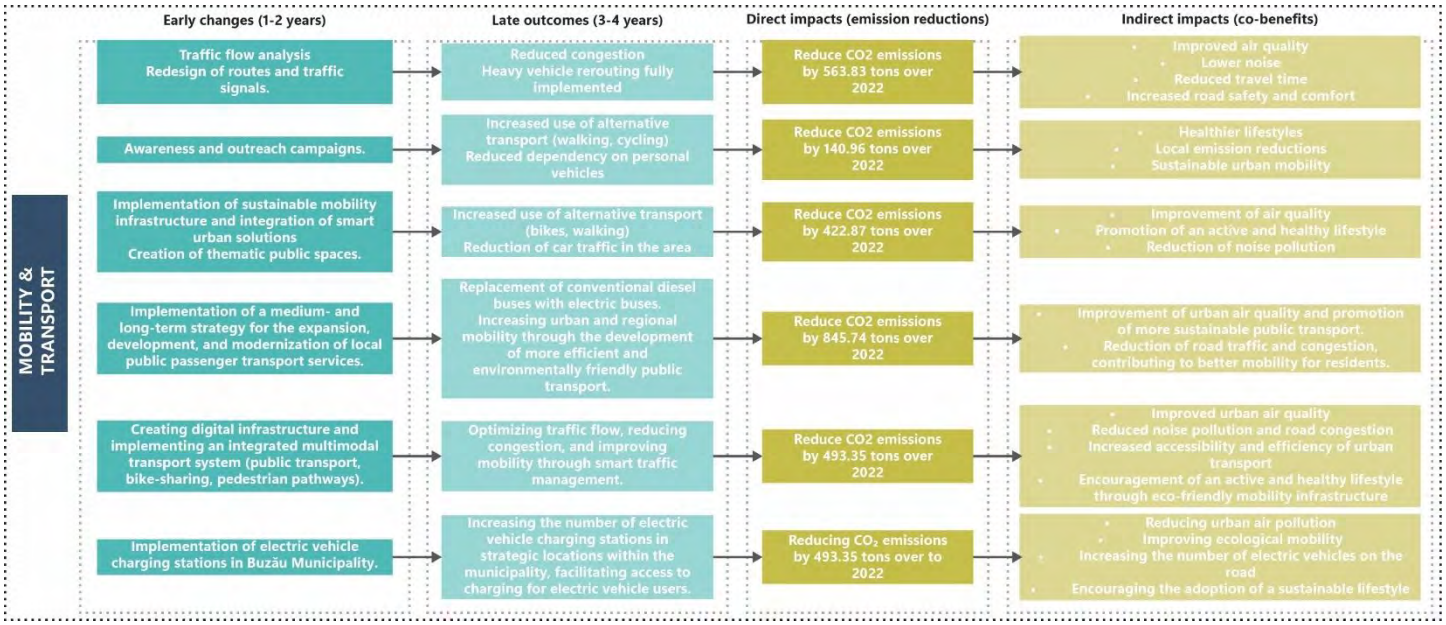


Figure 5 - IMPACT PATHWAYS: WASTE AND CIRCULAR ECONOMY

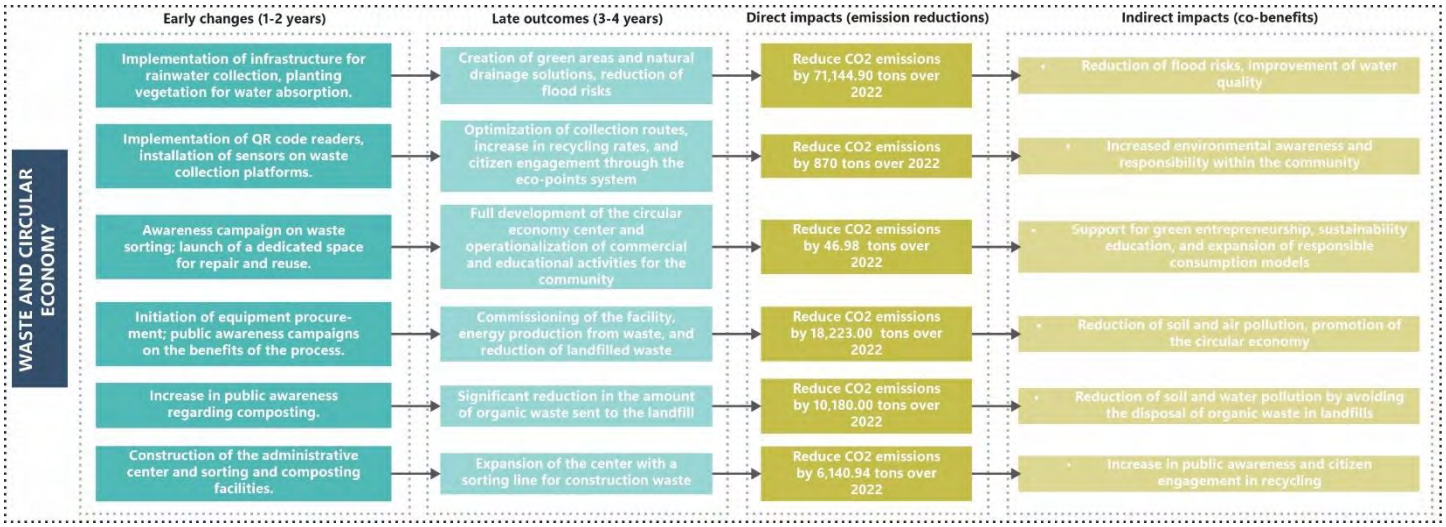


Figure 6 - IMPACT PATHWAYS: GREEN INFRASTRUCTURE & NATURE-BASED SOLUTIONS

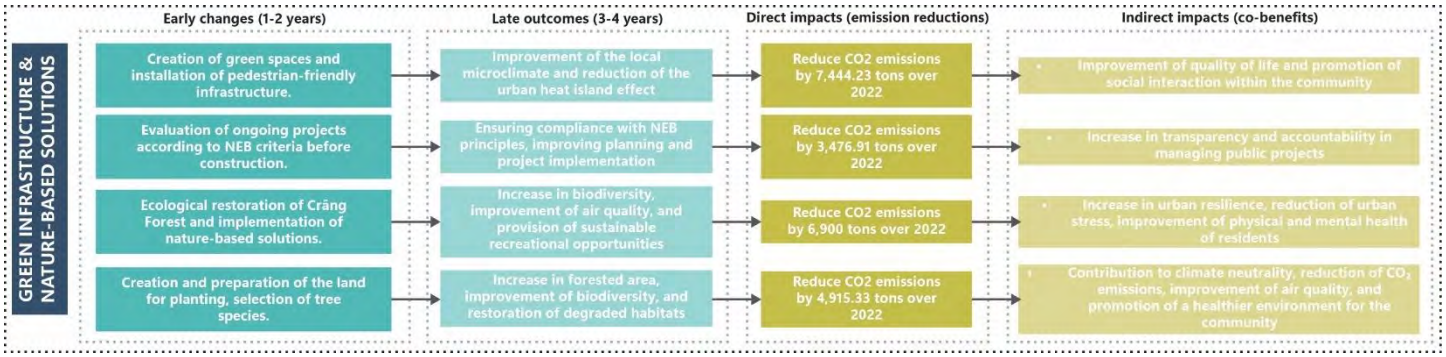


Figure 7 - IMPACT PATHWAYS: BUILT ENVIRONMENT

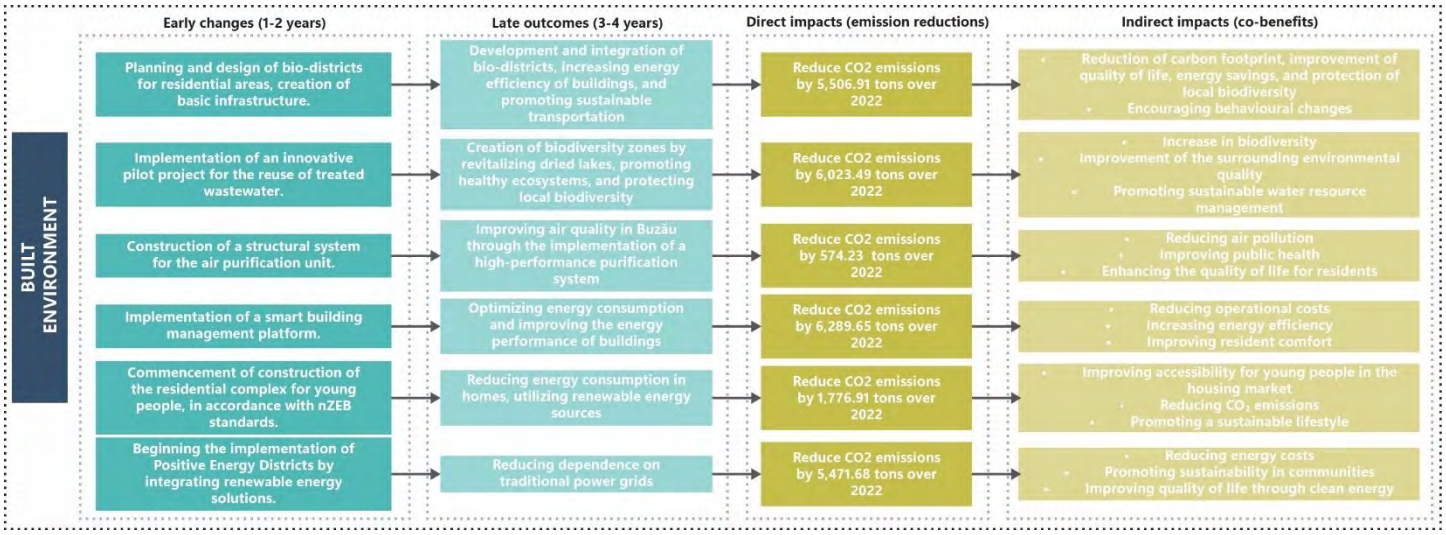
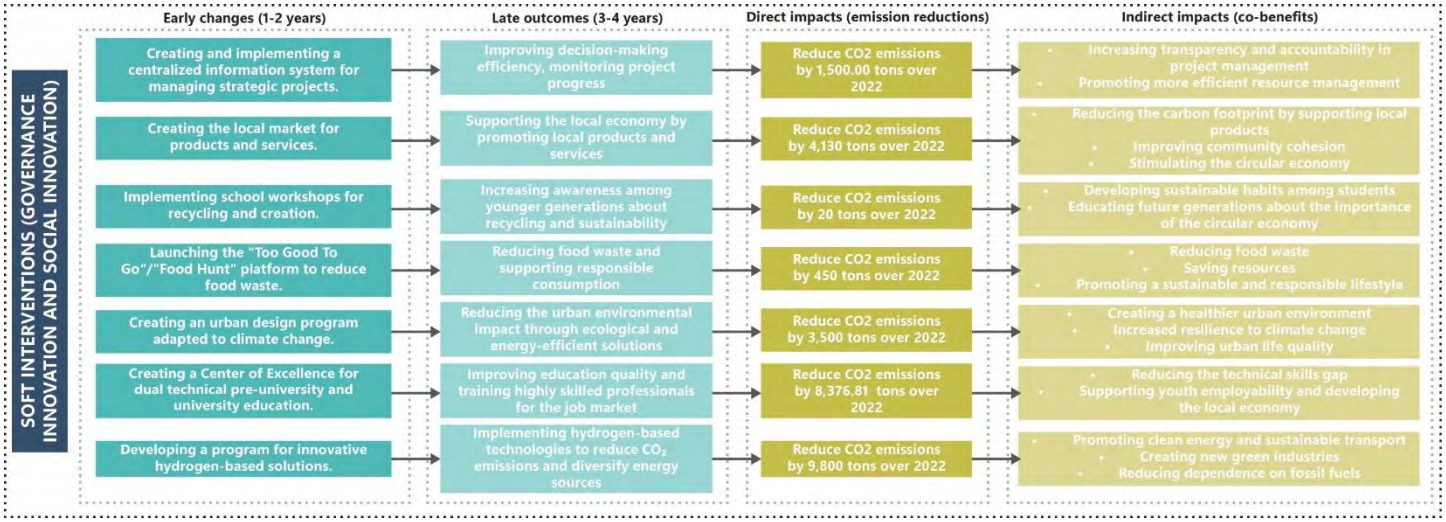


Figure 8 - IMPACT PATHWAYS: SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)



STRATEGY FOR RESIDUAL EMISSIONS

Describe your approach to managing residual emissions.

Following the analysis carried out in the section defining the Baseline Greenhouse Gas Emissions Inventory, it is estimated that, after the implementation of the Climate Neutrality Action Plan, 47,044.18 tons of CO2 emissions will remain at the local level.

The municipality's strategy for addressing residual emissions encompasses several dimensions, as detailed below.

REDUCING RESIDUAL EMISSIONS THROUGH THE IMPLEMENTATION OF PROJECTS INCLUDED IN OTHER STRATEGIC DOCUMENTS

In addition to the measures described in the Climate Neutrality Action Plan, several local strategic documents also outline actions aimed at reducing CO_2 emissions. Moreover, initiatives related to the implementation of smart city concepts, improvements in environmental governance, and capacity development will further support these efforts.

The local authorities have already approved a range of strategies, plans, and programs with a direct impact on carbon footprint reduction. Among the most relevant are:

- *The Integrated Urban Development Strategy (SIDU);*
- *The Sustainable Urban Mobility Plan (PMUD);*
- *The Sustainable Energy and Climate Action Plan (SECAP);*
- *The Waste Management Strategy;*
- *The Energy Efficiency Improvement Program for Buzău Municipality;*
- *The Circular Economy Strategy of Buzău Municipality.*

ADDITIONAL POTENTIAL MEASURES FOR REDUCING RESIDUAL EMISSIONS

(To be implemented subject to financial opportunity and municipal prioritization)

To support the implementation of these measures, the technical staff of Buzău Municipality may explore medium- and long-term opportunities depending on the availability of funding and enabling conditions. These may include attracting non-reimbursable external financing, forming partnerships with universities and research institutions, collaborating with civil society organizations, or developing alliances with the private sector.

Potential Measures:

BUILDINGS:

- ✓ **Energy management technology through artificial intelligence:** Application of AI algorithms and machine learning to optimize energy consumption by adjusting lighting, heating, and cooling according to weather forecasts and space occupancy patterns.
- ✓ **Efficient geothermal heating and cooling systems:** Implementation of geothermal heat pumps that use underground energy sources to ensure efficient heating and cooling, reducing energy consumption.
- ✓ **Phase-change construction materials (PCM):** Use of phase-change materials to absorb and release heat in a controlled manner, stabilizing indoor temperature and reducing HVAC system loads.
- ✓ **Sustainable modular construction:** Promotion of modular construction using prefabricated components that can be dismantled and reused, thereby helping reduce waste and emissions from construction and demolition processes.
- ✓ **Green roofs for urban biodiversity:** Creation of green roofs that support urban biodiversity, improving building insulation and carbon capture while also contributing to the ecological diversity of cities.

TRANSPORT:

- ✓ **Implementation of CO_2 capture systems in public transport vehicles:** Installation of CO_2 capture technologies in buses and trucks operating in cities to reduce emissions directly during transportation.
- ✓ **Green transport programs:** Implementation of programs that encourage freight companies to adopt fuel-efficient practices, use cleaner technologies, and optimize routes.
- ✓ **Advanced catalytic systems for heavy-duty vehicles:** Installation of modern exhaust after-treatment technologies to neutralize residual N_2O and CH_4 emissions from heavy road transport.
- ✓ **Ultrafine particle capture systems for electric and hybrid vehicles:** Deployment of advanced filters installed on brakes and tires to capture ultrafine particles generated through friction, thus reducing residual pollution that persists even in zero-exhaust-emission vehicles.

WASTE:

- ✓ **Recycling networks for construction materials:** Creation of digital platforms that facilitate the exchange and reuse of construction materials, promoting deconstruction over demolition and supporting the sustainable circulation of materials.

- ✓ **Resource exchange networks between industries:** Development of networks where waste from one industry is used as raw material by another, reducing overall waste and supporting the circular economy.
- ✓ **Zero-waste production:** Implementation of zero-waste initiatives aimed at eliminating waste generation through process redesign, material substitution, and recycling.
- ✓ **Circular business models:** Encouraging the adoption of circular economy business models focused on reusing, refurbishing, and recycling products and materials to extend their lifecycle and reduce resource consumption.

IPPU:

- ✓ **Use of biogas in cogeneration for electricity and heat production at wastewater treatment plants:** Capturing and utilizing biogas generated during wastewater treatment to simultaneously produce electricity and heat.
- ✓ **CCU technologies in heavy industries:** Capturing residual carbon dioxide from industrial processes and using it to produce construction materials or chemicals.
- ✓ **CO_2 capture and reuse in the cement industry:** Deployment of CCS/CCU technologies at cement plants to capture residual CO_2 and use it in producing low-carbon concrete.
- ✓ **Production of bio-based packaging materials:** Replacing conventional plastics in the packaging industry by integrating bio-plastics and locally produced biodegradable materials.
- ✓ **Recycling and recovery of plastics:** Establishing advanced pyrolysis and gasification facilities that convert non-recyclable plastic waste into raw materials for industry or synthetic fuels.

AFOLU:

- ✓ **Promoting sustainable soil improvement practices:** Encouraging adoption of soil management techniques such as reduced tillage, use of organic amendments, and cover crops to support soil health and carbon sequestration.
- ✓ **Protecting agricultural land through conservation easements:** Establishing conservation easements to safeguard farmland and forests against urban development, preserving their essential role in carbon capture and sustainable food production.
- ✓ **Adoption of efficient irrigation systems:** Promoting and implementing efficient irrigation methods such as drip irrigation and rainwater harvesting to reduce water consumption and improve soil health.

MONITORING RESIDUAL EMISSIONS

To effectively assess the results of the residual emissions strategy, the monitoring process outlined in the Climate Neutrality Action Plan will be expanded to comprehensively address both CO_2 emission reductions and carbon capture measures. This dual focus will ensure a holistic evaluation of progress toward achieving net-zero objectives.

Throughout **the implementation process**, it is essential to focus on measures addressing residual emissions, considering their decisive contribution to Buzău Municipality's transition to climate neutrality. ***Nature-Based Solutions*** stand out for their potential to offer feasible and accessible implementation options.

INDICATORS FOR MONITORING, EVALUATION AND LEARNING

Monitoring, Evaluation, and Learning (MEL) Indicators

Monitoring, Evaluation, and Learning (MEL) indicators are essential tools that enable cities to measure progress, assess effectiveness, and gain insights from the implementation of the Climate Neutrality Plan. These indicators provide a systematic framework for tracking climate actions and interventions, supporting data-driven decision-making and the continuous improvement of public policies.

The MEL indicator system encompasses the following dimensions:

- **Direct impact on greenhouse gas emissions** (e.g., tonnes of CO_2e avoided or reduced);
- **Indirect impacts and co-benefits, including social, economic, and health outcomes** (e.g., improved air quality, reduced energy costs, creation of green jobs);
- **Implementation efficiency** (e.g., rate of action completion, resources invested versus outcomes achieved);
- **Institutional learning, through the identification of lessons learned and real-time strategy adjustments**.

The indicator framework is aligned and harmonized with the European methodology established through the *Mission for 100 Climate-Neutral and Smart Cities (M100*), as well as with the MEL guidelines provided by this initiative. This ensures comparability and transparent reporting of progress, as well as the integration of local data into European monitoring platforms.

Through the use of MEL indicators, the municipality can:

- Ensure **transparency and accountability** to citizens and stakeholders;
- Evaluate the **actual results** of implemented measures against stated objectives;
- Enable the continuous **adaptation** of the plan based on updated data and contextual changes;
- Support **access to external funding** by providing clear, rigorous reporting.

MEL indicators can be categorized by domain (e.g., energy, mobility, buildings, waste, biodiversity), by level of impact (input, output, outcome, impact), and by reporting frequency. They can also be aligned with international frameworks such as CDP, Smart Cities Information System (SCIS), and the Covenant of Mayors, ensuring compatibility and comparability at the European level.

To support the process of institutional learning and continuous adaptation, the indicators will be integrated into the municipality's decision-making cycle. The data collected will be used not only for progress reporting but also for adjusting actions, reallocating resources, and underpinning annual budgets. This adaptive management mechanism transforms indicators into a practical governance tool.

At the same time, to ensure coherent and transparent implementation, the monitoring structure will include a clear allocation of roles and responsibilities. Municipal teams, partner public institutions, and the Local Net Zero Coalition will have well-defined mandates for data collection, analysis, reporting, and public communication. This mechanism prevents overlaps, clarifies accountability for each actor, and strengthens the credibility of the monitoring process. Further details on these aspects are provided in the STAKEHOLDERS chapter.

The table below presents the Monitoring, Evaluation, and Learning (MEL) indicators for the main actions of Buzău Municipality's Climate Neutrality Plan. Indicators are **grouped by thematic** areas such as energy, mobility, waste and circular economy, green infrastructure and nature based solutions, built environment, and governance. For each action, the expected result/impact, indicator title and code, and targets for the years 2027, 2030, and 2035 are specified.

Table 12 - PORTOFOLIO OF INDICATORS

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
ENERGY SYSTEMS						
Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)	Increasing energy autonomy of public buildings by producing green energy, reducing energy consumption from conventional sources, and lowering greenhouse gas emissions	Reduction of GHG emissions from stationary energy – public buildings (%)	BZ-NC-I01	20%	40%	60%
		Percentage of public buildings where clean energy production systems have been installed (%)	BZ-NC-I02	10%	20%	35%
Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)	Increasing energy efficiency and thermal resilience of public buildings	Reduction of GHG emissions from stationary energy – public buildings (%)	BZ-NC-I01	15%	25%	35%
		Percentage of public buildings with reduced energy consumption due to thermal rehabilitation (%)	BZ-NC-I03	20%	40%	50%
Implementing a only LED street lighting system	Reducing energy consumption for public lighting and lowering CO_2 emissions	Share of energy-efficient lighting sources (%)	BZ-NC-I04	30%	50%	100%
Green energy production through the construction of a photovoltaic panel park in Buzău Municipality	Increasing renewable energy production capacity and reducing dependence on conventional sources	Installed capacity of photovoltaic park (kWp)	BZ-NC-I05	5.000 kWp	8.000 kWp	10.000 kWp
Smart monitoring of electrical consumption in educational institutions and other public	Optimizing energy consumption and identifying saving opportunities, contributing	Percentage of public buildings equipped with smart energy	BZ-NC-I06	20%	40%	50%

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
buildings in Buzău Municipality's property	to CO_2 emission reductions	consumption monitoring systems (%)				
Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings	Increasing energy autonomy of residential buildings by producing green energy, reducing energy consumption from conventional sources, and lowering greenhouse gas emissions	Reduction of GHG emissions from stationary energy – residential buildings (%)	BZ-NC-I07	10%	20%	30%
		Percentage of residential buildings where clean energy production systems have been installed (%)	BZ-NC-I08	5%	10%	15%
Implementation of a waste-to-energy system for organic waste	Reducing the amount of organic waste and generating renewable energy	Amount of organic waste converted into energy (tons/year)	BZ-NC-I09	3.000 tone/an	6.000 tone/an	10.000 tone/an
ALL PROJECTS - ENERGY SYSTEMS		**Reduction of GHG emissions from stationary energy – buildings (tons CO2e/year)**	**BZ-NC-I10**	**4.294**	**7.917**	**11.560**
MOBILITY AND TRANSPORT						
Urban Traffic Optimization and Heavy Vehicle Diversion Plan	Reducing traffic congestion and GHG emissions from transport by diverting heavy traffic and optimizing traffic flows	Reduction of GHG emissions from transport (%)	BZ-NC-I11	3%	5%	8%
Integrated portal for active urban mobility	Reducing GHG emissions by increasing the use of sustainable transport modes and active mobility	Number of portal users (no.)	BZ-NC-I12	5.000	15.000	25.000
A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard	Reducing GHG emissions by increasing the use of sustainable transport modes and active mobility	Modal share for non-motorized mobility (cyclists and pedestrians) (%)	BZ-NC-I13	45%	48%	50%

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
Expand public transportation infrastructure and services	Increasing the attractiveness, accessibility, and efficiency of public transport, with a positive effect on the modal share of this transport mode and the reduction of GHG emissions	Public transport modal share (%)	BZ-NC-I14	17%	19%	22%
Smart Mobility Zone	Reducing GHG emissions and increasing the attractiveness of alternative modes of travel through the implementation of smart transport technologies	Number of installed intelligent transport system projects	BZ-NC-I15	2	4	6
Charging stations for electric vehicles in Buzău Municipality	Encouraging the use of electric vehicles and reducing GHG emissions	Number of installed electric vehicle charging stations	BZ-NC-I16	20	50	100
ALL PROJECTS - MOBILITY AND TRANSPORT		**Reduction of GHG emissions from transport (tons CO2e/year)**	**BZ-NC-I17**	**1.537**	**2.149**	**2.960**
WASTE AND CIRCULAR ECONOMY						
New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection	Increasing adaptation capacity to climate change, reducing flood risk, and improving water quality	Area covered with nature-based solutions (ha)	BZ-NC-I18	10	25	30
Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms	Improving waste collection and management and increasing the recycling rate	Percentage of recycled waste (%)	BZ-NC-I19	25%	40%	60%

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
Market & Hub	Promoting circular economy and sustainable consumption	Number of local businesses involved in the circular economy (no.)	BZ-NC-I20	10	25	50
Energy Recovery from Waste through Gasification and Molecular Dissociation Projects	Reducing waste and generating renewable energy	Amount of waste processed for energy recovery (tons/year)	BZ-NC-I21	500	1.500	3.000
Compost city station	Valorizing organic waste and reducing GHG emissions	Amount of compost produced (tons/year)	BZ-NC-I22	200	400	800
Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality	Increasing selective waste collection and raising citizens' awareness, contributing to increased recycling rates	Percentage of citizens using the center (%)	BZ-NC-I23	10%	20%	30%
ALL PROJECTS - WASTE AND CIRCULAR ECONOMY		**Reduction of GHG emissions from waste collection and circular economy (tons CO2e/year)**	**BZ-NC-I24**	**31.716**	**73.512**	**106.606**
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS						
Urban regeneration of collective housing areas through actions to revitalize interstitial spaces	Improving quality of life and the urban environment, capturing and storing carbon through nature-based solutions	Area of regenerated green spaces (ha)	BZ-NC-I25	5	10	15
NEB evaluation of on-going projects before construction	Enhancing the sustainability of projects and ensuring their alignment with New European Bauhaus (NEB) principles	Evaluated projects (no.)	BZ-NC-I26	10	25	40
Urban Forest	Creating extensive green spaces to improve air quality and biodiversity, and capturing and	Planted trees (no.)	BZ-NC-I27	2.000	5.000	10.000

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
	storing carbon through nature-based solutions					
Afforestation of the area adjacent to Buzău Municipality – 13.26 ha	Expanding forested areas to combat climate change, and capturing and storing carbon through nature-based solutions	Afforested area (ha)	BZ-NC-I28	5	10	13,26
ALL PROJECTS - GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS		**Reduction of GHG emissions through green infrastructure and nature-based solutions projects (tons CO2e/year)**	**BZ-NC-I29**	**6.584**	**14.293**	**22.736**
BUILT ENVIRONMENT						
New residential bio-districts	Developing sustainable neighbourhoods with low environmental impact	Developed residential bio-districts (no.)	BZ-NC-30	1	3	5
Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."	Increasing resilience and revitalizing local ecosystems through the reuse of wastewater	Restored lake area (ha)	BZ-NC-31	5	10	20
Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project	Improving air quality and public health	Reduction of PM2.5 concentration (%)	BZ-NC-32	10%	20%	30%
Smart building management platform	Optimizing energy and resource use in	Public buildings integrated into the	BZ-NC-33	10	20	40

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
	buildings, contributing to GHG emissions reduction	platform (no.)				
Construction of a residential complex for young people in Buzău Municipality nZEB	Creating energy-efficient housing for young people, contributing to GHG emissions reduction	nZEB units constructed (no.)	BZ-NC-34	50	100	200
Positive Energy Districts	Creating urban areas that generate more energy than they consume	Positive energy districts (no.)	BZ-NC-35	1	2	4
ALL PROJECTS - BUILT ENVIRONMENT		**Reduction of GHG emissions from projects in the built environment (tons CO2e/year)**	**BZ-NC-36**	**6.185**	**13.472**	**25.652**
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)						
Centralized information system for management and decision support in strategic development projects	Improving decision-making through data-driven processes and enhancing administrative transparency	Percentage of departments using the system (%)	BZ-NC-37	30%	65%	100%
Local products and service market	Stimulating the local economy and reducing the carbon footprint	Involved local producers (no.)	BZ-NC-38	20	50	100
School workshops for recycling and creation	Increasing environmental awareness among students	Annual workshops organized (no.)	BZ-NC-39	10	25	50
„Too Good To Go"/"Food Hunt"	Reducing food waste by redistributing surplus food to consumers, helping to decrease greenhouse gas emissions and promote responsible consumption	Amount of food saved (kg/month)	BZ-NC-40	500	1.500	3.000

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES		
				2027	2030	2035
Climate-smart urban design programme	Integrating sustainable and resilient urban design principles into urban planning, leading to the development of adapted and energy-efficient spaces	Designed public spaces (no.)	BZ-NC-41	5	10	15
Center of Excellence for Dual-Technical Pre-University and University Education Buzău	Developing a skilled workforce in technical fields aligned with labor market demands and the green transition, through dual education programs	Students enrolled in technical dual education programs (no.)	BZ-NC-42	100	200	300
Hydrogen based innovative solutions programme	Promoting and implementing hydrogen-based technologies as a source of clean energy, contributing to the decarbonization of the energy and transport sectors	Pilot projects implemented with hydrogen-based technologies (no.)	BZ-NC-43	1	3	5
ALL PROJECTS - SOFT INTERVENTIONS		**Reduction of GHG emissions from soft interventions (tons CO2e/year)**	**BZ-NC-44**	**7.274**	**17.073**	**27.777**

For every proposed indicator, fill out one Metadata Indicator sheet, by using the template provided below.

Table 13 - INDICATOR METADATA. REDUCTION OF GHG EMISSIONS FROM STATIONARY ENERGY – PUBLIC BUILDINGS (%)

INDICATOR NAME	**REDUCTION OF GHG EMISSIONS FROM STATIONARY ENERGY – PUBLIC BUILDINGS**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator reflects the percentage reduction in greenhouse gas (GHG) emissions generated by energy consumption in public buildings of the municipality, as a result of energy efficiency measures and the implementation of non-polluting (renewable) energy sources.
CALCULATION	GHG Reduction (%) = (Reference GHG emissions - Current GHG emissions) / Reference GHG emissions x 100 Where: - Reference GHG emissions = GHG emission level before the implementation of the project (baseline year); - Current GHG emissions = GHG emission level after the implementation of the measures.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the effects of implemented actions on the level of GHG emissions generated by energy consumption in public buildings. Through reduced energy demand and use of renewable sources, emissions are significantly lowered.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – public buildings • Public sector – administration, education, healthcare, etc. • Heating, cooling, lighting systems, auxiliary equipment.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator also reflects economic, social and environmental co-benefits associated with the interventions.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction of operational (energy) costs • Improved indoor comfort in buildings • Enhanced image of the public authority • Environmental awareness and education of building users • Reduction of local pollution.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. This indicator allows direct monitoring of progress in reducing emissions in the public buildings sector, a key component for achieving climate neutrality.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Decarbonization of public buildings • Reduction of final energy demand

	• Replacement of fossil fuels with renewable sources • Promotion of sustainable investments in the public sector.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is relevant and aligned with the methodologies and reporting requirements of the Covenant of Mayors, CDP and SCIS, which track local emission reductions from the buildings sector.
EXPECTED DATA SOURCE	• Local GHG emissions inventory • Energy bills • Building energy monitoring systems • Pre- and post-implementation energy audits.
EXPECTED AVAILABILITY	Available annually for all monitored buildings; data can be collected from technical departments of the local administration or from energy providers.
SUGGESTED COLLECTION INTERVAL	Annually (reporting based on calendar or fiscal year, according to local practices).
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Energy and Climate Action Plan (SECAP) • Climate Neutrality Plan • SEAP/SECAP monitoring reports • Project sheets or national energy efficiency indicators
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors Monitoring Framework • MRV systems (Monitoring, Reporting, Verification) • Eurostat – buildings sector • GHG Protocol for organizational or local emissions.

Table 14 - INDICATOR METADATA. PERCENTAGE OF PUBLIC BUILDINGS EQUIPPED WITH CLEAN ENERGY GENERATION SYSTEMS (%)

INDICATOR NAME	**PERCENTAGE OF PUBLIC BUILDINGS EQUIPPED WITH CLEAN ENERGY GENERATION SYSTEMS (%)**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator reflects the share of public buildings within the total municipal building stock that have been equipped with non-polluting (renewable) energy generation systems, such as photovoltaic panels, heat pumps, or other low-emission technologies.
CALCULATION	Percentage of buildings with clean systems = Number of public buildings with clean energy systems / Total number of public buildings × 100.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly contributes to GHG emission reduction by generating clean energy locally. This reduces demand from grid-based energy, which is often partially fossil-fuel-based, thereby decreasing associated emissions from electricity and, in

	some cases, heating.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – public buildings (administration, education, healthcare, etc.) • Energy generation sector – through reduced demand from the national energy grid • Building systems: lighting, heating, cooling, and auxiliary equipment.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator also captures a range of economic, social, and environmental co-benefits resulting from the shift to renewable energy in public buildings.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduced public energy expenditures • Increased energy autonomy of public buildings • Enhanced resilience against power outages • Improved public authority image as a green and responsible entity • Informal education of staff and users on the energy transition • Local market development for renewable energy equipment and services.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator supports tracking progress in integrating renewable energy in the public sector, serving as a critical tool for assessing decarbonization and climate neutrality efforts.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Increasing the share of renewable energy in final energy consumption • Reducing direct and indirect emissions from the public sector • Improving energy efficiency through local generation integration • Ensuring long-term sustainability of public infrastructure • Serving as a good practice example replicable across sectors (residential, private).
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator aligns with reporting requirements and methodologies of the Covenant of Mayors (SECAP), CDP, and SCIS. It is recommended for tracking local action plan (SEAP/SECAP) implementation in the public sector.
EXPECTED DATA SOURCE	• Municipal Technical/Asset Management Department • Project implementation reports • Local public building databases • Equipment providers and certified installers • Technical and economic documentation from funded projects.
EXPECTED AVAILABILITY	Data can be collected and updated annually or semi-annually based on project progress and completion. Information is available through municipal technical departments or from public institutions (schools, hospitals, etc.).
SUGGESTED COLLECTION INTERVAL	Annually (preferably at the end of the calendar year, with updates as needed based on ongoing project implementation).
DELIVERABLES DESCRIBING THE	• Sustainable Energy and Climate Action Plan (SECAP/SEAP)

INDICATOR	• Project fiches funded through national or EU programs (e.g., NRRP, OPESI, PNDL) • NZC monitoring and implementation progress reports • Construction reception reports and technical authorizations.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors – SECAP Monitoring Framework • Eurostat – building sustainability indicators • National energy efficiency methodologies for public buildings • GHG Protocol (indirect emission reductions – Scope 2).

Table 15 - INDICATOR METADATA. PERCENTAGE OF PUBLIC BUILDINGS WITH REDUCED ENERGY CONSUMPTION DUE TO THERMAL REHABILITATION (%)

INDICATOR NAME	**PERCENTAGE OF PUBLIC BUILDINGS WITH REDUCED ENERGY CONSUMPTION DUE TO THERMAL REHABILITATION**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator measures the share of public buildings that, after undergoing thermal rehabilitation, have reduced their annual energy consumption by a defined threshold (e.g., ≥30%).
CALCULATION	Percentage = Number of energy-efficient rehabilitated buildings / Total public buildings × 100.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. It directly tracks energy savings at the building level post-intervention.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy • Heating, cooling, and lighting systems.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. Reflects broader environmental, economic, and social gains.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduced energy bills • Building longevity • Boost to local economy • Improved indoor comfort.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It's relevant for tracking local energy efficiency and NZC goals.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Energy demand reduction

	• Public building stock modernization • Reduced pressure on energy systems.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. Compatible with Covenant of Mayors, CDP, and SECAP frameworks.
EXPECTED DATA SOURCE	• Energy audits • Construction completion reports • Technical project documentation.
EXPECTED AVAILABILITY	Yearly, based on post-implementation reporting.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Project fiches • Efficiency monitoring reports • SEAP / SECAP.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• MRV • EU and national energy reporting frameworks • Eurostat.

Table 16 - INDICATOR METADATA. SHARE OF ENERGY-EFFICIENT LIGHTING SOURCES (%)

INDICATOR NAME	**SHARE OF ENERGY-EFFICIENT LIGHTING SOURCES**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator reflects the percentage of public lighting sources that are energy-efficient, specifically those using LED technology rather than conventional lighting sources.
CALCULATION	LED Share = Number of installed LED lights / Total number of public lighting sources × 100
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the share of lighting sources that have been replaced by energy-efficient LED lights, which has an immediate impact on energy consumption reduction.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Public lighting • Energy sector – electricity consumption.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-	Yes. The implementation of a fully LED-based public lighting system can lead to financial savings and environmental benefits, including a reduction in greenhouse gas

BENEFITS)?	emissions.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduced energy costs • Lower GHG emissions • Improved infrastructure durability • Reduced light pollution • Enhanced visual comfort.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator is relevant for tracking progress towards energy consumption reduction and the promotion of renewable energy sources.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Reducing energy consumption • Energy efficiency in public infrastructure • Promoting sustainable lighting • Decarbonization of the public sector.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator aligns with existing platforms and methodologies such as Covenant of Mayors, CDP, and SCIS.
EXPECTED DATA SOURCE	• Public lighting inventory • Energy bills • Project implementation reports.
EXPECTED AVAILABILITY	Annually, based on technical reports and energy bills.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Energy and Climate Action Plan (SEAP) • Monitoring reports for SEAP/SECAP • Project implementation documentation.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• MRV • International platforms for emission monitoring • Eurostat – public lighting energy efficiency.

Table 17 - INDICATOR METADATA. INSTALLED CAPACITY OF THE PHOTOVOLTAIC PARK (KWP)

INDICATOR NAME	**INSTALLED CAPACITY OF THE PHOTOVOLTAIC PARK**
INDICATOR UNIT	Kilowatt-peak (kWp)
DEFINITION	This indicator reflects the total installed capacity of the photovoltaic system within

	the park, expressed in kilowatt-peak (kWp), which represents the maximum power the photovoltaic system can generate under optimal irradiation conditions.
CALCULATION	Installed Capacity (kWp) = ∑(Number of photovoltaic panels × Nominal power of each photovoltaic panel)
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the amount of electricity that can be produced by the photovoltaic park, contributing to the generation of green energy.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Energy sector – electricity production • Reduction of greenhouse gas emissions by replacing fossil energy sources.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. Although the indicator measures installed capacity, it can indirectly lead to reduced dependence on polluting energy sources and cost savings for users.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction of GHG emissions • Increasing the energy autonomy of the municipality • Reducing long-term energy costs.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator is relevant for monitoring progress in reducing GHG emissions and promoting renewable energy.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Promoting renewable energy • Reducing greenhouse gas emissions • Increasing energy autonomy.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is compatible with existing platforms and methodologies, such as Covenant of Mayors, CDP, and SCIS, which monitor the implementation of renewable energy.
EXPECTED DATA SOURCE	• Project implementation documentation • Technical data from photovoltaic equipment suppliers.
EXPECTED AVAILABILITY	Available annually, based on technical implementation and monitoring reports.
SUGGESTED COLLECTION INTERVAL	Annually (with reporting upon completion of each implementation phase).
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Energy and Climate Action Plan (SEAP) • Monitoring reports for SEAP/SECAP • Project implementation report.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• MRV (Monitoring, Reporting, Verification) • Indicators for monitoring renewable energy at the local level (e.g., Eurostat, GHG Protocol).

Table 18 - INDICATOR METADATA. PERCENTAGE OF PUBLIC BUILDINGS EQUIPPED WITH SMART ENERGY CONSUMPTION MONITORING SYSTEMS (%)

INDICATOR NAME	**PERCENTAGE OF PUBLIC BUILDINGS EQUIPPED WITH SMART ENERGY CONSUMPTION MONITORING SYSTEMS**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator reflects the percentage of public buildings in Buzău equipped with smart energy consumption monitoring systems. These systems allow real-time tracking of energy consumption, identification of energy losses, and optimization of energy use.
CALCULATION	Percentage of equipped buildings = Number of equipped buildings / Total number of public buildings × 100.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the implementation and use of smart monitoring systems, which can lead to energy savings by detecting inefficient consumption and improving energy management.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Energy sector – electricity consumption in public buildings • Reducing energy consumption in public institutions and improving its use.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. Implementing monitoring systems can generate co-benefits in energy economy, ecological education for users, and improving operational efficiency in buildings.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reducing electricity consumption • Increasing energy efficiency in public institutions • Ecological education and awareness for public building users.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor progress in improving energy management in public buildings and reducing GHG emissions from the public sector.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Reducing final energy demand in public buildings • Promoting energy efficiency and energy savings • Supporting GHG emission reduction targets through energy efficiency measures.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator aligns with the requirements and methodology of energy monitoring platforms such as Covenant of Mayors and other GHG emission and energy consumption reporting platforms.
EXPECTED DATA SOURCE	• Data collected from implemented smart monitoring systems • Electricity bills • Consumption monitoring and verification reports.
EXPECTED AVAILABILITY	Available annually, based on reporting from the monitoring systems and energy consumption verification in each public building.

SUGGESTED COLLECTION INTERVAL	Annually (with periodic reporting based on the monitoring system).
DELIVERABLES DESCRIBING THE INDICATOR	• Energy consumption monitoring reports • Sustainable Energy and Climate Action Plan (SEAP) • Energy efficiency assessment reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• MRV (Monitoring, Reporting, Verification) indicators • Indicators within energy and GHG emission monitoring platforms.

Table 19 - INDICATOR METADATA. REDUCTION OF GHG EMISSIONS FROM STATIONARY ENERGY – RESIDENTIAL BUILDINGS (%)

INDICATOR NAME	**REDUCTION OF GHG EMISSIONS FROM STATIONARY ENERGY – RESIDENTIAL BUILDINGS**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator reflects the percentage reduction in greenhouse gas (GHG) emissions generated by energy consumption in residential buildings as a result of energy efficiency measures and the implementation of non-polluting energy sources (renewable energy).
CALCULATION	GHG Reduction (%) = (Reference GHG Emissions - Current GHG Emissions) / Reference GHG Emissions x 100 Where: - Reference GHG Emissions = GHG emissions level before project implementation (baseline year); - Current GHG Emissions = GHG emissions level after measures are implemented.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. This indicator directly measures the effects of implemented measures on the reduction of GHG emissions generated by energy consumption in residential buildings.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – residential buildings • Residential sector – private homes, homeowners' associations • Heating, cooling, lighting, and auxiliary equipment systems.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. This indicator also reflects co-benefits related to economic, social, and environmental aspects associated with energy efficiency and renewable energy implementation.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reducing energy operating costs • Improving interior comfort in homes • Improving the quality of life for residents • Reducing local pollution.

CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. This indicator can directly monitor progress in reducing GHG emissions in the residential sector, a key component for achieving climate neutrality.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Decarbonizing the residential sector • • Reducing final energy demand • • Replacing fossil fuels with renewable energy sources.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator aligns with platforms like Covenant of Mayors, CDP, and SCIS, which monitor emission reductions in the residential sector.
EXPECTED DATA SOURCE	• Local GHG emission inventory • Energy bills • Energy consumption monitoring systems in buildings.
EXPECTED AVAILABILITY	Available annually for all monitored buildings; data can be collected from homeowners' associations, local administrations, or energy suppliers.
SUGGESTED COLLECTION INTERVAL	Annually (with reporting based on the calendar year or fiscal year, depending on local practices).
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Energy and Climate Action Plan (SEAP) • Climate neutrality plans • Monitoring reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors Monitoring Framework • MRV system indicators • Eurostat – residential sector • GHG Protocol for organizational or local emissions.

Table 20 - INDICATOR METADATA. PERCENTAGE OF RESIDENTIAL BUILDINGS WITH INSTALLED NON-POLLUTING ENERGY PRODUCTION SYSTEMS (%)

INDICATOR NAME	**PERCENTAGE OF RESIDENTIAL BUILDINGS WITH INSTALLED NON-POLLUTING ENERGY PRODUCTION SYSTEMS**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator reflects the percentage of residential buildings that have installed non-polluting energy production systems, such as photovoltaic panels, small wind turbines, or heat pumps. These systems reduce dependence on energy produced from fossil fuels and contribute to energy efficiency in buildings.
CALCULATION	Percentage of equipped buildings = Number of buildings equipped with non-polluting energy systems / Total number of residential buildings × 100.

DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the progress in implementing non-polluting energy systems in residential buildings, contributing to the reduction of GHG emissions and increasing the energy independence of homes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – residential buildings • Residential sector – private homes, homeowners' associations.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator generates co-benefits, such as energy savings for residents and reductions in GHG emissions.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reducing energy costs for residents • Increasing energy autonomy of homes • Reducing local pollution • Increasing comfort and quality of life in homes.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor the implementation of emission-reduction measures and the increase in renewable energy production in the residential sector.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Reducing GHG emissions in the residential sector • Increasing energy produced from renewable sources • Replacing fossil fuels with renewable energy.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is relevant for energy and emissions monitoring platforms, such as Covenant of Mayors and CDP.
EXPECTED DATA SOURCE	Data from local authorities, homeowners' associations, energy audits, energy bills, and renewable energy system implementation reports.
EXPECTED AVAILABILITY	Available annually, based on the implementation and reporting of non-polluting energy systems in residential buildings.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Reports on the implementation of non-polluting energy systems • Energy efficiency and GHG reduction action plans.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors Monitoring Framework • MRV indicators • Eurostat – residential sector.

Table 21 - INDICATOR METADATA. AMOUNT OF ORGANIC WASTE CONVERTED INTO ENERGY (TONS/YEAR)

INDICATOR NAME	**AMOUNT OF ORGANIC WASTE CONVERTED INTO ENERGY**
INDICATOR UNIT	Tons (t) per year
DEFINITION	This indicator reflects the amount of organic waste converted into energy, measured in tons per year. It refers to the quantity of organic waste that, through energy recovery processes (such as incineration, biogasification, etc.), is transformed into electrical or thermal energy.
CALCULATION	Amount of waste converted into energy (tons/year) = ∑(Amount of organic waste processed over time (tons)) *Total amount of organic waste processed annually in an energy recovery system.*
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of the energy recovery system on the amount of organic waste processed and converted into energy.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Waste management sector • Renewable energy sector • Energy generation systems (electrical and thermal).
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. This indicator also measures co-benefits from the energy recovery process, including the reduction of waste sent to landfills or incinerated without energy recovery.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reducing the amount of waste sent to landfills • Increasing renewable energy production • Reducing methane emissions from landfill waste • Creating new jobs in recycling and renewable energy sectors.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. This indicator can be used to track progress in organic waste valorization and renewable energy generation.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Increasing renewable energy production • Reducing greenhouse gas emissions • Promoting the circular economy through organic waste recycling.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is relevant to platforms monitoring waste management and renewable energy production, such as Covenant of Mayors and GHG reduction initiatives.
EXPECTED DATA SOURCE	• Waste processing reports • Energy production monitoring systems • Data from energy recovery facilities.

EXPECTED AVAILABILITY	Available annually, based on the processing of waste and energy generation.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Annual energy recovery report • Waste management and energy production monitoring reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Circular economy indicators • Renewable energy indicators • MRV systems (Monitoring, Reporting, Verification).

Table 22 - INDICATOR METADATA. GHG EMISSIONS REDUCTION FROM STATIONARY ENERGY - BUILDINGS (TONS CO2E/YEAR)

INDICATOR NAME	**GHG EMISSIONS REDUCTION FROM STATIONARY ENERGY - BUILDINGS**
INDICATOR UNIT	Tons of CO2 equivalent (CO2e) per year
DEFINITION	The indicator measures the amount of greenhouse gas (GHG) emissions reduced as a result of energy efficiency measures and the use of non-polluting energy sources in buildings within the project. The reduction is expressed in tons of CO2 equivalent (CO2e) per year.
CALCULATION	GHG Emissions Reduction (tons CO2e/year) = Reference GHG Emissions − Current GHG Emissions *Where*: *- Reference GHG Emissions = level of GHG emissions before the implementation of energy efficiency measures and renewable energy sources (baseline year).* *- Current GHG Emissions = level of GHG emissions after the implementation of measures.*
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of energy efficiency measures and renewable energy use on GHG emissions from buildings.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – public and residential buildings • Public sector buildings, including administrative institutions, education, healthcare, etc. • Heating, cooling, lighting systems, auxiliary equipment.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator also reflects co-benefits related to energy efficiency measures, such as reduced operating costs and improved comfort in buildings.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction in operating costs (energy) • Increased indoor comfort in buildings • Reduction of local pollution

	• Improved energy efficiency and performance of buildings.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor progress in reducing GHG emissions from buildings towards achieving climate neutrality goals.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Decarbonization of the building sector • Reducing final energy demand • Replacing fossil fuels with renewable energy sources • Reducing GHG emissions from stationary energy sector.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is relevant to platforms monitoring GHG emissions and building performance, including Covenant of Mayors and local emissions monitoring initiatives.
EXPECTED DATA SOURCE	• Energy audit reports • Local GHG emissions inventory • Energy bills • Building energy consumption monitoring systems.
EXPECTED AVAILABILITY	Available annually, based on data from energy audits and building energy consumption monitoring.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Energy and Climate Action Plan (SEAP) • Climate Neutrality Plan • SEAP/SECAP Monitoring Reports • National energy efficiency project sheets or indicators.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors Monitoring Framework • MRV (Monitoring, Reporting, Verification) systems • Eurostat – building sector • GHG Protocol for organizational or local emissions.

Table 23 - INDICATOR METADATA. GHG EMISSIONS REDUCTION FROM TRANSPORT (%)

INDICATOR NAME	**GHG EMISSIONS REDUCTION FROM TRANSPORT**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator measures the percentage reduction of greenhouse gas (GHG) emissions from transport as a result of the implementation of urban traffic optimization measures and the diversion of heavy traffic to alternative routes. The reduction is

	expressed as a percentage of GHG emissions before the measures were implemented.
CALCULATION	GHG Emissions Reduction (%) = (Reference GHG Emissions - Current GHG Emissions) / Reference GHG Emissions x 100 *Where:* *- Reference GHG Emissions = GHG emissions before the implementation of traffic optimization measures and diversion of heavy traffic.* *- Current GHG Emissions = GHG emissions after the measures were implemented*.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of urban traffic optimization and the diversion of heavy traffic on reducing GHG emissions from transport.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Road transport (light and heavy traffic) • CO2 and other greenhouse gases from vehicles.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator also reflects co-benefits related to the optimization of traffic, such as improving air quality in urban areas and reducing congestion.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction in urban air pollution • Decreased fossil fuel consumption • Improved urban quality of life • Reduced travel times and traffic congestion.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor progress in reducing GHG emissions from transport and assess the effectiveness of traffic optimization measures in reducing GHG emissions.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Reducing GHG emissions from transport • Promoting sustainable and green transport • Reducing fossil fuel use in transport.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is relevant and compatible with platforms monitoring GHG emissions from transport, including Covenant of Mayors and MRV platforms.
EXPECTED DATA SOURCE	• GHG emissions monitoring reports • Traffic studies and emission audits • Data from air quality and emission monitoring stations.
EXPECTED AVAILABILITY	Available annually, based on traffic data and GHG emissions reported by local authorities or environmental agencies.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Mobility Action Plan (SMAP) • Annual GHG Emissions Monitoring Report from Transport

	• Sustainable Urban Mobility Plan (SUMP).
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors Monitoring Framework • MRV (Monitoring, Reporting, Verification) systems • Eurostat – transport and GHG emissions • GHG Protocol for local emissions.

Table 24 - INDICATOR METADATA. NUMBER OF PORTAL USERS (NO.)

INDICATOR NAME	**NUMBER OF PORTAL USERS**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the total number of active users of the integrated portal for active urban mobility. Users can be individuals who access the portal for route planning, information on active transport options, or to interact with the platform's features.
CALCULATION	The number of portal users is calculated by counting the unique users who accessed the portal over a specific period (e.g., monthly or annually).
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of the portal on increasing the number of users who access and use the platform to support active urban mobility.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Active urban mobility • Sustainable and eco-friendly transport • Public and active transport (walking, cycling, etc.).
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator may also reflect indirect effects related to raising awareness of active and sustainable mobility options, which could contribute to reducing road traffic and GHG emissions.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction in urban traffic and congestion • Reduction in GHG emissions due to the replacement of private motor transport with active options • Promotion of a healthier lifestyle • Reduction in air pollution and improvement in urban environmental quality.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor the portal's impact on increasing the use of active transport modes and supporting sustainable mobility.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Promoting sustainable mobility • Reducing GHG emissions from transport • Increasing the use of active and public transport • Creating greener and more sustainable cities.

IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. The indicator is not specifically included in global platforms, but it can be used within the monitoring of active urban mobility portals as part of local or regional sustainable mobility plans.
EXPECTED DATA SOURCE	Data from the integrated portal (authentication systems, user databases).
EXPECTED AVAILABILITY	Continuously available based on user access to the portal.
SUGGESTED COLLECTION INTERVAL	Monthly or annually
DELIVERABLES DESCRIBING THE INDICATOR	• Portal usage reports • Statistical analysis of portal users • Evaluation of the portal's impact on active urban mobility.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Indicators from sustainable urban mobility plans (SUMP) • Indicators from active mobility monitoring platforms • Indicators on digital platform usage in public transport.

Table 25 - INDICATOR METADATA. MODAL SHARE FOR NON-MOTORIZED MOBILITY (CYCLISTS AND PEDESTRIANS) (%)

INDICATOR NAME	**MODAL SHARE FOR NON-MOTORIZED MOBILITY (CYCLISTS AND PEDESTRIANS)**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator measures the share of non-motorized transport modes (walking and cycling) in the total number of trips made on the sustainable mobility corridor in the central area of Buzău Municipality (Nicolae Bălcescu Boulevard). It is an essential indicator for evaluating the effectiveness of infrastructure dedicated to active transport.
CALCULATION	Non-motorized Modal Share} (%) = Number of trips by bicycle and walking / Total number of trips x 100.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of the implementation of sustainable mobility infrastructure on increasing the use of non-motorized transport modes (walking and cycling).
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Non-motorized transport • Active urban mobility • Reduction of emissions from transport by promoting walking and cycling.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator reflects indirect effects related to reducing GHG emissions and air pollution due to the replacement of private motor transport with more ecological non-motorized options.

IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction of GHG emissions from transport • Improvement of air quality and urban environment • Public health improvement through physical activity (walking and cycling) • Reduction of traffic and congestion • Promotion of an active and healthy lifestyle.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor the impact of sustainable mobility infrastructure on increasing non-motorized transport use, contributing to sustainability and emission reduction goals.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Promoting sustainable mobility and active transport • Reducing GHG emissions from transport • Creating a greener and healthier urban environment • Reducing dependence on motorized transport.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. The indicator is not directly included in international platforms but can be used in the monitoring of sustainable urban mobility plans and eco-friendly transport policies.
EXPECTED DATA SOURCE	Traffic surveys (pedestrian and cyclist flow counts), local authority or public transport agency data, mobility monitoring systems.
EXPECTED AVAILABILITY	Continuously available based on periodic traffic surveys or mobility monitoring systems.
SUGGESTED COLLECTION INTERVAL	Monthly or annually.
DELIVERABLES DESCRIBING THE INDICATOR	• Traffic monitoring report • Impact assessment report for sustainable mobility infrastructure • Sustainable urban mobility plan (SUMP).
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Indicators from sustainable urban mobility plans (SUMP) • Indicators from active mobility platforms (monitoring of cyclists and pedestrians) • Indicators of sustainable and ecological transport.

Table 26 - INDICATOR METADATA. MODAL SHARE FOR PUBLIC TRANSPORT (%)

INDICATOR NAME	**MODAL SHARE FOR PUBLIC TRANSPORT**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator measures the share of public transport (buses, trams, trolleybuses, etc.)

	in the total number of trips made within the Buzău municipality, as a result of the expansion of public transport infrastructure and services.
CALCULATION	Public Transport Modal Share (%) = Number of public transport trips / Total number of trips x 100.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of expanding public transport infrastructure and services on increasing the use of public transport by citizens.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Public transport • Sustainable urban mobility • Reduction of emissions from transport by encouraging the use of public transport over private motor transport.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator also reflects indirect impacts, such as reducing GHG emissions, alleviating traffic congestion, and improving air quality.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction of GHG emissions from transport • Reduction of traffic congestion • Improvement of air quality • Reduction of dependency on private motor transport • Promotion of a sustainable and eco-friendly lifestyle.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor the impact of expanding public transport on reducing private car usage, contributing to emission reductions and promoting a healthier urban environment.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Reducing GHG emissions from transport • Promoting public transport as a sustainable alternative • Reducing demand for individual motorized transport • Creating a cleaner and more accessible urban environment.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. The indicator is not directly included in international platforms but can be used in monitoring urban mobility strategies and eco-friendly public transport policies.
EXPECTED DATA SOURCE	Traffic surveys, data from local transport authorities, public transport usage reports, data from electronic ticketing systems or transport cards.
EXPECTED AVAILABILITY	Available annually based on public transport usage data.
SUGGESTED COLLECTION INTERVAL	Monthly or annually.
DELIVERABLES DESCRIBING THE INDICATOR	• Public transport usage monitoring report • Sustainable urban mobility plan (SUMP) • Annual report on public transport infrastructure and service development.

OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Indicators from sustainable urban mobility plans (SUMP) • Indicators from sustainable mobility and ecological transport platforms • Transport emission monitoring indicators.

Table 27 - INDICATOR METADATA. NUMBER OF PROJECTS WITH INTELLIGENT TRANSPORT SYSTEMS INSTALLED

INDICATOR NAME	**NUMBER OF PROJECTS WITH INTELLIGENT TRANSPORT SYSTEMS INSTALLED (INCLUDING NEW IMPLEMENTATIONS AND SYSTEM MODERNIZATIONS)**
INDICATOR UNIT	Count of projects
DEFINITION	Total number of projects within Buzău's *Smart Mobility Zone* that implement or upgrade one or more intelligent transport system (ITS) elements (e.g. smart traffic management, adaptive signal control, real-time passenger information, e-ticketing, data integration platforms, etc.). According to EU Directive 2010/40, *"Intelligent Transport Systems (ITS) are advanced applications… to provide innovative services relating to transport modes and traffic management, enabling various users to be better informed and make safer, more coordinated and 'smarter' use of transport networks".*
CALCULATION	Count all completed (or clearly planned) projects in the Smart Mobility Zone that involve ITS. Each project is counted once, regardless of how many ITS components it contains. For monitoring, report the total number of ITS projects implemented per year.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	The indicator measures project implementation activity, not greenhouse gas emissions or other direct environmental impacts.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	N/A (the indicator does not directly measure emissions from any sector).
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. ITS projects yield multiple co-benefits: they reduce congestion and travel times, improve road safety, and enhance passenger information. For example, adaptive signal control has been found to reduce crashes by about 5%, and studies show ITS (smart traffic controls) can cut CO_2 emissions by on the order of 6–7% across large networks (The MDPI study also found localized CO_2 reductions of 32–40% at intersections).
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	Reduction of greenhouse gas and pollutant emissions (via more efficient traffic flow), improved air quality, lower congestion and travel times, and enhanced road safety and user satisfaction.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is relevant to the climate-neutral impact pathway for transport and sustainable mobility. ITS projects support urban transport decarbonization and the transition to smart, low-carbon mobility.

IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	Urban transport decarbonization (smart sustainable mobility pathway).
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. Existing frameworks like the CDP city questionnaire or Covenant of Mayors do not include a dedicated metric for counting ITS projects; they focus on emissions, energy use or high-level mobility metrics. Similar measures exist in other contexts, e.g. the EU ITS action plan KPI list includes *"number of signalized intersections using adaptive control".*
EXPECTED DATA SOURCE	City and transport agency records and reports (project implementation databases, progress reports). Reference documents: Buzău's Sustainable Urban Mobility Plan, local Climate Neutrality Action Plan, annual monitoring reports.
EXPECTED AVAILABILITY	High – data are available from municipal and transport operator records.
SUGGESTED COLLECTION INTERVAL	Annually (or upon completion of each significant project) for continuous monitoring.
DELIVERABLES DESCRIBING THE INDICATOR	*Buzău Climate Neutrality Action Plan, Buzău Sustainable Urban Mobility Plan (SUMP),* annual mobility/climate monitoring reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• A comparable metric appears in the EU ITS KPI framework (e.g. KPI C4 on intersections with adaptive control) and in evaluation frameworks like CIVITAS (which track implemented mobility measures on a project basis).

Table 28 - INDICATOR METADATA. NUMBER OF ELECTRIC VEHICLE CHARGING STATIONS INSTALLED

INDICATOR NAME	**NUMBER OF ELECTRIC VEHICLE CHARGING STATIONS INSTALLED**
INDICATOR UNIT	Count (stations)
DEFINITION	This indicator reflects the total number of electric vehicle (EV) charging stations installed within the public network of Buzău Municipality, as part of efforts to electrify transport and reduce mobility-related emissions. Stations may include standard (AC), fast (DC), or ultra-fast charging types.
CALCULATION	Count all EV charging stations installed and operational within the municipality, regardless of charging speed or power. Can be reported as cumulative total or newly installed per reporting period (e.g., annually).
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	No. The indicator tracks installed infrastructure, not direct emissions.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	N/A (indirect indicator).

DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. Expanding charging infrastructure facilitates EV adoption, indirectly reducing transport-related emissions and improving air quality.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Indirect reduction of GHG emissions from transport • Improved urban air quality • Reduced noise pollution • Increased attractiveness of electric mobility.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is relevant for tracking the transition to low-emission mobility.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Electrification of urban transport • Reduction in fossil fuel demand • Decarbonization of road transport.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is included in most urban environmental reporting systems and recommended by the Covenant of Mayors to track progress on EV transition.
EXPECTED DATA SOURCE	Public mobility department / Urban infrastructure directorate / EV station operators.
EXPECTED AVAILABILITY	High – data available from municipal records and infrastructure providers.
SUGGESTED COLLECTION INTERVAL	Annually or upon completion of each installation phase.
DELIVERABLES DESCRIBING THE INDICATOR	• Sustainable Urban Mobility Plan (SUMP) • Local energy strategy • Mobility infrastructure progress reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors – SECAP • SCIS (Smart Cities Information System) indicators • Eurostat – Sustainable mobility.

Table 29 - INDICATOR METADATA. REDUCTION OF GHG EMISSIONS FROM TRANSPORT (TONS CO_2E/YEAR)

INDICATOR NAME	**REDUCTION OF GHG EMISSIONS FROM TRANSPORT**
INDICATOR UNIT	tons of CO_2 equivalent per year
DEFINITION	This indicator reflects the annual reduction in greenhouse gas (GHG) emissions from the transport sector, as a result of implementing sustainable mobility projects (public transport, active mobility, electrification, traffic optimization, etc.).

CALCULATION	GHG Reduction (tons CO_2e/year) = Reference GHG emissions − Current GHG emissions *Where:* *- Reference GHG emissions = estimated emission level under business-as-usual scenario* *- Current GHG emissions = emission level after project implementation.*
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of interventions on reducing transport-related emissions.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Road transport (passenger and freight) • Local public transport • Private motorized traffic • Mobility infrastructure.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator also helps assess social and health co-benefits.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improved air quality • Reduced noise pollution • Increased road safety • Improved public health via active mobility.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is a key indicator for measuring transport decarbonization pathways.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Transition to electric transport • Promotion of public transport and active mobility • Optimization of traffic flows • Urban mobility decarbonization.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. It is a core indicator in SECAP reports and CDP/SCIS methodologies.
EXPECTED DATA SOURCE	• Local GHG inventory • Traffic modeling • Urban mobility databases • Public transport operators' data.
EXPECTED AVAILABILITY	Good, with annual updates possible through cooperation with local transport and environmental agencies.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• SECAP (Sustainable Energy and Climate Action Plan) • Sustainable Urban Mobility Plan (SUMP)

	• CDP/SCIS reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors • Eurostat – Transport and Emissions • GHG Protocol – Transport.

Table 30 - INDICATOR METADATA. AREA COVERED WITH NATURE-BASED SOLUTIONS (HA)

INDICATOR NAME	**AREA COVERED WITH NATURE-BASED SOLUTIONS**
INDICATOR UNIT	hectares (ha)
DEFINITION	This indicator measures the total surface area (in hectares) covered by nature-based solutions (NBS), such as rain gardens, green infiltration areas, urban meadows, and constructed wetlands, aimed at stormwater management, reducing pressure on sewage systems, and supporting climate adaptation.
CALCULATION	Total NBS area (ha) = $\sum_{i=1}^{n} Area\ of\ each\ NBS\ intervention\ (ha)$
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly reflects the expansion of green infrastructure and NBS implementation for climate adaptation and sustainable water management.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Urban infrastructure and water management • Residential areas and green spaces • Urban flood risk management.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. It also contributes to biodiversity enhancement, air quality, and community well-being.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Flood risk reduction • Increase in urban biodiversity • Microclimate improvement • Landscaping and recreation.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is a relevant indicator for tracking urban climate adaptation and integrated water management.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Creation of climate-resilient urban infrastructure • Ecosystem-based adaptation to climate change • Increase in permeable green surfaces.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/	Yes. It is used in CDP Cities and SECAP reports as an adaptation and green infrastructure indicator.

COVENANT OF MAYORS PLATFORMS?	
EXPECTED DATA SOURCE	• Technical project documents and GIS maps • Data from urban planning and environmental departments • Implementation documents of NBS projects.
EXPECTED AVAILABILITY	Good. Data can be obtained directly from technical documentation and associated project maps.
SUGGESTED COLLECTION INTERVAL	Upon project implementation and with each extension/update.
DELIVERABLES DESCRIBING THE INDICATOR	• Climate adaptation action plans • NBS project technical reports • Local urban planning documents.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• EEA – European Environment Agency • Urban Green Infrastructure Framework • Covenant of Mayors – adaptation.

Table 31 - INDICATOR METADATA. PERCENTAGE OF RECYCLED WASTE (%)

INDICATOR NAME	**PERCENTAGE OF RECYCLED WASTE**
INDICATOR UNIT	Percent (%)
DEFINITION	This indicator reflects the share of municipal waste that is separately collected and recycled, as a percentage of the total waste generated, in the context of IoT technology and smart collection centers.
CALCULATION	Recycled waste (%) = Amount of recycled waste / Total amount of waste generated x 100.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. It directly measures the efficiency of selective waste collection and recycling via the implemented IoT system and modern collection centers.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Waste management • Household sector • Municipal sector.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. It supports the reduction of indirect GHG emissions, enhances public environmental awareness, and promotes the circular economy.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction of landfilled waste

	• Decrease in indirect GHG emissions • Increased citizen participation in separate collection • Improved operational efficiency of waste services.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It can monitor progress toward achieving recycling goals and reducing the environmental impact of waste.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Emission reduction from waste management • Circular economy promotion • Optimization of collection logistics through digitalization.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is compatible with CDP Cities and the Covenant of Mayors, used for waste management performance reporting.
EXPECTED DATA SOURCE	• Local sanitation operator • Smart collection platforms (QR/RFID) • Monthly/annual reports from recycling centers.
EXPECTED AVAILABILITY	Very good, with real-time monitoring possible through the IoT system.
SUGGESTED COLLECTION INTERVAL	Monthly or quarterly, with consolidated annual reporting.
DELIVERABLES DESCRIBING THE INDICATOR	• Local waste management plan • Environmental reports • Project sheets and monitoring reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Eurostat – Waste Statistics • EEA – Waste Data Reporting • Smart city urban performance monitoring platforms.

Table 32 - INDICATOR METADATA. NUMBER OF LOCAL BUSINESSES ENGAGED IN THE CIRCULAR ECONOMY (NO.)

INDICATOR NAME	**NUMBER OF LOCAL BUSINESSES ENGAGED IN THE CIRCULAR ECONOMY**
INDICATOR UNIT	Number (no.)
DEFINITION	This indicator reflects the total number of local businesses actively participating in the circular economy by applying practices such as reuse, repair, recycling, waste reduction, or the use of secondary raw materials in their business operations.

CALCULATION	Sum of local businesses identified as circular economy actors based on predefined criteria (certifications, audits, verified self-declarations, participation in relevant networks/initiatives).
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. By encouraging and increasing the number of circular businesses, it helps reduce the consumption of virgin resources and associated waste and GHG emissions from production, transport, and disposal.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Production and trade sector • Waste management • Transport and logistics.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. It promotes both economic and social co-benefits.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Creation of green jobs • Strengthening local economic resilience • Reduced reliance on imported raw materials • Promotion of local innovation.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is relevant to tracking progress toward a circular economy, which plays a key role in decarbonization and urban sustainability.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Local circular economy • Reduction of production and consumption emissions • Waste minimization and resource reuse • Efficient use of materials.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Not directly, but it can be aligned with circular economy indicators from sustainable urban strategies and extended CDP reporting.
EXPECTED DATA SOURCE	• Local business registry • Business surveys and interviews • Corporate environmental reports • Market & Hub platform database.
EXPECTED AVAILABILITY	Annually, depending on platform updates and collaboration with the local business sector.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Local circular economy strategy • Market & Hub annual reports • Verified circular business databases.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Circular Cities Declaration

	• Eurostat – circular economy indicators • Urban Agenda for the EU – Circular Economy Partnership.

Table 33 - INDICATOR METADATA. QUANTITY OF WASTE PROCESSED FOR ENERGY RECOVERY (TONS/YEAR)

INDICATOR NAME	**QUANTITY OF WASTE PROCESSED FOR ENERGY RECOVERY**
INDICATOR UNIT	Tons per year (tons/year)
DEFINITION	The indicator reflects the annual volume of municipal or industrial waste that is processed using thermochemical conversion technologies such as gasification and molecular dissociation to generate energy (electric and/or thermal), thus reducing landfill volumes and supporting a circular economy.
CALCULATION	Annual sum of waste quantities treated through gasification or molecular dissociation facilities, based on operational reports and environmental authority records.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. Waste-to-energy conversion reduces GHG emissions by avoiding landfill use, capturing and utilizing resulting gases, and displacing fossil-based energy production.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Waste management • Energy from industrial processes • Power and heat generation sectors.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The projects bring multiple environmental, economic, and social co-benefits.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction in landfill waste volumes • Renewable energy generation • Job creation in the Green Economy • Reduced soil and air pollution from dumping sites.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It supports tracking of sustainable waste management and energy transition efforts.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Waste-to-energy transition • Emission reduction from landfill sites • Displacement of conventional energy sources • Circular resource management systems.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. It can be reported under CDP and SCIS frameworks in the context of waste-related emissions and alternative energy sourcing.

EXPECTED DATA SOURCE	• Operational reports from energy recovery facilities • Local environmental and sanitation authorities • Facility operators.
EXPECTED AVAILABILITY	Available annually from administrative sources and facility documentation.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Annual facility reports • Local waste and energy strategies • Climate neutrality and sustainability reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Eurostat – Waste statistics • EEA – Circular economy monitoring framework • GHG Protocol (Waste & Energy modules).

Table 34 - INDICATOR METADATA. AMOUNT OF COMPOST PRODUCED (TONS/YEAR)

INDICATOR NAME	**AMOUNT OF COMPOST PRODUCED**
INDICATOR UNIT	Tons per year (tons/year)
DEFINITION	This indicator reflects the annual amount of compost produced from the treatment of biodegradable (organic) waste such as food scraps and plant matter in an urban composting facility. The resulting compost can be used in agriculture, urban green spaces, or distributed to citizens.
CALCULATION	Total quantity of compost (in tons) produced and sorted during a calendar year, based on operational records from the composting facility.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. Composting reduces GHG emissions by avoiding the landfilling of organic waste, which would otherwise produce methane.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Waste (especially biodegradable waste) • Soil management (through compost application) • Transport (reduction in waste volume sent to landfills).
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. The indicator captures several economic and environmental co-benefits.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction in urban waste volumes • Improved soil quality • Cost savings in green space maintenance

	• Promotion of composting practices among citizens.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is relevant for tracking progress toward circular economy goals and emissions reduction in the waste sector.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Organic waste treatment and valorization • Reduction of methane emissions from landfills • Sustainable agriculture and compost use • Circular economy practices.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. It is used in the context of circular economy and sustainable waste management reporting in platforms such as CDP and the Covenant of Mayors.
EXPECTED DATA SOURCE	• Operational reports from the composting facility • Local environmental or sanitation authorities • Facility operators.
EXPECTED AVAILABILITY	Available annually, with monthly or quarterly internal records.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• Composting facility operational reports • Municipal waste management reports • Local waste management strategies • Circular economy action plans.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Eurostat – Waste treatment statistics • GHG Protocol – Waste sector • EEA – Indicators for bio-waste management.

Table 35 - INDICATOR METADATA. PERCENTAGE OF CITIZENS USING THE INTEGRATED CENTER FOR SEPARATE WASTE COLLECTION THROUGH VOLUNTARY CONTRIBUTION (%)

INDICATOR NAME	**PERCENTAGE OF CITIZENS USING THE INTEGRATED CENTER FOR SEPARATE WASTE COLLECTION THROUGH VOLUNTARY CONTRIBUTION**
INDICATOR UNIT	Percent (%)
DEFINITION	This indicator reflects the share of the municipal population that actively uses the voluntary drop-off waste collection center within a given time frame (typically yearly). It is a civic engagement indicator for responsible waste management.

CALCULATION	Usage rate = Number of unique users of the Integrated center for separate waste collection through voluntary contribution / Total population of the municipality × 100
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. It indirectly contributes to GHG reduction by diverting waste from landfills to recycling streams.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Waste (by reducing improperly disposed waste) • Transport (via optimized waste collection and processing) • Production (through recycled material reuse).
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. It reflects civic engagement, ecological awareness, and waste reduction behavior.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Increased recycling awareness • Community participation in the circular economy • Pollution reduction and lower sanitation costs • Citizen responsibility and environmental education.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It tracks progress in public involvement and efficiency of voluntary waste collection.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Increased recycling and source separation rates • Reduction of residual waste and related emissions • Public participation in the green transition • Support for circular economy systems.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. It aligns with civic participation and circular economy goals in platforms such as the Covenant of Mayors.
EXPECTED DATA SOURCE	• Access records from the drop-off center • Data from the local administration or facility operator • User surveys or electronic check-ins.
EXPECTED AVAILABILITY	Available annually; monthly data can support trend analysis.
SUGGESTED COLLECTION INTERVAL	Annually (with optional quarterly updates).
DELIVERABLES DESCRIBING THE INDICATOR	• Center operation reports • Urban environmental or sanitation reports • Local waste management strategies • Circular economy action plans.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Eurostat – Municipal waste statistics • Covenant of Mayors – Community engagement metrics • EEA – Urban sustainability indicator sets.

Table 36 - INDICATOR METADATA. GHG EMISSIONS REDUCTION FROM WASTE COLLECTION AND CIRCULAR ECONOMY (TONS CO_2E/YEAR)

INDICATOR NAME	**GHG EMISSIONS REDUCTION FROM WASTE COLLECTION AND CIRCULAR ECONOMY**
INDICATOR UNIT	Tons of CO_2 equivalent per year (tons CO_2e/year)
DEFINITION	This indicator measures the annual reduction in greenhouse gas emissions resulting from projects focused on sustainable waste management (e.g., separate collection, recycling, composting, treatment) and circular economy initiatives.
CALCULATION	Difference between estimated emissions before and after project implementation, based on IPCC or GHG Protocol methodologies: GHG Reduction = Baseline Emissions−Post-Implementation Emissions *Calculation includes:* • *Methane emissions avoided from landfills* • *Emissions avoided by recycling (vs. virgin production)* • *Emissions avoided by composting (vs. anaerobic decomposition)* • *Indirect circular economy benefits (resource extraction, transport, production)*
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. It directly tracks GHG reductions in the waste sector.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Waste (collection, treatment, disposal) • Industry (via material reuse) • Transport (reduced volume and distances for waste transport) • Agriculture (use of compost instead of synthetic fertilizers).
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduced soil and water pollution • Improved public environmental awareness • Green jobs in waste management • Local circular economy development.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It supports tracking toward Net Zero through waste sector decarbonization and circularity.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Waste prevention and minimization • Eco-friendly waste treatment (composting, recycling) • Material substitution via secondary raw materials • Reduction in final disposal and waste transport.

IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. It is a standard metric in CDP Waste reporting and Covenant of Mayors' SECAP frameworks.
EXPECTED DATA SOURCE	• Reports on sanitation and recycling operators • Local or national GHG inventories • Municipal emission reporting • Project feasibility assessments.
EXPECTED AVAILABILITY	Annually, post-implementation.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• GHG/SECAP reports • Local waste management strategies • Project monitoring reports • CDP and Covenant of Mayors submissions.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• IPCC Guidelines for National Inventories • GHG Protocol – Waste Sector • Covenant of Mayors SECAP • ISO 14064-1.

Table 37 - INDICATOR METADATA. REGENERATED GREEN SPACE AREA (HA)

INDICATOR NAME	**REGENERATED GREEN SPACE AREA**
INDICATOR UNIT	Hectares (ha)
DEFINITION	This indicator measures the total area of green spaces regenerated through urban revitalization actions in collective housing areas, aimed at improving urban environmental quality, enhancing biodiversity, and providing residents with a healthier living environment.
CALCULATION	The total area of regenerated green spaces will be calculated, including parks, gardens, playgrounds, pedestrian paths, etc., within collective housing zones. Regenerated area = ∑ Area of each regenerated green space.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact on the ecological regeneration of green spaces and improvement in air quality and urban microclimate.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Energy efficiency in buildings • Reduction of emissions through improved air quality

	• Modification of urban microclimate.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Increased urban biodiversity • Reduced urban heat island effect • Enhanced resident comfort and health • Promotion of an active lifestyle (walking, playing, relaxation) • Aesthetic improvement and attractiveness of revitalized areas.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator reflects progress in improving urban environmental quality and achieving sustainable urban development.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• GHG emissions reduction through air quality and microclimate improvement • Increased carbon absorption through vegetation • Increase in urban green spaces • Promotion of a healthy lifestyle.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is in line with the approaches promoted by the Covenant of Mayors and green city initiatives.
EXPECTED DATA SOURCE	• Urban regeneration plans • Local authority reports and project documentation • Green space inventories.
EXPECTED AVAILABILITY	Available annually after the completion of each project stage.
SUGGESTED COLLECTION INTERVAL	Annually (depending on project progress).
DELIVERABLES DESCRIBING THE INDICATOR	• Project monitoring reports • Urban planning and regeneration documents • Environmental impact reports • Progress reports for the Covenant of Mayors.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors for Climate and Energy • Eurostat – Environmental and Urbanism Indicators.

Table 38 - INDICATOR METADATA. VALUATED PROJECTS (NO.)" RELATED TO THE PROJECT "NEW EUROPEAN BAUHAUS ASSESSMENT OF ONGOING PROJECTS PRIOR TO IMPLEMENTATION"

INDICATOR NAME	**VALUATED PROJECTS (NR.)" RELATED TO THE PROJECT *"NEW EUROPEAN BAUHAUS ASSESSMENT OF ONGOING PROJECTS PRIOR TO IMPLEMENTATION"***
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the number of projects that have been evaluated according to the principles and requirements of the New European Bauhaus (NEB) before their implementation. The evaluation aims to integrate sustainability, accessibility, and aesthetics into the design and implementation plans of the projects.
CALCULATION	All projects that have undergone evaluation according to NEB criteria before the implementation phase are counted. Number of evaluated project s= ∑ Projects evaluated according to NEB.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	No. The indicator does not measure direct impacts on emissions but only tracks the evaluation according to NEB principles before implementation.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	N/A.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improving architectural quality and urban design • Enhancing the sustainability of projects and their integration with the surrounding environment • Promoting accessibility and social inclusion • Reducing the ecological impact of projects.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. This indicator tracks the progress of integrating NEB principles in ongoing projects.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Promoting sustainability in urban planning • Creating a more accessible and resilient built environment • Encouraging innovation in the design and implementation of green and sustainable projects.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. This indicator is specific to the NEB evaluation process and is not included in the general monitoring platforms mentioned.

EXPECTED DATA SOURCE	• Internal project evaluation reports • Project documents that include NEB evaluation • Project evaluation committees.
EXPECTED AVAILABILITY	Available annually, depending on the evaluation stage of ongoing projects.
SUGGESTED COLLECTION INTERVAL	Annually (during the evaluation phase of the projects).
DELIVERABLES DESCRIBING THE INDICATOR	• NEB project evaluation reports • Project implementation and design plans for evaluated projects • Progress reports and action plans for NEB projects.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• NEB monitoring reports • Monitoring systems for EU sustainability-related projects.

Table 39 - INDICATOR METADATA. PLANTED TREES (NO.)

INDICATOR NAME	**PLANTED TREES**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the total number of trees planted within the „Urban Forest" project, aimed at improving urban environmental quality, increasing green spaces, reducing CO2 emissions, and enhancing biodiversity.
CALCULATION	The number of trees planted during the project implementation is counted. Number of planted trees = ∑ Trees planted within the project.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the environmental impact by increasing the number of trees, which contributes to CO2 capture and air quality improvement.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• CO_2 emission reduction through tree capture. • Improvement of urban air quality.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improved urban life quality. • Increased biodiversity. • Reduction of the urban "heat island" effect. • Creation of recreational and relaxation spaces for citizens. • Aesthetic enhancement of the urban landscape.

CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to monitor the impact on environmental quality and the improvement of urban green infrastructure.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Increasing urban green space. • Reducing CO2 emissions in urban environments. • Enhancing biodiversity in cities. • Adapting cities to climate change.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. The indicator is not included in the general monitoring platforms mentioned but is important for assessing the sustainability and impact of green projects at the local level.
EXPECTED DATA SOURCE	• Project implementation reports. • Tree planting and maintenance records.
EXPECTED AVAILABILITY	Available annually, depending on the planting and monitoring stages of the project.
SUGGESTED COLLECTION INTERVAL	Annually (during the planting season and tree monitoring phase).
DELIVERABLES DESCRIBING THE INDICATOR	• Urban Forest" project progress report • Tree planting and maintenance plan • Tree health monitoring reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Urban biodiversity monitoring platforms • Green city environmental indicators • CO_2 emission monitoring reports.

Table 40 - INDICATOR METADATA. AFFORESTED AREA (HA)

INDICATOR NAME	**AFFORESTED AREA**
INDICATOR UNIT	Hectares (ha)
DEFINITION	This indicator measures the total area of land afforested within the „Afforestation of the Area Adjacent to the Municipality of Buzău" project, aimed at increasing forested areas, enhancing biodiversity, and improving environmental quality.
CALCULATION	The total afforested area is measured. Afforested area = Total afforested land area (ha).
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the environmental impact by increasing the forested area, which contributes to CO2 capture, soil protection, and improved air quality.
IF YES, WHICH EMISSION SOURCE	• CO_2 emission reduction through tree capture.

SECTORS DOES IT IMPACT?	• Soil protection and erosion prevention. • Improved air quality by absorbing pollutants.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Biodiversity improvement. • Increased life and public health quality. • Reduction of the urban "heat island" effect. • Creation of new habitats for fauna. • Promotion of environmental education in local communities.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to track the impact on environmental quality and the enhancement of green infrastructure and biodiversity.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Increasing green spaces and forests. • Reducing CO2 emissions. • Enhancing biodiversity in urban and peri-urban areas. • Combating climate change and adapting to it.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No. The indicator is not included in the mentioned general monitoring platforms but is essential for evaluating the sustainability and impact of green projects at the local level.
EXPECTED DATA SOURCE	• Project implementation reports. • Afforestation maps and plans. • Afforested area records.
EXPECTED AVAILABILITY	Available annually as the project progress is monitored and the afforested area is updated.
SUGGESTED COLLECTION INTERVAL	Annually (during the planting and monitoring phase).
DELIVERABLES DESCRIBING THE INDICATOR	• „Afforestation of the Area Adjacent to the Municipality of Buzău" project progress report • Afforestation and maintenance plan • Forest area monitoring reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Urban biodiversity and forestry monitoring platforms • CO_2 emission and carbon storage indicators • Local and national environmental reports.

Table 41 - INDICATOR METADATA. GHG EMISSIONS REDUCTION THROUGH GREEN INFRASTRUCTURE AND NATURE-BASED SOLUTIONS (TONS OF CO_2 EQUIVALENT PER YEAR)

INDICATOR NAME	**GHG EMISSIONS REDUCTION THROUGH GREEN INFRASTRUCTURE AND NATURE-BASED SOLUTIONS**
INDICATOR UNIT	tons of CO_2 equivalent per year
DEFINITION	This indicator measures the annual reduction in greenhouse gas (GHG) emissions resulting from green infrastructure projects (e.g. tree planting, rain gardens, urban green zones) and nature-based solutions that contribute to both the sequestration and avoidance of carbon emissions.
CALCULATION	GHG Reduction (tons CO_2e/year) = Estimated Sequestration + Estimated Avoided Emissions • *Sequestration refers to the natural process of capturing and storing atmospheric CO_2, primarily through biological means such as plant photosynthesis and carbon accumulation in soils, trees, and restored ecosystems.* • *Avoided emissions are those that would have occurred in the absence of interventions (e.g., reduced fossil fuel use, less motorized transport, mitigation of urban heat island effects).*
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. It directly measures the reduction in GHG emissions.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy (buildings) • Transportation • Waste • Land use and land cover.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improved air quality • Urban heat island mitigation • Increased urban biodiversity • Sustainable urban landscaping • Public health and well-being.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. It is a key indicator for measuring decarbonization pathways.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Natural carbon sinks • Ecosystem resilience enhancement

	• Indirect decarbonization of urban environments.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. It is included in SECAP, CDP and SCIS methodologies related to nature-based climate actions.
EXPECTED DATA SOURCE	• Local GHG inventories • Forestry and land use data • GIS and satellite imagery • Environmental or ecological studies.
EXPECTED AVAILABILITY	Medium to good, with potential for annual updates via partnerships with local authorities and environmental agencies.
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	• SECAP • Urban biodiversity strategies • Climate adaptation plans • CDP/SCIS reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors • Eurostat – Land Use and Forestry • GHG Protocol – AFOLU Sector.

Table 42 - INDICATOR METADATA. RESIDENTIAL BIO-DISTRICTS DEVELOPED (NO.)

INDICATOR NAME	**RESIDENTIAL BIO-DISTRICTS DEVELOPED**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the number of residential bio-districts developed. A residential bio-district is an urban or suburban area where ecological and sustainable solutions are implemented to support a sustainable lifestyle. These solutions include the use of renewable energy, efficient resource management, green infrastructure, and the use of eco-technologies in construction and transportation.
CALCULATION	The number of developed residential bio-districts is directly calculated based on the implemented projects. A bio-district is considered fully developed when all the ecological and sustainable measures planned in the project are implemented.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the number of bio-districts developed and the implementation of sustainable solutions that can contribute to the reduction of greenhouse gas emissions.

IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – residential buildings • Transportation and urban mobility • Waste management and recycling • Use of water resources and renewable energy.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improved quality of life in residential areas • Reduced maintenance and operational costs • Promotion of circular economy at local level • Reduced pollution and improved air quality • Improved mobility and green infrastructure.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to track the development and implementation of sustainable solutions in urban and residential areas.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Creation of sustainable and resilient communities • Reduction of CO2 emissions in urban areas • Promotion of circular economies and nature-based solutions.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	It is not specifically included, but it is compatible with the principles promoted by sustainability monitoring platforms at the local level.
EXPECTED DATA SOURCE	• Project progress reports • Monitoring of the implementation of ecological solutions • Bio-district development plans.
EXPECTED AVAILABILITY	Available annually, based on project progress reports and implementation evaluations.
SUGGESTED COLLECTION INTERVAL	Annually (during project progress reports).
DELIVERABLES DESCRIBING THE INDICATOR	• Bio-district development plans • Project progress reports • Monitoring reports on the implementation of ecological solutions.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Sustainability urban development monitoring platforms • Indicators in sustainable urban mobility initiatives • Sustainability indicators from national and European programs.

Table 43 - INDICATOR METADATA. RESTORED LAKE AREA (HA)

INDICATOR NAME	**RESTORED LAKE AREA**
INDICATOR UNIT	Hectares (ha)
DEFINITION	This indicator measures the area of lakes restored as a result of using treated wastewater from the Buzău Municipality wastewater treatment plant to replenish the dried lakes in the southeastern part of Buzău County. The project implements an innovative system to use treated water for lake refilling, aiming to restore the ecological balance of these lakes.
CALCULATION	The restored lake area is calculated based on the volume of treated water delivered to each lake, taking into account the depth and area covered by each affected lake.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of lake restoration, which may contribute to GHG emissions reduction by restoring ecosystems and reducing the need for irrigation from other sources.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Water resource management • Emissions reduction from irrigation and water management.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Restoration of biodiversity in lakes • Increased resilience to climate change by restoring aquatic ecosystems • Improved water quality • Promotion of sustainable water resource management.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to track the positive impact on water resource management and biodiversity in lakes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Restoration of aquatic ecosystems • Increased water use efficiency • Reducing drought vulnerability.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	It is not specifically included, but the indicator is compatible with platforms monitoring innovative solutions for water resource management and environmental protection.
EXPECTED DATA SOURCE	• Treated water monitoring reports • Data on the volume of water delivered to lakes • Ecological impact studies.
EXPECTED AVAILABILITY	Available annually based on project monitoring and progress reports.
SUGGESTED COLLECTION INTERVAL	Annually ((based on impact monitoring and project progress reports).

DELIVERABLES DESCRIBING THE INDICATOR	• Project progress reports • Ecological monitoring reports • Impact studies regarding lake restoration.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Water resource monitoring systems • Ecological sustainability and water management indicators.

Table 44 - INDICATOR METADATA. REDUCTION IN PM2.5 CONCENTRATION (%)

INDICATOR NAME	**REDUCTION IN PM2.5 CONCENTRATION**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator measures the reduction in PM2.5 particulate concentration in the air as a result of the implementation of the air purification system within the "Buzău City Air – Intelligent Air Quality Management Systems" project. PM2.5 refers to particles with a diameter of less than 2.5 microns, which can affect human health and the environment.
CALCULATION	The reduction in PM2.5 concentration (%) is calculated using the following formula: Reduction in PM2.5 concentration (%) = Reference PM2.5 concentration / Current PM2.5 concentration x 100 *Where:* *• Reference PM2.5 concentration = PM2.5 concentration before project implementation.* *• Current PM2.5 concentration = PM2.5 concentration after implementation of purification measures.*
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of the air purification system on the reduction of PM2.5 concentrations in the air.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Air quality in urban environments • Public health.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improved air quality • Reduced health risks, especially for vulnerable populations • Increased awareness of air pollution • Creation of a healthier environment in urban areas.

CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator can be used to track the impact of air purification on public health and urban environmental quality.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Improving air quality • Reducing exposure to air pollution • Enhancing resilience to climate change.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator is relevant to platforms monitoring air quality and urban health, as well as projects aimed at reducing urban pollution.
EXPECTED DATA SOURCE	• Air quality monitoring (PM2.5 monitoring stations) • Data collected from air purification systems • Air quality reports.
EXPECTED AVAILABILITY	Available annually or periodically, depending on the frequency of air quality measurements.
SUGGESTED COLLECTION INTERVAL	Annually or quarterly (depending on air quality monitoring frequency in affected areas).
DELIVERABLES DESCRIBING THE INDICATOR	• Air quality monitoring reports • Air purification system impact reports • Public health and environmental studies.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Air pollution monitoring systems (e.g., CDP) • Public health indicators related to air quality • Urban environmental monitoring platforms.

Table 45 - INDICATOR METADATA. PUBLIC BUILDINGS INTEGRATED INTO THE PLATFORM (NO.)”

INDICATOR NAME	**PUBLIC BUILDINGS INTEGRATED INTO THE PLATFORM**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the number of public buildings that have been integrated into the intelligent building management platform, enabling the monitoring and optimization of energy consumption, heating, cooling, and lighting systems, as well as improving energy efficiency and reducing operational costs.
CALCULATION	The number of buildings integrated into the platform represents the total number of public buildings connected and managed through the intelligent building management system.

DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The indicator directly measures the impact of the management system on optimizing energy consumption and operational efficiency in public buildings.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – public buildings • Public sector – administration, education, health, etc.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction in operating and maintenance costs • Improved energy efficiency • Increased comfort within buildings • Reduction of greenhouse gas emissions • Creation of a more efficient and sustainable management system.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes. The indicator allows for monitoring the integration and effectiveness of the public building management platform.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Energy efficiency in public buildings • Reduction in energy consumption • Reduction of greenhouse gas emissions • Promotion of intelligent technologies in public infrastructure.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes. The indicator may be relevant for platforms monitoring energy efficiency and the performance of public buildings.
EXPECTED DATA SOURCE	• Data from the building management platform • Energy consumption monitoring reports • Data collected from public building administrations.
EXPECTED AVAILABILITY	Available annually or at designated intervals, depending on the data collection and integration process.
SUGGESTED COLLECTION INTERVAL	Annually (or based on the platform implementation and usage).
DELIVERABLES DESCRIBING THE INDICATOR	• Building management platform monitoring reports • Technical sheets of integrated buildings • Energy efficiency reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Platforms monitoring the energy performance of buildings • Energy Management Systems (e.g., ISO 50001) • EU indicators on energy efficiency in buildings.

Table 46 - INDICATOR METADATA. NZEB UNITS CONSTRUCTED (NO.)

INDICATOR NAME	**NZEB UNITS CONSTRUCTED**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the total number of residential units built to meet the nZEB (nearly Zero-Energy Building) standard, characterized by very low energy consumption, covered largely by on-site renewable sources.
CALCULATION	Each completed and accepted housing unit built in compliance with nZEB technical criteria is counted.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. nZEB buildings significantly reduce energy use and, as a result, GHG emissions.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – residential buildings.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Lower maintenance and utility costs for residents • Enhanced thermal comfort and indoor air quality • Promotion of green construction standards • Increased real estate value.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Improving energy efficiency in the residential sector • Reducing energy consumption • Integrating renewable energy • Cutting GHG emissions from buildings.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Can be reported as part of building emissions reduction efforts.
EXPECTED DATA SOURCE	• Technical and construction acceptance documentation • Building permits and nZEB certifications • Project implementation reports.
EXPECTED AVAILABILITY	Available at the end of each construction phase / annually.
SUGGESTED COLLECTION INTERVAL	Annually or upon project completion.
DELIVERABLES DESCRIBING THE	• Construction completion reports

INDICATOR	• Energy performance certificates • nZEB compliance documentation.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Eurostat – energy-efficient buildings indicators • EU "Fit for 55" package • NZEB tracking tools (EU level).

Table 47 - INDICATOR METADATA. POSITIVE ENERGY DISTRICTS (NO.)

INDICATOR NAME	**POSITIVE ENERGY DISTRICTS**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the number of urban districts with a positive annual energy balance, meaning they generate more renewable energy than they consume, through smart energy management systems, high energy efficiency, and sustainable infrastructure.
CALCULATION	Each district is counted if measurable data demonstrates a positive energy balance, certified or validated at local or national level.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes. The surplus renewable energy production contributes to a net reduction in GHG emissions from buildings and infrastructure.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – residential and public buildings • Urban infrastructure and local energy systems.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Lower community-wide energy costs • Increased local energy resilience • Innovation and collaboration among local stakeholders • Improved investment attractiveness in sustainable zones.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Local energy system decarbonization • Increased efficiency and renewable energy use • Integrated and sustainable urban development.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/	Can be reported under decarbonization strategies and PED pilot projects (SCIS / JPI Urban Europe).

COVENANT OF MAYORS PLATFORMS?	
EXPECTED DATA SOURCE	• District energy assessments • Energy monitoring reports • Official PED certifications.
EXPECTED AVAILABILITY	Available upon district validation / annually.
SUGGESTED COLLECTION INTERVAL	Annually or upon achievement of energy goals.
DELIVERABLES DESCRIBING THE INDICATOR	• Annual energy analysis • District-level performance reports • Feasibility studies and technical validations.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• JPI Urban Europe – PED Framework • SCIS – Smart Cities Information System • SET Plan Action 3.2 (Positive Energy Districts).

Table 48 - INDICATOR METADATA. GHG EMISSIONS REDUCTION FROM BUILT ENVIRONMENT PROJECTS (TONS CO_2E/YEAR)

INDICATOR NAME	**GHG EMISSIONS REDUCTION FROM BUILT ENVIRONMENT PROJECTS**
INDICATOR UNIT	Tons of carbon dioxide equivalent per year (tons CO_2e/year)
DEFINITION	This indicator quantifies the annual reduction in greenhouse gas (GHG) emissions resulting from projects targeting energy efficiency, renewable energy integration, sustainable infrastructure, and the modernization of public spaces and buildings within the built environment.
CALCULATION	GHG reduction = Baseline emissions before project – Estimated emissions after project implementation Standard emission factors (e.g., IPCC, EU, national) are used depending on the sector (energy, transport, waste).
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Stationary energy – public, residential and commercial buildings • Transport – when sustainable mobility is included • Waste – for circular infrastructure projects.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-	Yes.

BENEFITS)?	
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduced utility bills • Increased occupant comfort and health • Urban space modernization • Enhanced economic attractiveness.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Reduction of emissions from the construction sector • Decarbonization of buildings and urban infrastructure • Improved energy efficiency and renewable energy use.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes, it is widely used in SEAP/SECAP and CDP reporting.
EXPECTED DATA SOURCE	• Energy audits • Feasibility studies • GHG calculation tools (e.g., GHG calculator, LEAP, SIMAP).
EXPECTED AVAILABILITY	After project implementation and in annual post-implementation assessments
SUGGESTED COLLECTION INTERVAL	Annually.
DELIVERABLES DESCRIBING THE INDICATOR	• Energy monitoring reports • GHG impact estimates • Ex-ante and ex-post assessments.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Covenant of Mayors • IPCC Inventory Guidelines • Climate-KIC Pathfinder Metrics • ISO 14064.

Table 49 - INDICATOR METADATA. PERCENTAGE OF DEPARTMENTS USING THE CENTRALIZED DIGITAL SYSTEM FOR MANAGEMENT AND DECISION-MAKING SUPPORT IN STRATEGIC DEVELOPMENT PROJECTS (%)

INDICATOR NAME	**PERCENTAGE OF DEPARTMENTS USING THE CENTRALIZED DIGITAL SYSTEM FOR MANAGEMENT AND DECISION-MAKING SUPPORT IN STRATEGIC DEVELOPMENT PROJECTS**
INDICATOR UNIT	Percentage (%)
DEFINITION	This indicator represents the share of relevant local government departments that actively use the centralized IT system for managing and monitoring strategic development projects.
CALCULATION	Number of departments using the system / Total number of relevant departments × 100
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Public administration • Strategic planning • Project management.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Increased institutional efficiency • Improved data-driven decision-making • Enhanced interdepartmental coordination.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Smart governance and decision-making support for green transition • Administrative digitalization for sustainability monitoring.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Not directly, but relevant for governance and urban planning best practices.
EXPECTED DATA SOURCE	• Internal system usage reports • Login and activity logs • Institutional surveys.
EXPECTED AVAILABILITY	After system deployment, with quarterly or annual updates.

SUGGESTED COLLECTION INTERVAL	Quarterly.
DELIVERABLES DESCRIBING THE INDICATOR	• Platform usage reports • Internal implementation assessments • Digital transformation strategies.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Smart City KPIs • ISO 37120 (Sustainable cities and communities).

Table 50 - INDICATOR METADATA. LOCAL PRODUCERS INVOLVED (NO.)

INDICATOR NAME	**Local producers involved**
INDICATOR UNIT	Number (no.)
DEFINITION	This indicator reflects the number of local producers – including farmers, artisans, or service providers – actively participating in the local marketplace created by the project, either through physical presence or by supplying goods/services.
CALCULATION	Total number of registered and active local producers participating in the supported market.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Local economy • Rural and urban entrepreneurship • Agri-food and traditional services sector.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Support for circular economy • Local job creation • Reduced transport emissions (through local sourcing) • Strengthening local cultural identity.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Circular and local economy • Short supply chains • Promotion of responsible and sustainable consumption.

IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Not directly, but aligned with local sustainable development and circular economy strategies.
EXPECTED DATA SOURCE	• Producer registration lists • Participation forms / contracts • Activity reports from market organizers.
EXPECTED AVAILABILITY	Updated periodically (quarterly or annually), depending on market frequency.
SUGGESTED COLLECTION INTERVAL	Quarterly.
DELIVERABLES DESCRIBING THE INDICATOR	• Local market operation report • Circular economy or rural development strategies • Project monitoring sheets.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Urban Agenda for the EU – Circular Economy Partnership • Local rural development indicators.

Table 51 - INDICATOR METADATA. SCHOOL WORKSHOPS FOR RECYCLING AND CREATIVE ACTIVITIES ORGANIZED ANNUALLY (NO.)

INDICATOR NAME	**SCHOOL WORKSHOPS FOR RECYCLING AND CREATIVE ACTIVITIES ORGANIZED ANNUALLY**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the total number of educational workshops held annually in schools, aiming to promote recycling, reuse, and creativity through practical and participatory activities.
CALCULATION	Total number of workshop sessions held within one calendar year, based on organizer reports.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Environmental education and awareness • Circular economy • Environmental sector.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.

IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Behavioral change in recycling and responsible consumption • Engagement of school communities in sustainable practices • Increased environmental awareness among children and youth.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Education for the Green Transition • Promoting circular economy through behavioral change • Community involvement in waste reduction.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No.
EXPECTED DATA SOURCE	• Annual reports from schools and NGOs • Attendance sheets • Activity documentation or educational budgets.
EXPECTED AVAILABILITY	Available annually.
SUGGESTED COLLECTION INTERVAL	Annually.
DELIVERABLES DESCRIBING THE INDICATOR	• Annual reports on educational activities • School extracurricular activity plans • Local strategies for environmental education.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Local sustainability education indicators • Eco-school best practice guidelines.

Table 52 - INDICATOR METADATA. AMOUNT OF FOOD SAVED (KG/MONTH)

INDICATOR NAME	**AMOUNT OF FOOD SAVED**
INDICATOR UNIT	Kilograms per month (kg/month)
DEFINITION	This indicator measures the total quantity of food that would otherwise have gone to waste (due to expiry, surplus, or withdrawal from sale) but was rescued and redistributed or consumed through the app/platform developed by the project.
CALCULATION	Monthly sum of food quantities collected and saved, reported by participating operators, retailers, and registered users in the system.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN	Yes.

GREENHOUSE GAS EMISSIONS?)	
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Food and consumption • Circular economy • Food waste management.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Reduction of GHG emissions from organic waste • Increased awareness of food waste • Improved food access for vulnerable communities.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Circular economy in the food chain • Reducing resource loss and waste • Contribution to climate neutrality through reduced food waste.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Not directly but contributes to waste and GHG reduction objectives.
EXPECTED DATA SOURCE	• Reports from the app/digital platform • Declarations from commercial partners • Logistics tracking systems.
EXPECTED AVAILABILITY	Available monthly.
SUGGESTED COLLECTION INTERVAL	Monthly.
DELIVERABLES DESCRIBING THE INDICATOR	• Operational dashboard of the app • Monthly activity reports • Sustainability reports from participating businesses.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• SDG 12.3 (Halving food waste) • Indicators from FAO or Zero Waste Europe programs.

Table 53 - INDICATOR METADATA. CLIMATE-SMART DESIGNED PUBLIC SPACES (NO.)

INDICATOR NAME	**CLIMATE-SMART DESIGNED PUBLIC SPACES**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator reflects the total number of public spaces (e.g., squares, parks, streets, green areas, pedestrian zones, etc.) for which design or redevelopment plans were developed under climate-smart and sustainable urban planning principles.
CALCULATION	Total number of public spaces with technical documentation, urban plans, design concepts, or action plans prepared as part of the program.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	No.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	N/A.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improved urban space quality • Enhanced climate resilience • Reduction of urban heat island effect • Enabling green mobility and efficient land use.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Sustainable and climate-conscious urban planning • • Enabling green/blue infrastructure projects • • Supporting decarbonization of built environment.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Not directly but supports climate adaptation and urban planning indicators.
EXPECTED DATA SOURCE	• Urban planning department of the municipality • Technical design / architecture teams • Documentation approved by Local Council.
EXPECTED AVAILABILITY	Available annually.
SUGGESTED COLLECTION INTERVAL	Annually.

DELIVERABLES DESCRIBING THE INDICATOR	• Urban plans and technical documentation • Approved project lists • Program progress reports.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• URBACT • SDG 11.3 (Sustainable urbanization) • Local Green Deal frameworks.

Table 54 - INDICATOR METADATA. STUDENTS ENROLLED IN TECHNICAL DUAL EDUCATION PROGRAMS (NO.)

INDICATOR NAME	**STUDENTS ENROLLED IN TECHNICAL DUAL EDUCATION PROGRAMS**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator measures the total number of pupils and students enrolled in technical dual education programs provided by the Center of Excellence at pre-university and university levels, per academic year.
CALCULATION	Total number of active students officially enrolled at the beginning of the academic year in dual education technical programs.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Technical and vocational education • Training for green and smart industries • Employment in emerging sectors.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Increased local capacity for innovation and skilled labor • Strengthened collaboration between education and economy • Reduced youth unemployment.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Green and digital skills development • Workforce adaptation to green transition • Educational infrastructure supporting sustainable economy.
IS THE INDICATOR CAPTURED BY	No, but relevant to local sustainable development and education indicators.

THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	
EXPECTED DATA SOURCE	• Center of Excellence secretariat • Partner educational institutions • Ministry of Education / School Inspectorate.
EXPECTED AVAILABILITY	Annually.
SUGGESTED COLLECTION INTERVAL	Annually (academic year starts).
DELIVERABLES DESCRIBING THE INDICATOR	• Enrollment lists / educational databases • Annual center reports • Partner education statistics.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• SDG 4.4 (Relevant skills for employment) • Erasmus+ programs and EU Pact for Skills.

Table 55 - INDICATOR METADATA. PILOT PROJECTS IMPLEMENTED USING HYDROGEN-BASED TECHNOLOGIES (NO.)

INDICATOR NAME	**PILOT PROJECTS IMPLEMENTED USING HYDROGEN-BASED TECHNOLOGIES**
INDICATOR UNIT	Number (no)
DEFINITION	This indicator represents the total number of pilot projects that incorporate hydrogen-based technologies, developed and implemented under the program, across all relevant sectors (energy, transport, industry, etc.).
CALCULATION	Total number of functional pilot projects using hydrogen technologies, developed and operational during the reporting period.
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Renewable energy • Sustainable transport • Green industry • Innovation and technology.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes.

IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Strengthening local technological capacity • Reducing greenhouse gas emissions • Promoting circular economy and decarbonization.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Integration of hydrogen solutions in energy and industrial systems • Transition to clean and non-polluting energy sources • Enhancing innovation for climate neutrality.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No, but aligned with EU initiatives on hydrogen economy (e.g. European Hydrogen Strategy).
EXPECTED DATA SOURCE	• Program implementation reports • Local public authorities / project developers • Funding and technical evaluation documents.
EXPECTED AVAILABILITY	Annually.
SUGGESTED COLLECTION INTERVAL	Annually.
DELIVERABLES DESCRIBING THE INDICATOR	• Technical implementation reports • Feasibility studies and approved projects • Local pilot project database.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• Horizon Europe (H2 projects) • European Green Deal – H2 component • SDG 9 (Industry, innovation and infrastructure).

Table 56 - INDICATOR METADATA. REDUCTION OF GHG EMISSIONS FROM SOFT INTERVENTIONS (TONS CO2E/YEAR)

INDICATOR NAME	**REDUCTION OF GHG EMISSIONS FROM SOFT INTERVENTIONS**
INDICATOR UNIT	Tons CO2e/year
DEFINITION	This indicator reflects the reduction of greenhouse gas (GHG) emissions resulting from the implementation of soft interventions in governance and social innovation. These interventions include policies and measures that support the transition to a sustainable model, promoting innovative governance and creating solutions that reduce environmental impact.

CALCULATION	GHG Reduction = (GHG emissions before intervention - GHG emissions after implementation) x Reduction factor for soft interventions
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	No. Soft interventions do not have a direct impact on emissions but contribute indirectly by changing behavior and creating policies conducive to a cleaner environment.
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	• Public governance • Social and economic policies • Environmental education and awareness.
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes. Reduction of GHG emissions through behavioral changes and strategies implemented by local authorities and public institutions.
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	• Improvement of public policies for the environment • Increase in ecological awareness and education • Behavioral changes among citizens and organizations.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes.
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	• Promoting sustainable governance • Changes in social and economic behaviors • Integrating environmental aspects into public policies.
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	No, but it is relevant for evaluating the impact of soft interventions in the context of climate change and sustainable development.
EXPECTED DATA SOURCE	• Public policy and government strategy reports • Impact studies and sustainability assessments • Reports from authorities and institutions involved in soft interventions.
EXPECTED AVAILABILITY	Annually.
SUGGESTED COLLECTION INTERVAL	Annually.
DELIVERABLES DESCRIBING THE INDICATOR	• Public policy monitoring reports • Sustainable governance strategies and plans • Social and environmental impact assessment studies.
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	• SDG 12 Indicators (Responsible production and consumption) • European Green Deal – governance and ecological education components • Local and regional development strategies.

To strengthen the monitoring framework, the municipality will develop a unified coordination mechanism that ensures data consistency and their validation at the interdepartmental level. The set of indicators will be periodically reviewed and refined to reflect the most relevant areas of action and to integrate lessons learned into the implementation process. The clarity of roles and responsibilities within the monitoring structures will be detailed through internal operational procedures and clear mandates for each institution and actor involved. At the same time, the entire process will be aligned with the official methodology of the European Mission for Climate-Neutral and Smart Cities, ensuring a transparent and comparable framework for tracking progress and reporting to national and European partners.

To maintain **the constant engagement of stakeholders**, the MEL process will be complemented by periodic training activities for municipal staff and members of the Local Net Zero Coalition. Workshops, urban labs, and training sessions will be organized, focusing on data use and indicator interpretation. This effort strengthens institutional capacity and facilitates community involvement in a participatory and transparent process. Details on ensuring the participatory process are presented in the *STAKEHOLDERS* chapter, in the section:*PARTICIPATORY PROCESSES AND ACTIONS IMPLEMENTED*.

In addition, in line with the M100 methodology, **communication of results** will be carried out through multiple channels – interactive digital platforms, public reports, and dissemination events – so that data on progress toward climate neutrality is accessible and easy to understand for citizens, partners, and funders. This participatory type of communication fosters behavioral change and strengthens the legitimacy of the process.

STAKEHOLDERS

Provide a concise overview of the key stakeholders who hold significant influence or impact on the local transition to climate neutrality.

- ➔ **Make sure to also address the internal and external stakeholders that are relevant to the climate neutrality transition in terms of the necessary financing. For these stakeholders, address the funding issues both in the influence and interest columns, where applicable.**

The Municipality of Buzău reaffirms its commitment to sustainable urban development through a participatory approach, actively involving various categories of stakeholders in the decision-making process.

Initiatives such as the *Sustainable Energy and Climate Action Plan (SECAP), Green Smart Circular Buzău, the Circular Economy Transition Strategy of the Municipality of Buzău, the Sustainable Urban Mobility Plan (SUMP) of Buzău, and the Integrated Urban Development Strategy (IUDS)* reflect this collaborative vision by bringing together public institutions, the private sector, NGOs, citizens, and experts from relevant fields. Through the creation of constructive dialogue and alignment of development strategies with community needs, the city aims to implement flexible and effective policies to ensure balanced and sustainable growth.

All the above-mentioned documents form an essential pillar for drafting the future *Climate Neutrality Action Plan (CNAP).* These projects promote extended community engagement, encouraging shared responsibility among all stakeholders and the development of solutions tailored to the urban context. Their participatory mechanisms help identify environmental challenges, set priorities, and evaluate the feasibility of various initiatives. Building on this foundation, CNAP Buzău extends efforts toward inclusive and sustainable urban development, with the goal of achieving climate neutrality by 2035. Additionally, a monitoring and evaluation system will track progress, adjust strategies, and optimize outcomes through constant collaboration among authorities, experts, and the community.

Regarding the governance framework, CNAP Buzău emphasizes integrating climate change mitigation measures both within the city and in the surrounding areas. Major initiatives include the formation of a ***Local Net Zero Coalition***, the enhancement of policies to protect green spaces, improve air quality, and revitalize soil. The strategy also incorporates measures to foster public-private partnerships in renewable energy and biodiversity conservation, along with the creation of an entity to integrate and analyze relevant data for sustainable development. In parallel, the plan seeks to improve energy efficiency and develop local capacities through educational programs, training courses for public officials, and access to green funding.

***The Local Net Zero Coalition* will play a crucial role in raising awareness and encouraging community engagement** by supporting green initiatives and sustainable lifestyles. As a participatory platform, the Local Net Zero Coalition will bring together relevant actors from multiple sectors of the local community, including:

- **Public service providers and operators –** public transport, urban lighting, sanitation, district heating, etc.;
- **Energy sector companies –** electricity and natural gas suppliers and distributors;
- **Energy services firms** – including energy efficiency and smart solutions experts;
- **The private sector and business community** – SMEs, major investors, and local economic clusters;
- **Professional associations and experts** – engineers, urban planners, architects, environmental consultants, etc.;
- **NGOs, civic groups, homeowners' associations, and active citizens;**
- **Academic institutions and R&D&I organizations;**
- **Local media –** partners in public awareness and information;
- **Other relevant actors**, depending on local specifics and community needs.

To achieve its climate goals, ***CNAP Buzău*** **relies on a mix of education, innovation, and active participation**. The plan includes **awareness campaigns** on recycling, the use of green energy sources, and the promotion of eco-friendly transportation, along with interactive tools such as **digital monitoring platforms and carbon footprint calculators**. Creative initiatives like **urban art projects, green solution fairs, and innovation competitions (e.g., hackathons)** are designed to spark innovative thinking and mobilize the community.

By strengthening climate governance mechanisms and promoting broad engagement from citizens, businesses, and research institutions, Buzău is shaping a greener future grounded in collaboration and shared responsibility, through the following key directions:

- **Collaboration between public institutions and interjurisdictional associations**: Buzău aims to strengthen local governance through integrated actions and cooperation between the departments of the Buzău City Hall and interjurisdictional bodies. This collaboration enhances the implementation of urban policies and contributes to the sustainable development of the city.
- **Private sector involvement**: To accelerate the transition to climate neutrality, the Net Zero Coalition will work with business representatives to align them with the municipality's CO_2 reduction targets. Partnerships with the private sector will facilitate the adoption of sustainable solutions and investment in green technologies.
- **The role of civil society**: NGOs, citizens, and various associations are key actors in implementing the Climate Neutrality Action Plan. Participatory mechanisms, introduced from the early stages of drafting other local strategic documents, have ensured the active involvement of NGOs, academic institutions, and vulnerable communities. This methodology guarantees the inclusion of their perspectives in both current initiatives and future development strategies.

- **Funding sources and investments**: The sustainable development of Buzău heavily depends on attracting non-reimbursable funds and private investments. Institutions managing such resources – from Managing Authorities and intermediary bodies for European and national funds to international financiers like the EBRD, EIB, or the World Bank – play a strategic role. Over the past two decades, access to these funds has influenced the city's development direction, and in the context of a low-carbon future, this financial support remains essential.
- **Education, research, and innovation**: Universities and research institutes play a key role in combating climate change by generating innovative solutions, developing expertise, and conducting educational programs. The partnership between the local administration and the academic environment ensures the application of advanced technologies and best practices in crucial areas such as energy efficiency, sustainable urban mobility, infrastructure modernization, and the expansion of green spaces, all contributing to the goal of climate neutrality.

Table 57 - STAKEHOLDERS ANALYSIS

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
BUZĂU CITY HALL	PROCESS	PUBLIC ADMINISTRATION	The City Hall plays a central role in developing, coordinating, and implementing the Climate Neutrality Plan. Through its administrative and technical structures, it formulates policies, measures, and projects aimed at reducing carbon emissions, enhancing energy efficiency, promoting sustainable mobility, and adapting to climate change. It also coordinates public consultations, citizen involvement, and collaboration	The City Hall is interested in supporting the city's transition to climate neutrality through integrated sustainable urban development policies, attracting funding for green projects, improving residents' quality of life, reducing public sector energy costs, and strengthening the city's resilience to climate change.	HIGH

			with local, national, and international stakeholders to achieve climate objectives.		
BUZĂU PREFECTURE	PROCESS	PUBLIC ADMINISTRATION	The Prefecture indirectly influences the implementation of Buzău's Climate Neutrality Plan by verifying the legality of local administrative acts, facilitating collaboration between relevant institutions, supporting access to governmental or European funds, promoting public policies related to climate and environment, and mediating potential conflicts between authorities. Although it does not draft the plan, the Prefecture plays an important role in ensuring the institutional and legal framework necessary for its effective implementation.	The Prefecture's interest lies in ensuring compliance with national and European legislation, coordinating its implementation at the county level, supporting local authorities in accessing funds and developing inter-institutional partnerships, and monitoring compliance with established climate objectives. It also plays a crucial role in ensuring effective governance by monitoring and evaluating the progress made within the plan.	HIGH

BUZĂU COUNTY COUNCIL	PROCESS	PUBLIC ADMINISTRATION	The County Council has a strategic role in integrating climate objectives at the county level, facilitating the alignment of local plans with regional and national policies. Through its competencies, it supports the development of sustainable infrastructure, interurban green mobility, and partnerships between administrative-territorial units. It can also contribute through funding, European projects, and institutional support for implementing climate measures.	The Council's interest in the Climate Neutrality Plan lies in ensuring balanced and sustainable territorial development at the county level, reducing climate vulnerabilities in rural and urban areas, and strengthening administrative capacity to attract funds for green infrastructure projects and energy transition.	HIGH
SC TRANS BUS S.A. – BUZĂU TRANSPORT COMPANY	INFRASTRUCTURE	PUBLIC SECTOR	Trans Bus S.A. plays an essential role in transitioning to sustainable urban mobility by modernizing its fleet with non-polluting vehicles, expanding routes, and digitizing public transport services. As a key partner in achieving climate neutrality, the company directly contributes to reducing emissions in the transport	Trans Bus is interested in the Climate Neutrality Plan as it supports the expansion and modernization of public transport sustainably, attracting funds for non-polluting vehicles, increasing public transport usage, and integrating green mobility in the metropolitan area.	HIGH

			sector and enhancing access to green transport for urban and peri-urban communities.		
COMPANIA DE APĂ S.A. BUZĂU	INFRASTRUCTURE	PUBLIC SECTOR	The Water Company contributes to climate objectives by optimizing water supply and sewage infrastructure, reducing losses, improving energy efficiency at treatment plants, and integrating circular solutions for water management. Investments in green infrastructure and adaptation to extreme phenomena (droughts, floods) are crucial for enhancing the city's resilience to climate change.	The company's interest lies in improving the energy efficiency of water systems, managing resources under water stress conditions caused by climate change, modernizing infrastructure, and adapting services to extreme phenomena like droughts or floods.	HIGH
RER SUD S.A. – BUZĂU SANITATION COMPANY	INFRASTRUCTURE	PUBLIC SECTOR	RER SUD S.A. contributes to reducing the carbon footprint through efficient selective collection, expanding recycling, energy recovery from waste, and implementing modern integrated waste management solutions. The company plays an important role in the local circular	The company is interested in expanding and optimizing the selective collection system, reducing costs through the recovery of recyclable materials, aligning with European waste regulations, and developing sustainable services that meet	HIGH

			economy and in reducing indirect emissions associated with waste storage or transport.	the community's environmental requirements.	
"DUNĂREA DE JOS" UNIVERSITY OF GALAȚI	CAPACITIES	RESEARCH, DEVELOPMENT, AND INNOVATION	The university contributes to Buzău's Climate Neutrality Plan through scientific expertise, applied research, development of technological solutions, and training human resources in relevant fields (environment, energy, sustainable urbanism). Collaboration with local authorities supports evidence-based decision-making and promotes innovation in the green transition.	The university has a strategic interest in engaging in applied research on climate topics, attracting funding for green projects, strengthening local and regional collaborations, and training specialists in fields relevant to the climate transition.	HIGH
MĂRĂCINENI COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION "ADI – TRANSPORT – BUZĂU MĂRĂCINENI"	ALLIANCES	INTERJURISDICTIONAL ASSOCIATION	Peri-urban communities that are members of the ADI Transport Buzău-Mărăcineni contribute to expanding ecological public transport from the municipality to surrounding areas, supporting regional green mobility and reducing individual polluting transport. By participating in	The commune's interest lies in improving connectivity with Buzău through ecological public transport, reducing individual traffic and pollution, attracting investments, and enhancing quality of life through an integrated sustainable	HIGH

			this intercommunity association, communes support an integrated, coherent development model with a positive impact on greenhouse gas emissions in the Buzău metropolitan area.	mobility framework.	
ȚINTEȘTI COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION "ADI – TRANSPORT – BUZĂU MĂRĂCINENI"	ALLIANCES	INTERJURISDICTIONAL ASSOCIATION	Similar to Mărăcineni, Țintești Commune contributes to expanding ecological public transport from the municipality to surrounding areas, supporting regional green mobility and reducing individual polluting transport.	The commune's interest lies in improving connectivity with Buzău through ecological public transport, reducing individual traffic and pollution, attracting investments, and enhancing quality of life through an integrated sustainable mobility framework.	HIGH
VADU PAȘII COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION "ADI – TRANSPORT – BUZĂU MĂRĂCINENI"	ALLIANCES	INTERJURISDICTIONAL ASSOCIATION	Similar to Mărăcineni, Vadu Pașii Commune contributes to expanding ecological public transport from the municipality to surrounding areas, supporting regional green mobility and reducing individual polluting transport.	The commune's interest lies in improving connectivity with Buzău through ecological public transport, reducing individual traffic and pollution, attracting investments, and enhancing quality of life through an integrated sustainable	HIGH

				mobility framework.	
VERNEȘTI COMMUNE – INTERCOMMUNITY DEVELOPMENT ASSOCIATION "ADI – TRANSPORT – BUZĂU MĂRĂCINENI"	ALLIANCES	INTERJURISDICTIONAL ASSOCIATION	Similar to Mărăcineni, Vernești Commune contributes to expanding ecological public transport from the municipality to surrounding areas, supporting regional green mobility and reducing individual polluting transport.	The commune's interest lies in improving connectivity with Buzău through ecological public transport, reducing individual traffic and pollution, attracting investments, and enhancing quality of life through an integrated sustainable mobility framework.	HIGH
PRO EUROCULT ASSOCIATION	CAPACITIES	NGO	The Pro Eurocult Association contributes through ecological education activities, civic engagement, and promoting sustainability among citizens and youth. Through cultural, educational, and volunteer projects, it supports behavioral changes	The association is interested in supporting ecological education, increasing public awareness, and involving citizens in the green transition through cultural, educational, and civic participation activities.	MODERATE

			and strengthens a local culture favorable to the climate transition.		
BUZĂU PLANT GENETIC RESOURCES BANK – FOR VEGETABLE GROWING, FLORICULTURE, AROMATIC AND MEDICINAL PLANTS	CAPACITIES	PUBLIC SECTOR	The Buzău Plant Genetic Resources Bank plays a crucial role in protecting agricultural biodiversity, supporting sustainable agriculture, and adapting local food systems to climate change. By conserving and utilizing traditional varieties, it contributes to agro-ecological resilience and promotes low-carbon local food consumption.	The bank aims to leverage plant biodiversity as a resource for climate adaptation, promote sustainable agriculture, and create partnerships to preserve local genetic heritage in the face of climate risks.	MODERATE
S.C. ROMCARBON S.A.	INFRASTRUCTURE	PRIVATE SECTOR	Romcarbon, operating in plastic recycling and sustainable packaging production, significantly contributes to the circular economy and reducing emissions from industrial processes. The company's investments in green technologies and energy efficiency support the transition to a low-impact industrial model.	The company is interested in diversifying recycling activities, recovering materials in a circular economy, reducing energy costs, and positioning itself as a regional leader in the sustainable plastics industry.	HIGH

S.C. GREENTECH S.A.	INFRASTRUCTURE	PRIVATE SECTOR	GreenTech S.A., one of the leading PET recycling companies in Romania, directly supports climate neutrality objectives by recovering plastic waste and integrating it into a circular production chain. The company's activities reduce the consumption of primary resources and the carbon footprint of the packaging industry.	GreenTech aims to expand recycling capacity, optimize industrial processes from an energy perspective, and increase competitiveness in the European market by adhering to environmental standards and reducing the carbon footprint.	HIGH
S.C. VOESTALPINE RAILWAY SYSTEMS ROMANIA S.A.	INFRASTRUCTURE	PRIVATE SECTOR	Through its industrial activity in railway systems, Voestalpine contributes to sustainable mobility infrastructure, offering modern solutions for efficient and low-emission rail transport. The company's efforts in energy efficiency and clean technologies align with local emission reduction objectives.	The company is interested in integrating energy efficiency principles into production, innovating in sustainable railway infrastructure, and engaging in partnerships that support green mobility and climate neutrality.	HIGH

Shortly describe the participatory model for achieving climate neutrality, highlighting the collaboration with the local community (citizens), local stakeholders (e.g., private companies, NGOs, research organisations) and external partners (e.g., other public administrations, regional development agencies, national ministries, other organisations).

- ➔ **Relevant aspects may include the local context, the prior experience in community and stakeholder collaboration (e.g., jointly developed and implemented projects, strategic partnerships) and the engagement with various external partners.**
- ➔ **Present the participatory measures used in developing this Action Plan (if applicable) and the participatory method (approaches, processes, mechanisms, instruments, structures, capacity building) to be employed in order to ensure both the implementation and monitoring of the current Climate Neutrality Action Plan.**
- ➔ **Make sure to also describe the actions pertaining to Organisational and Governance Innovation, as well as the actions related to Social and Other Innovation fields.**
- ➔ **Do not forget to make reference to upholding the principles of climate justice, particularly for the marginalised communities.**

The Municipality of Buzău embraces a participatory decision-making framework, ensuring public involvement both as a legal obligation and as an effective strategy for local governance. Legislation stipulates that citizens and stakeholders must be informed and allowed to express their views on local planning documents, and these requirements are fulfilled through the organization of public debates on relevant topics. This active engagement also extends to local initiatives such as programs, projects, and regulations, promoting community participation on a broader scale.

Furthermore, the municipality adopts a strategic approach by collaborating with various stakeholders to implement specific interventions, thus demonstrating its commitment to inclusive and effective governance. This model reflects a balance between complying with legal requirements and fostering civic participation, leveraging collective efforts to address urban challenges and highlighting Buzău's commitment to participatory urban development.

PARTICIPATORY PROCESSES AND IMPLEMENTED ACTIONS

The Municipality of Buzău implements various programs and initiatives that engage the local community in efforts toward climate neutrality and sustainable development. The city places strong emphasis on public participation, recognizing that the active involvement of citizens, initiative groups, and non-governmental organizations is essential for the successful implementation of measures.

Here are some relevant examples:

- **Updated Municipal Website:**

Offers accessible information and interactive tools that facilitate citizen participation and enhance transparency and public engagement.

Online Community & Social Media Campaigns, such as:

- ***"Green Stories from Buzău"*** – A storytelling campaign where residents are invited to share sustainability-related experiences (e.g., reduced consumption, alternative mobility). Stories may be published on the Climate Action Plan website or displayed in public spaces.
- ***"Green Buzău Monthly Challenges"*** – Themed mini-campaigns (e.g., "Plastic-Free Week," "10 Days by Bike"), promoted online with symbolic rewards and public recognition for participants.
- ***Digital Platform for Green Ideas*** – A participatory space where citizens can propose concrete projects for a sustainable city. Top-voted ideas may receive micro-funding or be implemented with local partners.

Consultations on Strategic Planning Documents:

Public consultations are held for key planning documents, such as the *Sustainable Energy and Climate Action Plan (SECAP), Integrated Urban Development Strategy, Sustainable Urban Mobility Plan*, etc. Citizens, NGOs, and other stakeholders are invited to attend public debates and provide feedback. These consultations ensure that decisions reflect the community's needs and vision.

Non-reimbursable Funding Sources to Implement Projects:

The Municipality of Buzău has secured and aims to continue accessing non-reimbursable funding to enhance administrative capacity and foster stronger collaboration with the local community and stakeholders across the city.

Regular Debates with Non-Governmental Organizations:

The city organizes periodic meetings with NGOs and local initiative groups to discuss environmental issues, current projects, and support for sustainability-related activities. NGOs play a crucial role in community mobilization and in raising awareness on climate change. These meetings foster effective and constructive partnerships, such as:

- ***"Neighborhood Green Ambassador – Buzău"*** – Recruitment of local volunteers acting as climate advocates within their neighborhoods, supporting awareness-raising, community mobilization, and needs reporting.
- ***"My Green Neighborhood" – Participatory Walks*** – Themed urban walks with citizens and experts to identify vulnerable areas (e.g., lack of green spaces, inefficient lighting) and propose solutions. These can be mapped on an open-access interactive digital map.

- ***Small-Scale Local Transformations*** – Civic activation campaigns where residents revitalize a neglected space with municipal support (e.g., pallet benches, mini urban gardens, eco-art projects).

Participatory Governance and Public Voting Processes:

Buzău is exploring participatory governance models that allow citizens to directly vote for sustainable project funding—such as green space development, solar panel installations on public buildings, recycling infrastructure, or bike lane expansion. These processes may include the formation of ***"Green Neighborhood Councils"*** made up of advisory groups of citizens, NGOs, and experts who contribute ideas, proposals, and monitoring support. This inclusive approach enhances transparency and civic accountability.

Co-Design Initiatives:

The municipality has launched co-design processes that directly involve citizens in shaping urban art projects and creative activities. Residents contribute ideas, especially for public space improvements, green infrastructure, and urban mobility. Through workshops and open brainstorming sessions, community input is integrated into city projects, ensuring greater public acceptance and alignment with local needs, including:

- ***"Green Crosswalks" & Message-Based Urban Art*** – Intersections or pedestrian areas artistically transformed into climate communication spaces with local artists and volunteers.
- ***Interactive Climate Installations*** – e.g., Artificial trees "breathing" based on air quality, urban furniture displaying messages on energy use.
- ***Visual Contest – "Green City Through Your Eyes"*** – A creative competition for students to submit visual representations (posters, illustrations, comics) of a sustainable Buzău. Winning works are publicly exhibited.

Educational Programs and Awareness Campaigns:

Buzău also runs educational, and awareness initiatives aimed at informing citizens about reducing carbon emissions, using renewable energy, and adopting sustainable practices. Activities include workshops, public events, tree planting, and school competitions on environmental themes. These actions are especially aimed at engaging young people and foster responsible environmental behavior:

- **Climate Hackathon – *"Buzău Net-Zero 2035"*** – A collaborative event for students to generate ideas for local policies, apps, or awareness initiatives.
- ***"Youth for Climate"* Summer Camp** – A non-formal educational program focused on practical workshops (eco-crafts, urban greening, tree planting). Graduates become climate ambassadors in schools.
- **Eco Start-up Challenge – *"Young Green Entrepreneurs"*** – A sustainable ideas competition for youth, in partnership with local businesses. Winning projects may receive mentorship or pilot funding.

Community-Led Waste Management Projects:

The city has involved the community in waste management through selective collection programs and voluntary drop-off centers (CAVs). Public meetings and training sessions help residents understand the importance of separate waste collection and its role in environmental protection.

COMMUNITY INITIATIVES LED BY NGOs:

A collaboration agreement is being finalized with an NGO specializing in sustainability and climate neutrality, which will reinforce the city's efforts toward its climate goals.

The Municipality of Buzău has demonstrated a strong commitment to climate neutrality through partnerships with various organizations and the implementation of relevant projects. A notable example is the collaboration with the **Sustainability Embassy in Romania**, with whom the city organized the roundtable ***"Climate Change: Between Fake News and Reality"*** in November 2022 at the Buzău County Museum. The event aimed to educate and raise public awareness on climate change and the importance of sustainable actions.

INTERNATIONAL INITIATIVES:

In addition to national funding programs, the Municipality of Buzău is engaged in international projects and networks financed directly by the European Commission. Below is a summary of the most significant international partnerships and projects undertaken to enhance the city's European visibility and foster strong collaborations with peers from other countries, while jointly developing innovative solutions to shared challenges.

Table 58 - INTERNATIONAL PROJECTS AND NETWORKS INVOLVING BUZĂU MUNICIPALITY

INTERNATIONAL PROJECTS	INTERNATIONAL NETWORKS
INNOTRANS – Supporting the Innovation Capacity of Regions in the Transport Sector *INNOTRANS* aims to improve or revise current support measures of public funding schemes for transport innovation, as a key element of the transport innovation infrastructure, considering the current state of the innovation environment in regions. The action plans resulting from the project will propose support schemes for innovation in transport within regional programs for growth and	Project funded under the **INTERREG EUROPE 2014–2020 Interregional Cooperation Program**

INTERNATIONAL PROJECTS	INTERNATIONAL NETWORKS
jobs. Buzău integrates low-emission mobility solutions, supporting the city's long-term decarbonization objectives and progressing toward climate neutrality by 2035.	
REBUS – Renovation for Energy-Efficient Buildings The *REBUS* project aims to improve policies in partner regions by developing a regional framework for energy-efficient building renovation. Buzău benefits from best practices in building renovation and from a guide aimed at local authorities to carry out effective public building rehabilitation, thus saving energy and public resources. This working tool was developed through identifying, selecting, and transferring interregional best practices. The project also aims to raise awareness about the link between public building energy efficiency and the financial and natural resource economy. The results of the *REBUS* project align with the *Europe 2020 Strategy* targets regarding energy consumption reduction in public buildings and efficient use of public resources, supporting Buzău's goal to reduce emissions from public buildings and contribute to the city's climate neutrality goal by 2035.	Project funded under the **INTERREG EUROPE 2014–2020 Interregional Cooperation Program**, Priority 3: "Supporting the transition to a low-carbon economy in all sectors," Specific Objective 3.1.

INTERNATIONAL PROJECTS	INTERNATIONAL NETWORKS
VIOLET – Preserving Traditional Buildings through Energy Reduction The *VIOLET* project aims to conserve traditional and heritage buildings by integrating energy efficiency and cultural heritage into the planning, management, and monitoring of policies, all through interregional cooperation. Buzău applies best practices to reduce emissions while preserving cultural heritage. This project balances sustainability with conservation, contributing to achieving climate neutrality by 2035 through energy-efficient building solutions.	The targeted policy instrument is the **REGIONAL OPERATIONAL PROGRAM 2014–2020**, Priority Axis 5.1: "Conservation, protection, promotion, and development of natural and cultural heritage," through cooperation between five regions (South-East Region/Romania, Aquitaine/France, Zeeland/Netherlands, Andalusia/Spain, Cyprus) at different development stages, and an expert consultant partner from Stuttgart/Germany.
COST – City-GroundwaterWay (OC-2024-1-27389) The main objective of the City-GroundwaterWay project is to develop a resource management approach to improve the efficiency of urban groundwater management, to strengthen the resilience of public water supply and sewage systems in the face of climate change and to manage interactions with underground infrastructure. Project objectives include: ☆ Developing consolidated knowledge of best practices in urban subsurface management across Europe and beyond; ☆ Defining medium-term actions to integrate the urban water cycle into urban planning. ☆ Improving resilience of public groundwater supply to climate change at the European level. ☆ Establishing a collaboration framework between urban entities and relevant professional institutions for improving urban underground infrastructure. The project consortium includes over 30 international partners: universities, research institutions, water companies, municipalities, and groundwater experts.	The *COST* project is funded by the **EU through the Horizon 2020 Framework Programme for Research and Innovation**. COST funding complements national research funds and is dedicated solely to collaboration activities such as workshops, conferences, working group meetings, training schools, short-term scientific missions, and dissemination and communication activities.

INTERNATIONAL PROJECTS	INTERNATIONAL NETWORKS
Buzău Municipality is mentioned as an involved city, acting as an end-user and direct beneficiary of the project results. Buzău's contributions: ★ Part of the group of municipalities that will use the online Guide and technical outcomes of the project. ★ Participates in dissemination activities and in testing the applicability of developed solutions (e.g., monitoring methodologies, urban hydrogeological models, underground infrastructure policies); ★ Considered a replicable example for good practices in urban groundwater management. ★ Will benefit from training, workshops, and tools for integrating groundwater data into urban planning. ★ Contributes to defining local requirements for the "Digital Twin" model, supporting decision-making in urban subsurface management. Buzău plays a strategic and applied role, actively participating in the adaptation of scientific results to real local government needs in groundwater and urban infrastructure.	

INTERNATIONAL PROJECTS	INTERNATIONAL NETWORKS
SMARTWASTECITIES – Waste Management Policies Fortification for Building Sustainable & Green Cities The *"SmartWasteCities"* project aims to improve urban waste management policies and support the transition to a circular economy through interregional cooperation, exchange of best practices, and implementation of innovative technological solutions. A central component is the pilot project for installing smart waste bins in Chișinău, which will serve as the basis for a circular economy strategy replicable in other European regions. The Buzău City Hall contributes to strengthening and updating its environmental policies by participating in interregional learning, technical consultation, and dissemination of good practices. Through its involvement in this project, Buzău reinforces its position as a local government model focused on sustainability, digitalization, and European partnerships.	Buzău Municipality, as a public policy-associated authority, actively participates in the **"SmartWasteCities – Waste Management Policies Fortification for Building Sustainable & Green Cities"** European project, submitted for funding under the **Interreg Europe Program**, specifically the **Second Call** of the **2021–2027 programming period**.

IMPORTANCE OF PUBLIC PARTICIPATION PROCESSES:

The Municipality of Buzău considers public participation essential in all efforts related to climate neutrality and sustainable development. By involving citizens from the planning phase, greater transparency and legitimacy of decisions are ensured, and initiatives are tailored to the real needs of the community. Public engagement also helps raise awareness of the importance of ecological measures and fosters a sense of collective responsibility regarding environmental protection.

Through these initiatives, Buzău demonstrates an active and innovative approach to citizen engagement in urban governance processes. From digital platforms and participatory budgeting to community projects and smart city solutions, the city promotes transparency, collaboration, and active involvement of residents in its sustainable development.

STRATEGIC COLLABORATIONS:

- **At the European level:** The Municipality of Buzău has established a strategic collaboration with the European Bank for Reconstruction and Development (EBRD), which provides funding and technical assistance for the development of action plans. Meanwhile, the public authority, in coordination with local and central stakeholders, is responsible for implementing these plans. These partnerships ensure a coordinated approach to promoting a more sustainable and climate-resilient urban environment in the municipality.
- **At the national level:** Buzău is one of 10 cities selected for the Climate Neutrality M100 Mission—part of a national initiative aimed at helping cities reduce carbon emissions and transition to smart, green, and citizen-friendly urban environments by 2035—alongside Alba Iulia, Bistrița, Brașov, Bucharest, Constanța, Iași, Oradea, Reșița, and Timișoara.
- **At the regional level:** The Municipality of Buzău maintains a strong collaboration with ***the South-East Regional Development Agency*, ensuring coordinated efforts in urban planning and sustainability initiatives**. Additionally, the South-East Regional Development Council (CDR) plays an essential role in the region. As a deliberative body without legal personality, the CDR operates on partnership principles within the South-East development region, coordinating activities related to the formulation and monitoring of regional development policies. The Council is composed of equal representatives from local public administrations within the development region, promoting joint efforts for regional development and strategic planning.
- **At the local level:** *The Municipality of Buzău* provides various tools for citizens to collaborate with the local administration, stay informed, and express their views. Civil society plays a crucial role by organizing community engagement initiatives aimed at improving climate action and quality of life. These initiatives are often supported by the local authority or private funding, highlighting joint efforts from both public and private sectors to promote sustainable urban development.

STRATEGIC PARTNERSHIPS:

The Municipality of Buzău has developed an extensive network of partnerships at local and regional levels in the following areas:

- **Urban mobility:**
  - **Partnership within the Buzău-Mărăcineni Intercommunity Development Association**, including the Municipality of Buzău and 14 communes in the functional area;
  - **Partnership agreement for the development of electric transportation**, signed between the Municipality of Buzău and the communes of Vernești, Mărăcineni, and Țintești.

- **Infrastructure and public utilities:**

- **Partnership agreement approved by Local Council Decision (HCL)** for the extension of the potable water supply networks in partnership with the commune of Ţinteşti.

♦ **Education and vocational training:**

- **Collaboration with *"Dunărea de Jos" University of Galaţi, Buzău Technological High School*, and 9 economic operators** for the implementation of dual education at both pre-university and university levels;
- **Partnership with the *Embassy of Finland in Romania* and *Häme University of Applied Sciences (HAMK)*** for implementing the "Finnish-Inspired Classes" program, focused on promoting child well-being.

♦ **Environment and sustainability:**

- **Partnership with waste management operator *S.C. RER SUD*** for conducting educational campaigns in schools and kindergartens regarding the concept of green and sustainable schools.
- **Collaboration with the *Plant Genetic Resources Bank (BRGV) Buzău*** for urban regeneration projects by transforming degraded areas into green spaces. BRGV is a public research institution, unique in Romania, under the coordination of the Ministry of Agriculture and Rural Development, specializing in the conservation of plant genetic resources both ex situ and in situ over the short, medium, and long term.

LOCAL CONTEXT AND PREVIOUS EXPERIENCE IN COLLABORATION WITH THE COMMUNITY AND STAKEHOLDERS:

Buzău – a smart city and provider of high-quality public services focused on citizen well-being, where all projects developed by the administration revolve around one central point – the citizen. The result is higher living and operational standards for both residents and businesses, offering new employment opportunities through a more innovative entrepreneurial ecosystem, alongside improved environmental sustainability.

Over the past 5 years, the Municipality of Buzău has started replicating smart city solutions included in the Sustainable Energy and Climate Action Plan, the Integrated Urban Development Strategy, and the Sustainable Urban Mobility Plan to increase energy efficiency, reduce GHG emissions, and improve public services for citizens.

Key projects include**:**

- *Urban Mobility Management Center;*
- *Smart Building Management Platform;*
- *Air Quality Management – Smart Green City;*
- *Public Lighting Modernization;*

- *Digital Public Services.*

This local experience reflects a strong commitment to sustainable and participative solutions through **the implementation of initiatives** in collaboration with citizens, the private sector, academia, and NGOs, which have proven the effectiveness of a participatory approach, **including**:

- **Integrated transport systems, including electric buses, dedicated lanes, and traffic management systems**. The purchase of electric buses marks a major step in reducing the carbon footprint of the public transport system. With significantly fewer emissions compared to traditional diesel buses, this measure is expected to reduce annual CO_2 emissions from public transport by approximately 30%. The project is part of a major initiative also aimed at prioritizing public transport through the use of dedicated median lanes—a unique concept in Romania.

- **Intelligent traffic management, e-ticketing, and full fleet management systems.** This has already led to a 20% reduction in vehicle emissions by optimizing traffic flow and reducing vehicle idling times. By reducing congestion, the system is expected to have a cumulative effect in reducing CO_2 emissions by 10,000 tons annually, contributing to more efficient and sustainable urban mobility. The project is integrated with Micromobility Buzău Velo City – 500 city bicycles.

- **Energy efficiency, structural consolidation, and renewable energy for multi-family and public buildings.** About 20 collective housing blocks have been rehabilitated and modernized for energy efficiency, while another 46 are currently undergoing similar improvements under the National Recovery and Resilience Plan (PNRR). Focus is placed on using low-carbon, non-toxic, recyclable, and biodegradable construction materials, locally sourced and produced using eco-friendly techniques to minimize ecological impact.

- **Public lighting and 3.5 MW photovoltaic panel fields.** These are essential for improving energy efficiency and reducing environmental impact. By using solar energy from photovoltaic panels, public lighting systems can operate sustainably, reducing dependence on traditional energy sources. Currently, 85% of public lighting has been replaced with energy-efficient systems.

- **Circular economy, ecological islands, and Romania's first circular school.** The project has reached significant milestones toward climate neutrality, including the installation of 126 ecological islands for waste management and recycling, the creation of a fully ecological circular school with energy efficiency, air purification, and biodiversity, and an integrated circular economy concept aimed at reducing emissions and promoting sustainable resource use. These projects were pioneering initiatives, strengthening our optimistic vision for the future.

- **Pilot project on the use of wastewater from Buzău's Municipal Wastewater Treatment Plant** to **establish an irrigation system to improve the "IAZUL MORILOR" Gravity Channel** – a green-blue infrastructure development project initiated by the Municipality of Buzău. The project aims to improve environmental quality and create sustainable spaces for residents throughout the entire functional urban area, integrating green infrastructure (green spaces, parks/afforestation, ecological corridors, micromobility paths, photovoltaic fields) and blue infrastructure (rivers, lakes, rainwater networks, irrigation systems) into the urban framework. It has strategic importance in reducing pollution, mitigating climate change by lowering atmospheric temperatures, restoring natural wetlands and creating new artificial ones, efficient rainwater management, reducing structural degradation of watercourses, increasing irrigation efficiency in agriculture, achieving circular resource efficiency through rainwater and greywater capture and reuse, reducing dependence on potable water sources, conserving natural resources, protecting biodiversity, and creating recreational and public green spaces for the community.
  This project will bring significant benefits to both the municipality's residents and those in neighboring communes, contributing to:
  - *Improved air quality and public health by creating extensive green spaces that reduce pollution and provide areas for recreational activities.*
  - *Efficient stormwater management and flood prevention through the implementation of blue infrastructure that enables sustainable water to use and capture.*
  - *Increased tourism appeal and quality of life by developing ecological corridors and promenades that connect the municipality with surrounding communes.*

To achieve climate neutrality goals, it is essential to scale up relevant sectoral interventions by 2035.

Several existing **sectoral interventions have the potential to be further developed and scaled up**, thus contributing to bridging the gap toward the green future targeted for 2035. These include:

- **IN THE STATIONARY ENERGY SECTOR (excluding public lighting):**

  - ✓ **Intervention 1** *(Expansion):* Buzău has moved beyond the pilot phase and is now expanding energy efficiency projects citywide. This includes the implementation of nearly zero-energy building (nZEB) standards, the installation of heat pumps, solar panels, and advanced thermal insulation. Green roofs will also be integrated, along with modernization solutions for multifamily residential buildings.
  - ✓ **Intervention 2** *(Expansion):* Following the success of pilot projects, energy-efficient renovations will be extended to other areas of the city. nZEB standards will be implemented in all public and historical buildings. Proven solutions, such as solar panel installations and heating system upgrades, will be widely applied to ensure overall energy efficiency. Community pilot projects in

energy will support mechanisms and partnerships for the integration of renewable energy sources.

- ✓ **Intervention 3** *(Sustainability & Resilience):* In this phase, energy consumption monitoring solutions will be integrated through Building Energy Management Systems (BEMS). A digital system for data collection and analysis will be implemented, enabling continuous energy consumption optimization and the development of long-term sustainable policies.

➢ **IN THE PUBLIC LIGHTING SECTOR:**

- ✓ **Intervention 1:** Buzău will complete **public lighting modernization projects** by installing energy-efficient LED lamps and solar panels to power them. Additionally, smart control systems will be tested to automatically adjust light intensity based on need, contributing to energy savings. The system will be available citywide.
- ✓ **Intervention 2: Pilot innovative solutions for sustainable lighting and charging**: Buzău will pilot innovative solutions integrating energy-efficient LED lamps with solar panels and electric vehicle charging stations. This initiative aims to enhance public lighting and promote electric vehicle usage, creating a multifunctional infrastructure for a greener city.
- ✓ **Intervention 3** *(Sustainability & Resilience):* Real-time monitoring systems will be implemented to evaluate the performance of the public lighting system using smart city technologies. The collected data will be used to optimize and efficiently maintain the systems managed by the designated operator. Sustainable expansion policies for lighting will be developed and applied in all sectors, ensuring the longevity and effectiveness of the lighting infrastructure.

➢ **IN THE TRANSPORT SECTOR:**

- ✓ **Intervention 1: Electric bus fleet**: The Expansio Buzău electric bus pilot fleet effectively reduces emissions and noise pollution in the city. Expanding this fleet across all routes will significantly reduce fossil fuel dependency, improve air quality, and enhance energy efficiency in the urban environment. This expansion promotes a greener public transport system and encourages more residents to use public transportation, contributing to a more sustainable city.
- ✓ **Intervention 2: Digital public transport platform (MaaS)**: The implementation of a comprehensive digital public transport platform will integrate all transport modes under the Mobility as a Service (MaaS) concept. This innovative approach will optimize routes and schedules, reduce emissions by simplifying travel, and encourage public transport use over private vehicles. The platform will also offer real-time updates, enhancing user experience and making transportation more attractive to citizens.
- ✓ **Intervention 3: AI and open data in transport**: The integration of AI technologies and open data in the transport system will optimize traffic flow, reduce congestion, and minimize vehicle idle times. By analyzing traffic patterns and implementing smart traffic management solutions, a 10%

reduction in CO_2 emissions is expected, significantly improving urban sustainability and efficiency. This initiative will promote data transparency and enable residents to make informed travel decisions.

➢ **IN THE WASTE SECTOR:**

- ✓ **Intervention 1** *(Pilot Phase):* Buzău will optimize wastewater treatment by partially phasing out biological treatment technologies. This initiative aims to reduce costs and ensure the circularity of wastewater and rainwater, especially in the context of IAZUL MORILOR, enhancing ecological sustainability. The city will also establish a voluntary collection center to improve waste management. Mixed waste and large construction debris will also be sorted.
- ✓ **Intervention 2: Urban waste management islands**: Urban waste islands will decentralize waste collection, improve sorting, and increase recycling rates. Smart systems will monitor waste in real time, optimizing collection routes and reducing landfill dependence, supporting Buzău's green waste initiatives.
- ✓ **Intervention 3: Digitalization and carbon reduction**: By digitalizing public services and using virtual public servants, Buzău will reduce the need for physical offices and travel. This will lower the administrative carbon footprint and contribute to the city's emission reduction goals.

➢ **IN THE RENEWABLE ENERGY GENERATION SECTOR:**

- ✓ **Intervention 1: Expansion of photovoltaic systems**: Expanding photovoltaic systems in residential buildings will significantly reduce reliance on non-renewable energy and CO_2 emissions. This will support Buzău's energy independence and strengthen its position in renewable energy generation.
- ✓ **Intervention 2: Positive Energy Districts (PED)**: Positive energy districts will generate more energy than they consume, integrating photovoltaic systems and energy-efficient technologies. These districts will help reduce the city's overall energy consumption and contribute to achieving climate neutrality by 2035.
- ✓ **Intervention 3: Smart energy monitoring**: Buzău will implement smart energy monitoring systems in public buildings to track and optimize energy consumption in real time. This will reduce energy waste and enable better integration of renewable energy sources into the city's grid.

➢ **IN OTHER SECTORS:**

- ✓ **Intervention 1** *(Pilot Phase):* Regeneration and expansion of green areas: Buzău is focused on regenerating and expanding existing green spaces and creating blue-green corridors. The goal is to increase the total green area, particularly large and continuous zones, by 2035. These corridors

will not only provide ecological benefits but also enhance the urban environment, act as carbon sinks, and improve biodiversity. Example: Urban Forest.

- ✓ **Intervention 2** *(Generalization Phase):* Scaling up green solutions: Following the success of pilot projects, all city sectors will adopt and implement green infrastructure solutions on a large scale. This will result in expanded green areas in Buzău, acting as carbon absorbers and significantly contributing to improved air quality and urban environment. Green belts will also create recreational spaces and mitigate urban heat islands.
- ✓ **Intervention 3** *(Sustainability & Resilience):* Real-time monitoring digital platform: A digital platform will be developed to monitor green areas and their carbon capture capacity in real time. This system will help track emission offsets and optimize green infrastructure management. The platform will also support Buzău's sustainable and resilient development by integrating real-time data to enhance the efficiency of green space management.

NATIONAL AND INTERNATIONAL RECOGNITION OF PROJECTS DEVELOPED BY BUZĂU MUNICIPALITY:

The Municipality of Buzău has adopted several open innovation approaches to enable the testing, piloting, and demonstration of integrated smart solutions for the city — especially in the areas of urban mobility, public services, and environmental management.

These efforts are based on a collaborative ecosystem involving local stakeholders, private companies, academia, and citizens. Through urban living labs, public-private partnerships, and co-creation platforms, Buzău fosters a dynamic environment in which innovative ideas are transformed into practical applications, contributing to sustainability and an improved quality of life.

- Year 2021 -

- ★ Awarded the ***"Best City Brand in Europe"*** trophy at the world's largest branding competition – *Transform Magazine Awards*.
- ★ **First Prize** in the annual competition organized by the French Embassy in Bucharest, on the theme *"Sustainable Cities 2021"*;
- ★ **Award for *"Promoting the Local and Circular Economy"*** at the *Capital Magazine Top 100 Managers in Romania Gala*, highlighting the most visionary leaders of 2021.

- Year 2022 -

- ★ ***"Champion of Education"*** title for the "School in the Park" project, in the "Public Administration" category at the *Romanian Government's Sustainable Development Gala*.
- ★ **Award for *"Excellence in Quality Education and Youth"***, Romanian Municipalities Association Gala, 6th Edition.
- ★ **Award from ECOTIC** at the Clean Environment Awards Gala for the *"Circular School" – School No. 11 Buzău*.

- **Award for *"Efficient and Sustainable Public Administration"*,** offered by the Romanian German Chamber of Commerce, *Cities of Tomorrow* edition (September 13–16, 2021);
- **Smart City Industry Awards** – 6th Edition – Smart Environment Award for the project ***"Smart Green & Circular Buzău"***;
- ***"Mayor of the Year 2022"*** title awarded to Buzău Mayor Constantin Toma at the *Romanian Smart City Association Gala, 6th Edition*;
- **Smart Mobility Award for** the project: ***Modernization and Improvement of the Attractiveness and Safety of Public Transport in Buzău****, Telelink City*.

- Year 2023 -

- ***"European Label of Excellence in Good Governance – ELoGE"****,* for responsible implementation of the 12 principles of democratic governance by the Council of Europe through the General Secretariat of the Government.
- ***First intelligent traffic management and adaptive traffic management system*** that handles a multimodal corridor with median public transport lanes — a national first and unique in Eastern Europe.

PROCESS OF DEVELOPMENT:

The development of the *Climate Neutrality Action Plan (CNAP) for the Municipality of Buzău* was a collaborative and systematic process, carried out in two essential stages – **the initial drafting and public consultation** – to ensure compliance with European and national frameworks, as well as the active involvement of the community and stakeholders.

Drafting Stage:

- **Participatory Approach:** The active involvement of the community and stakeholders was crucial in the drafting process of CNAP, ensuring transparency and inclusion.
- **Alignment with Strategic Documents:** The proposed actions within the CNAP were harmonized with existing municipal strategies, including Romania's Urban Policy 2035 and the Country Report on Climate and Development for Romania (RTCD).
- **Stakeholder Consultation:** Continuous consultations were organized with various involved parties, including urban planning experts, climate change specialists, and civil society representatives. The feedback received was integrated into the final structure and content of the CNAP.
- **Compliance with EU and National Standards:** The CNAP was developed according to the methodology established by the European Commission for the EU Mission on Climate-Neutral and Smart Cities, within the National M100 Hub.

Public Consultation Stage:

- **The *CNAP* draft was published on the Buzău Municipality website** for public review, accompanied by forms to collect opinions and suggestions regarding the proposed actions.
- **The opinions and recommendations received from the wider community were incorporated** to improve the final document, thus increasing its relevance and public support.

IMPLEMENTATION AND MONITORING PROCESS:

The Climate Neutrality Action Plan for the Municipality of Buzău proposes a governance structure that supports strengthening climate management both at the urban and county and regional levels.

To ensure the efficient implementation and monitoring of the Climate Neutrality Action Plan, the Municipality of Buzău will adopt a framework tailored to its specific needs. Thus, the implementation of this plan will be coordinated by a group of public and private entities, ensuring structures and experts who will contribute to managing and monitoring the Climate Neutrality Action Plan.

Within this structure, **a dedicated working group will coordinate implementation and monitoring activities**, under the supervision of a designated coordinator and a steering committee led by the Mayor.

***The Implementation and Monitoring Working Group* will include key departments from the Buzău City Hall**, such as the Departments of Urban Development, Public Finance, European Projects, Architecture, Urbanism, and Community Services, as well as specialized services such as energy efficiency and public utilities, environmental quality promotion, and others. Additionally, the Forecasting Department will support data analysis necessary for progress evaluation.

One of the main collaboration mechanisms will be a *Local Net Zero Coalition*, structured to include a variety of local entities, such as public service companies, energy suppliers, academic institutions, relevant RDI organizations, and NGOs, alongside citizens and local media. This will contribute to integrating a broader approach, ensuring an integrated and unified vision for the entire region.

Furthermore, in each of the above stages, **the Municipality of Buzău will consider marginalized communities**, ensuring that their needs are appropriately addressed throughout the implementation of this plan. In line with its commitment to climate neutrality, the Municipality of Buzău will enhance its climate resilience efforts, striving for a coherent integration of mitigation and adaptation actions.

In conclusion, **the implementation of this plan will focus on participatory approaches**, with a particular emphasis on soft interventions related to governance innovation and social innovation. These interventions include public education and awareness through organizing working groups, hackathons, and competitions to stimulate active citizen participation.

Additionally, to support the necessary behavioral changes, awareness campaigns will be launched targeting both residents and businesses in the municipality to promote the adoption of eco-friendly

practices. These campaigns will be supported by continuous training measures for public officials and stakeholders to ensure efficient implementation of climate policies.

The Municipality of Buzău will also promote external partnerships to attract financial and expertise resources, actively engaging in national and international networks. A significant example in this regard is **the European LIFE NECPlatform project *"Enhancing Multi-level Governance in National Energy and Climate Policies"* – *LIFE21-CET-GOV NR. 101076359: Memorandum for Involving Local Authorities in Developing and Implementing National Energy & Climate Policies*** – which supports six EU Member States (Bulgaria, Croatia, France, Italy, Portugal, and **Romania**) in creating and managing **permanent climate and energy dialogue platforms (CED)** at multiple levels, in accordance with Article 11 of the Regulation on the Governance of the Energy Union and Climate Action.

Local Authorities have the potential to become a real force in the energy transition, helping Europe achieve its climate neutrality and energy independence goals. Moreover, the European Union has clearly designated cities as leaders in the energy transition through initiatives such as the Covenant of Mayors and the Mission 100 Smart and Climate-Neutral Cities. However, national climate and energy policies rarely capitalize on this potential, offering limited or inadequate support for local transition efforts.

This is why the *NECPlatform* project contributes to bridging the gap by supporting Bulgaria, Croatia, France, Italy, Portugal, and Romania in creating and managing multilateral energy and climate dialogue platforms to help integrate energy and climate policies vertically and horizontally, being an example of good practice in multi-level dialogue.

Collective and joint actions are needed, and energy governance and policies must be rethought to be more flexible. To have truly inclusive and adequate national strategies and financing programs for implementation, **Romania should not miss the opportunity to strengthen multi-level governance by supporting climate and energy dialogues, with the active involvement of Local Authorities and other relevant stakeholders.** Multilateral dialogue provides a framework for achieving long-term energy and climate objectives, while also offering economic, environmental, and social benefits. It enables better coordination, stimulates innovation, and enhances resilience, ultimately contributing to a sustainable and safer energy future for all.

***The Memorandum for Involving Local Authorities in Developing and Implementing National Energy and Climate Policies* creates the framework for**:

- *Initiating and maintaining an open, permanent dialogue for the constructive exchange of information between Local and Central Authorities on Energy and Climate;*
- *Involving the local level in developing, monitoring, and evaluating national strategies for coherence between different levels of governance and areas of competence;*
- *Active contribution of Local Authorities in initiatives defining the steps towards achieving Climate Neutrality;*

- *Creating a conducive framework for inclusive and adequate programs aimed at increasing local Energy and Climate technical capacities;*
- *Ensuring necessary funds through inclusive and adequate financing programs for transposing the objectives of national Energy and Climate strategies at the local level;*
- *Ensuring transparency regarding progress made in achieving Energy and Climate objectives, building public trust and demonstrating accountability for climate actions;*
- *Promoting innovation and ecological transition – both at the national and local levels;*
- *Establishing clear objectives in Energy and Climate, fostering political stability, encouraging investments in green technologies and renewable energy, stimulating job creation, industrial development, and ecological transition in the broad sense;*
- *Involving stakeholders (including citizens, businesses, and civil society) in the development of Energy and Climate policies, increasing awareness of climate change, and encouraging local participation in achieving national objectives.*

In the coming period, **the focus will remain on diversifying funding sources** by accessing European and national funds and by fostering public–private partnerships. For planned meetings within climate and energy dialogue platforms, the Association of Energy Cities in Romania (part of the European *LIFE NECPlatform* project consortium) intends to involve the *Ministry of Energy and the Ministry of Environment, Waters and Forests, the General Secretariat of the Government*, municipalities, and municipal representatives such as *the Association of Municipalities in Romania, the Association of Cities in Romania, the Association of Communes in Romania, Regional Development Agencies*, relevant civil society representatives, industry representatives, research institutes/universities, etc. Additionally, **new funding sources will be sought**, including attracting private capital and using funds from the South-East Regional Program. Public-private partnerships will be expanded to stimulate innovation and investments in sustainable and climate-neutral projects, and crowdfunding initiatives will be explored to support small-scale ecological and climate-neutral projects.

Moreover, **soft actions will be considered to mobilize private capital for climate neutrality interventions**. Through efforts to encourage civic engagement activities, various local stakeholders will be empowered to raise awareness and inspire local companies, especially those with international dimensions, to align with ESG standards through investments in local initiatives.

At the same time, **the process of strengthening institutional capacities** has already begun through staff training and the creation of clear governance mechanisms, which will be detailed in the CNC monitoring structure.

We agree that these measures should be directly reflected in the Action Portfolio. In this regard, directives such as the *Local NetZero Coalition* will be explicitly included in the portfolio and in the Impact Pathways section, to ensure a direct link between participatory governance processes and the practical implementation of measures.

The governance process will integrate institutions and actors with a role in facilitating access to funding, including the banking sector, development agencies, and private investors, to maximize the chances of CNC implementation.

In the next phase, we will conduct **a more detailed mapping of NGOs, civic associations, and representative citizen structures** (e.g., homeowners' associations). These stakeholders will be involved both in decision-making and in the implementation and monitoring of actions, as we believe that the transition to climate neutrality can only succeed through active collaboration between the administration, civil society, and citizens.

In conclusion, we consider these recommendations essential for increasing the quality and relevance of the CNC and are committed to explicitly integrating them into the Action Portfolio and governance mechanisms in the upcoming stages.

Through these measures, the Municipality of Buzău aims to become a model of best practices in the transition to a climate-friendly community, actively involving citizens, local institutions, and international organizations in achieving climate neutrality objectives.

BARRIERS

Provide a summary of the main local barriers impeding the city's transition towards climate neutrality.

- ➔ **For each barrier, briefly outline its impact on hindering the climate neutrality achievement and describe the approach / intervention / solution for overcoming it through the implementation of the current Climate Neutrality Action Plan.**
- ➔ **Make sure to also incorporate barriers related to climate investment: structural, policy, economic and financial obstacles which could hinder the deployment of capital to support climate action.**

Table 59 - KEY BARRIERS

EMISSION DOMAIN	IDENTIFIED BARRIER	DESCRIPTION	PROPOSED SOLUTION
TRANSPORTATION	**Dependence on private vehicles**	Urban mobility in Buzău is still heavily dominated by private car use, resulting in traffic congestion, high CO_2 emissions, and air pollution. Despite efforts to promote public transport and cycling, there is a lack of incentives to drive behavioral change. Many residents perceive alternative modes as less convenient due to limited infrastructure and service frequency.	✦ Expand and electrify public transport; ✦ Improve infrastructure for cycling and walking; ✦ Promote shared and micro-mobility (e-scooters, car-sharing).
	Inadequate infrastructure for alternative mobility	Although Buzău has made efforts to promote cycling, dedicated bicycle lanes remain insufficient and disconnected. Pedestrian pathways also require upgrades to encourage walking as a primary mode of transport and to support healthy lifestyles. Safety concerns, particularly at intersections, further discourage these alternatives.	Develop infrastructure for alternative mobility, including safe bicycle lanes, wide sidewalks, and integrated public transport systems.
	Outdated public transport fleet	The current fleet of old diesel buses generates high	Promote shared transport schemes and micro-mobility

		emissions and is energy inefficient, negatively impacting public health through increased air pollution.	options such as electric scooters and car-sharing.
	Lack of EV charging stations	Despite growing interest in electric vehicles, Buzău lacks a widespread charging infrastructure, making EV adoption impractical. Additionally, grid capacity and integration challenges may slow down expansion.	Develop a comprehensive network of electric vehicle charging stations.
	Resistance to behavioral change	Many residents and businesses are reluctant to adopt sustainable transport options due to entrenched habits, cultural perceptions, or perceived convenience. The private car remains a status symbol for some, while companies often favor traditional logistics over greener alternatives.	✦ Improve public transport infrastructure and service quality ✦ Integrate public transport with other alternative modes ✦ Implement deterrent policies for private vehicle use (e.g., congestion charges, limited parking availability, higher parking fees) ✦ Offer incentives for public transport use (e.g., free/subsidized passes for students, seniors; loyalty point systems for frequent riders) ✦ Run awareness and education campaigns on the economic and environmental benefits of public transport ✦ Promote digital tools and user-friendly systems (e.g., unified ticketing and journey planning apps, contactless payment systems, real-time route and wait time displays)
BUILT ENVIRONMENT	**Energy-inefficient buildings**	Most residential and public	✦ Renovate public and

		buildings in Buzău suffer from poor insulation, leading to high energy consumption for heating and cooling, substantial energy losses, and consequently high CO_2 emissions. The low energy efficiency of residential and commercial buildings is further exacerbated by rising natural gas prices. Despite the availability of funding for thermal rehabilitation, many homeowners are reluctant to participate due to financial constraints, lack of awareness, or unwillingness to undertake renovations. Modernization challenges combined with high upfront costs discourage investment in energy-efficient solutions, even when long-term savings are possible.	private buildings; ✦ Promote nZEB standards; ✦ Provide subsidies for energy efficiency upgrades.
	Use of unsustainable construction materials	The use of conventional materials with high carbon footprints (e.g., concrete, steel) increases emissions and the excessive use of natural resources. At the same time, green building materials (such as energy-efficient insulation, smart windows, and sustainable timber) remain expensive and are less accessible in the local market, discouraging adoption—particularly in the private development sector.	✦ Promote the use of sustainable construction materials. ✦ Offer financial incentives and policy support for green construction and renovation. ✦ Improve local availability and production of eco-friendly materials to reduce transport costs and import dependency. ✦ Educate the public and developers on the benefits of green materials. ✦ Promote and integrate new technologies (eco-insulation, smart windows, sustainable wood). ✦ Develop demonstration projects

			and case studies showcasing the benefits of green construction materials.
	Lack of technical expertise	Many local contractors, architects, and engineers lack the experience needed to implement nZEB (nearly Zero Energy Buildings) standards and deep energy retrofits. This results in delays, higher costs, and missed opportunities for efficiency gains.	✦ Develop and expand training and certification programs for architects, engineers, builders, and energy auditors focused on sustainable renovation techniques and efficient technologies. ✦ Create clear and regionally adapted guides and standards for energy-efficient renovations. ✦ Increase government and institutional support: subsidies, local and national consultancy hubs, and pilot programs in collaboration with public authorities. ✦ Provide free access to digital tools including technical information, tutorials, energy audit simulators, and other online resources. ✦ Foster public-private partnerships for innovative energy-efficiency solutions. ✦ Raise public awareness and conduct educational campaigns.
	Underutilized brownfields	Several underutilized or abandoned industrial sites in Buzău present opportunities for sustainable urban renewal. However, challenges such as soil contamination, legal constraints, and high redevelopment costs hinder	✦ Soil decontamination and ecosystem restoration. ✦ Smart reuse and conversion of sites (e.g., urban parks, renewable energy facilities, climate-

		progress. The municipality has initiated several projects to rehabilitate and modernize former industrial zones as part of its transition strategy toward climate neutrality, including: • **Street grid reconfiguration in the southeastern area**: A new urban zoning plan is underway to enhance urban mobility through the creation of a transport hub and a public services zone. • **Development of a health cluster**: Construction of a health complex, including a municipal hospital, with street infrastructure upgrades for improved accessibility and integration. • **New production and storage facilities**: Construction of industrial halls and administrative buildings aimed at economic revitalization and job creation. • **Modernization of the Industrial Goods Market**: Old warehouses have been replaced with modern, well-equipped containers, improving commercial infrastructure and urban aesthetics.	neutral housing districts). ✦ Financial incentives and public policies to attract eco-investment on redeveloped land. ✦ Support sustainable innovation and technologies such as circular construction, water capture and reuse systems, and eco-industrial hubs for green startups and businesses. ✦ Involve local communities and promote grassroots initiatives.
	Lack of incentives for green renovations	Property owners lack financial motivation to modernize their homes for energy efficiency, resulting in thermal discomfort and poor building performance.	✦ Financial incentives for energy-efficient renovations. ✦ Development and enforcement of standards for passive and zero-emission buildings.
ENERGY SYSTEMS	**High fossil fuel dependency**	A significant share of the energy consumed in Buzău Municipality is derived from	Invest in local renewable energy sources and promote energy efficiency in industry.

		polluting sources such as coal and natural gas. This results in high energy costs, air pollution, and vulnerability to market fluctuations. Meanwhile, renewable energy solutions like solar and wind power are not yet fully integrated into the local energy mix.	
	Regulatory barriers	Energy system regulations in Buzău impose several barriers that hinder the development of green infrastructure, energy efficiency projects, and the overall transition to a sustainable energy system. These challenges stem from both national legislative frameworks and their local implementation: • **Bureaucracy and complex administrative procedures:** o Obtaining permits for renewable energy projects (e.g., solar panels, wind turbines) is a lengthy and complicated process that deters investors. o Accessing EU and government support schemes requires extensive documentation and co-financing from beneficiaries. • **Lack of clear regulations for green infrastructure:** o Rules for integrating renewable sources into the grid are vague, complicating connections for prosumers (citizens or businesses that both produce and consume energy). o Absence of local standards for upgrading	• **Simplify and digitalize administrative processes:** o Implement a unified digital platform for permits and funding applications. o Develop a clear local guide for accessing renewable energy financing and eliminating legal ambiguities. • **Adapt and improve local regulations:** o Establish clear frameworks for prosumer grid integration. o Set minimum efficiency standards for insulation, smart systems, and solar use in buildings. • **Develop electric mobility infrastructure:** o Create a local EV charging strategy through public-private partnerships. o Apply for EU funds to purchase electric buses and modernize public transport. • **Liberalize the local energy market:** o Support competitive mechanisms to increase green energy options. o Develop community energy storage projects (e.g., shared battery systems). • **Introduce support**

		buildings with energy-efficient technologies slows down adoption. • **Barriers to electric mobility:** o Local regulations are insufficient to support a wide network of EV charging stations. o Few incentive schemes exist for eco-friendly public transport, and there are difficulties in accessing funds for upgrading to electric buses. • **Strict rules in the energy market and distribution:** o Energy distributor monopolies lead to high modernization costs and limit the integration of alternative sources. o There is a lack of regulations to facilitate energy storage systems (e.g., batteries, backup solutions), which are crucial for optimizing consumption and reducing reliance on the national grid. • **Alignment with national and European targets:** o The municipality must ensure all projects align with national and EU decarbonization strategies, potentially delaying local initiatives. o Ambitious carbon reduction and energy efficiency targets require funding and logistical support, which are often lacking.	**schemes for households and SMEs:** o Provide subsidies and tax incentives for solar panels and energy-efficient home upgrades. o Launch educational programs to raise awareness among citizens and businesses on energy efficiency benefits.
	Lack of robust renewable energy infrastructure	The integration of solar and wind energy into the local grid remains limited. The existing electricity infrastructure may not	Develop local renewable energy capacities such as solar parks and wind farms.

		support the large-scale uptake of renewables, leading to potential bottlenecks and inefficiencies.	
	Inefficient electricity distribution networks	• High energy losses during electricity transmission and distribution. • Increased dependency on energy imports.	Modernize the electricity distribution network to reduce energy losses.
	Lack of support mechanisms for prosumers	Citizens and businesses are not sufficiently incentivized to produce and sell renewable energy.	Introduce financial incentives to support solar panel installation and encourage the shift toward prosumer participation.
GREEN INFRASTRUCTURE AND NATURE-BASED SOLUTIONS	**Lack of a climate-optimized urban planning framework**	Uncontrolled urban sprawl leads to territorial fragmentation, rising infrastructure costs, and excessive resource consumption, ultimately reducing the quality of life for residents. Urban heat islands contribute to rising city temperatures, and in Buzău, many areas suffer from excessive use of asphalt and concrete. This results in higher summer temperatures and increased demand for cooling energy.	✦ Integrate sustainable development principles into urban planning. ✦ Promote compact, mixed-use urban development with controlled densification.
	Insufficient integration of green infrastructure	Although Buzău has made progress in expanding parks and green spaces, urban planning does not yet fully integrate nature-based solutions (NBS) to support climate adaptation and resilience. Green roofs, permeable pavements, and urban forests remain underutilized. The lack of green areas impacts air quality and weakens the city's capacity to adapt to climate change.	✦ Expand vegetated surfaces, as they are among the most cost-effective and impactful solutions for mitigating urban heat. ✦ Implement nature-based solutions to enhance urban climate adaptation.
	Conflict between urban	As the city grows, tensions	✦ Promote sustainable

	development and climate adaptation	arise between the need to preserve green spaces and the push to expand infrastructure, housing, and business districts. Without proper regulation, unchecked urban expansion could undermine climate efforts.	urban planning by encouraging green cities, limiting uncontrolled sprawl, and supporting mixed-use development. ✦ Build smart, resilient utility infrastructure. ✦ Prioritize energy efficiency and emission reduction. ✦ Engage communities in participatory governance. ✦ Protect existing natural areas, restore degraded urban ecosystems, and establish ecological corridors to support biodiversity.
	Poor water infrastructure management	Aging networks result in significant water losses during distribution and lead to high costs for utility expansion.	Modernize water supply and sewage infrastructure.
SOFT INTERVENTIONS (Governance Innovation and Social Innovation)	**Lack of effective coordination between authorities and communities**	Insufficient collaboration between the local administration and the community results in slow implementation of sustainability measures and limited public support.	Establish participatory platforms to involve citizens in decision-making, improve transparency, and foster community engagement.
	Insufficient public-private collaboration on climate action	Although some local businesses show interest in sustainability, there is no formal structure to coordinate climate action between the public sector, private companies, and research institutions.	Create public-private partnerships for sustainability projects in the green economy.
	Limited access to funding for local green initiatives	Many climate actions require long-term, large-scale investments. However, municipal budgets are constrained, and private investors may hesitate due to	Provide incentives to support green businesses.

		perceived risks.	
	Potential job losses in carbon-intensive sectors	The transition away from fossil fuels and traditional production methods may lead to job losses in certain industries, especially those relying on outdated technologies.	✦ Launch reskilling and upskilling programs. ✦ Develop new jobs in renewable energy sectors (solar, wind, green hydrogen). ✦ Offer incentives for a just transition. ✦ Support SMEs and green entrepreneurship. ✦ Promote regional economic planning and diversification: clean industries in affected regions, eco-tourism, sustainable agriculture, digital innovation, etc.
	Low citizen involvement and lack of public acceptance of climate policies	Despite being essential, climate policies may face public opposition if perceived as restrictive (e.g., car bans, energy upgrades). Without public buy-in, implementation slows down.	✦ Raise public awareness and education. ✦ Involve citizens in decision-making processes. ✦ Provide tangible benefits: subsidies, tax reductions for sustainable behaviors, demonstration projects. ✦ Combat disinformation and increase transparency. ✦ Cultivate a culture of collective responsibility.
	Digital divide and low adoption of smart city solutions	Smart city initiatives rely on digital tools, but not all citizens—especially the elderly and low-income groups—have access to technology or the skills to use digital platforms for mobility, energy, and governance.	✦ Expand internet and technology access. ✦ Promote digital literacy and education. ✦ Ensure public digital services are accessible and efficient. ✦ Create digital hubs and innovation labs. ✦ Promote the benefits of smart cities to all

			demographics.
WASTE & CIRCULAR ECONOMY	**Low recycling rate and poor selective collection**	Inefficient waste management and low recycling rates contribute to increased pollution, resource loss, and high disposal costs.	✦ Develop an integrated selective collection system. ✦ Expand recycling capacity by establishing efficient infrastructure.
	Lack of circular economy infrastructure (e.g., reuse centers)	The absence of infrastructure for circular economy initiatives significantly affects the environment (increased waste, resource depletion, GHG emissions), the economy (economic loss, higher production costs, uncreated jobs), and public health (toxic pollution, unresolved waste problems).	✦ Establish recycling and reuse centers. ✦ Support businesses that promote circular economy practices. ✦ Educate and engage communities through educational programs that encourage responsible recycling and sustainable consumption. ✦ Create storage and distribution infrastructure for recycled materials. ✦ Implement regulations and policies favoring the circular economy.
	Dependence on landfill disposal	A significant share of Buzău's municipal solid waste is still sent to landfills. This practice impacts the environment (GHG emissions, soil and groundwater contamination, resource loss), public health (respiratory diseases, pest outbreaks), and the local economy (high waste management costs, EU penalties, unexploited economic potential).	✦ Increase recycling and selective collection through efficient source separation systems and financial incentives for households and companies. ✦ Promote circular economy principles. ✦ Develop composting and biodigestion infrastructure to produce biogas from biodegradable waste. ✦ Apply landfill taxes and implement incentives to discourage landfilling.

	Low citizen participation in waste sorting and circular economy	Despite local policies encouraging recycling, household-level waste separation remains inconsistent. Many citizens are unaware of or unmotivated to engage in circular economy practices.	✦ Improve access to collection infrastructure. ✦ Introduce financial incentives and reward systems. ✦ Launch awareness and education campaigns. ✦ Involve local businesses and municipal authorities. ✦ Leverage technology and digitalization for efficiency.
	Insufficient infrastructure for composting and organic waste processing	A large portion of municipal waste consists of biodegradable materials, but Buzău lacks a comprehensive composting infrastructure. As a result, organic waste is landfilled instead of being transformed into valuable resources.	✦ Create a network of composting centers: municipal stations, community platforms, and urban biodigester units. ✦ Implement an efficient separate collection system for organic waste. ✦ Offer incentives to citizens and businesses. ✦ Promote home composting practices. ✦ Use compost in agriculture and urban green spaces.
	Low private sector involvement in circular economy initiatives	Many companies generate significant waste but lack clear incentives or support to transition to circular economy models (e.g., reuse, repair, upcycling).	✦ Introduce financial and fiscal incentives. ✦ Develop favorable regulations and public policies. ✦ Create markets for recycled materials. ✦ Foster partnerships and collaboration between companies on circular economy projects. ✦ Raise awareness and educate businesses. ✦ Involve consumers in

			encouraging businesses to adopt circular practices.
	Illegal dumping and weak enforcement of waste regulations	Unauthorized dumping in forests, riverbanks, and undeveloped urban areas remains a persistent issue due to lack of monitoring, weak enforcement, and limited penalties.	✦ Strengthen regulations and monitoring systems. ✦ Establish a technology-based waste tracking and control system. ✦ Improve waste collection infrastructure. ✦ Enhance partnerships between local authorities, private sector, and environmental NGOs. ✦ Encourage citizen responsibility and engagement. ✦ Introduce ecological taxation. ✦ Enforce extended producer responsibility (EPR) schemes for goods and packaging (e.g., electronics, batteries) to ensure proper recycling and end-of-life management.
CROSS-CUTTING BARRIERS	**Geomorphological and Topographical Constraints**	Buzău is located in a geographically diverse area, including hills, slopes, and plains, which pose challenges for urban development, infrastructure, and spatial planning. These constraints affect large-scale green infrastructure implementation and include: • Steep slopes and rugged terrain, particularly in peripheral areas, requiring specialized solutions for stability and accessibility; • Landslide-prone zones, particularly after heavy rainfall or unsustainable	✦ Urban planning and regulation adapted to high-risk geomorphic zones ✦ Soil stabilization and protection techniques ✦ Infrastructure tailored to difficult terrains ✦ Water management and flood prevention systems ✦ Innovative use of challenging land ✦ Ecological and sustainable infrastructure projects

		construction, requiring vegetation-based stabilization and proper drainage; • Flooding and hydrological risks due to the Buzău River and its tributaries, necessitating protective infrastructure like levees and dams; • Soil erosion in steep areas, impacting land stability and requiring soil protection and drainage solutions; • Limited access to natural resources (e.g., water, fertile land) in rugged areas, demanding sustainable management; • Transportation and road infrastructure constraints in hilly/mountainous terrain, requiring technical and financial solutions for connectivity; • Green space management opportunities through the conversion of challenging terrain into parks or recreational trails.	✦ Collaboration with experts and research institutions ✦ Educational and awareness campaigns about geological and topographical risks
	Lack of Emissions Removal Technologies	Buzău faces significant barriers due to outdated infrastructure, limited financial resources, and the absence of a coherent strategy for implementing modern emissions reduction technologies. This impacts air quality and public health. **Main Causes:** • Outdated energy and district heating infrastructure relying heavily on fossil fuels; • Polluting transportation systems, dominated by personal fossil fuel vehicles and lacking in EV infrastructure;	✦ Modernize the district heating system, including renewable integration and distribution upgrades ✦ Promote electric transport: expand EV charging networks (several such projects are already underway) ✦ Improve building energy efficiency through renovations ✦ Invest in public transport modernization ✦ Adopt green

		• Inadequate air quality monitoring and emissions management systems; • Slow progress in renewable energy investment due to financing gaps and bureaucracy; • Outdated industrial practices without viable green alternatives.	technologies: electric vehicles, smart grids, etc.
	Prohibitive Investment Costs	High upfront investment costs for energy efficiency projects hinder the adoption of modern solutions for reducing energy consumption and emissions. **Main Causes:** • Limited access to public and private funding; • High initial costs of efficient technologies (LEDs, smart grids, solar panels); • Complex and time-consuming financing procedures; • Lack of strong fiscal incentives or subsidies; • High operational and maintenance costs post-implementation. **Consequences:** • Delayed transition to sustainability; • Continued reliance on inefficient and polluting systems; • Higher infrastructure maintenance costs; • Ongoing public health and air quality challenges.	✦ Tap into EU and national funds (PNRR, Modernization Fund) for energy infrastructure ✦ Develop public-private partnerships (PPPs) for green energy infrastructure ✦ Introduce tax relief and subsidies for green investment ✦ Use innovative financing (e.g., Energy Performance Contracts - EPCs, local transition funds) ✦ Launch pilot projects and scalable models to demonstrate ROI ✦ Promote renewables: solar panels for public buildings, LED lighting upgrades

	Lack of Financing and Funding Schemes	Inadequate financing tools limit the progress of Buzău's energy efficiency and emissions reduction efforts, despite participation in programs like Horizon and Interreg. **Main Causes:** • Limited municipal budgets with competing priorities; • Bureaucratic obstacles in accessing EU/government funding; • Absence of local financing instruments for energy transition; • Weak promotion of public-private collaboration; • Lack of local subsidies or tax incentives for green adoption. **Consequences:** • Delays in green transition and modernization efforts; • Continued use of inefficient systems; • Missed investor interest and stalled green infrastructure growth; • Rising emissions and local air pollution.	✦ Access EU/national funds (PNRR, Modernization Fund, ERDF, Large Infrastructure Program) ✦ Create a local green energy transition fund; allocate part of the municipal budget for sustainable initiatives ✦ Expand PPPs with ESCO models or renewable energy developers ✦ Implement innovative financing: o Energy Performance Contracts (EPCs) o Green Bonds (municipal sustainability funding) o Crowdfunding and community financing o Tax incentives and subsidies for sustainable investments by SMEs and households
STRUCTURAL BARRIERS (related to infrastructure and urban organization)	**Outdated Public Transport**	The city operates an aging diesel bus fleet, has non-electrified rail infrastructure, and lacks sufficient public transport stations.	✦ Investments in green public transport ✦ Expansion of the bicycle lane network ✦ Renovation of buildings for energy efficiency ✦ Modernization of the district heating system ✦ Promotion of nature-based solutions (e.g., absorbent green spaces)
	Lack of Bicycle Lanes	The city lacks a coherent and safe bike lane network, discouraging alternative mobility.	
	Energy-Inefficient Buildings	Most public and residential buildings are poorly insulated, leading to high energy consumption for heating and cooling.	
	Outdated Heating and	Significant heat and water	

	Water Distribution Networks	losses due to deteriorated infrastructure, resulting in high carbon emissions and excessive resource use.	
	Extensive Impermeable Urban Surfaces	Overuse of concrete in the city reduces the soil's ability to absorb rainwater, causing urban flooding.	
POLITICAL BARRIERS (related to governance and coordination)	**Lack of a Common Vision**	• Disagreements between local and central government regarding sustainable development priorities • Inefficient coordination between administrative levels and absence of a shared vision can slow down climate action implementation	✦ Establishment of a Local Council for Climate Neutrality ✦ Alignment of local policies with national and European strategies ✦ Adoption of flexible regulations to support the green transition *Buzău's participation in the national M100 platform facilitates collaboration between local, national, and European authorities, ensuring policy alignment for the green transition.*
	Rigid Legislation	Outdated urban planning regulations hinder the implementation of green solutions (e.g., restrictions on installing solar panels on historic buildings).	
	Weak Institutional Coordination	Lack of a clear collaboration mechanism between local authorities, utility providers, and private investors.	
	Frequent Political Changes	Frequent turnover in local administrations can disrupt long-term project implementation.	
ECONOMIC BARRIERS (related to the structure of the local economy)	**Dependence on Polluting Industries**	Cities with heavy industry (e.g., cement, metallurgy) face difficulties in reducing emissions.	✦ Subsidies for green businesses ✦ Support for industries undergoing transition ✦ Tax incentives for eco-friendly materials ✦ Development of local markets for recycled products ✦ Promotion of
	Lack of Incentives for Green Businesses	Local businesses are not sufficiently encouraged to adopt sustainable practices.	
	High Costs of Eco-Friendly Materials	Real estate developers and builders tend to favor conventional, cheaper options over sustainable alternatives.	

	Limited Market for Circular Products	The circular economy is underdeveloped, and recycled products face low market demand.	innovation to diversify the local economy and reduce reliance on polluting industries
FINANCIAL BARRIERS (related to access to funding and investment)	**Insufficient Local Budget**	Small and medium-sized cities do not have sufficient financial resources to implement major green infrastructure projects.	✦ Establishment of a specialized office for attracting European funds ✦ Public-private partnerships for green projects ✦ Development of local financing mechanisms (e.g., green bonds, emission-related taxes) *Through the M100 platform, Buzău benefits from support in accessing European and national funds for environmental projects, facilitating the implementation of planned measures.*
	Limited Access to European Funding	• Lack of expertise in drafting and managing projects can lead to missed opportunities for securing EU funds • Limited financial resources can restrict the investments needed for green infrastructure projects and other climate initiatives	
	Private Investor Reluctance	Investments in sustainable infrastructure often have a long return-on-investment period, discouraging private capital.	
	Fossil Fuel Subsidies	In some cases, subsidies for traditional fuels reduce the motivation to invest in renewable energy.	

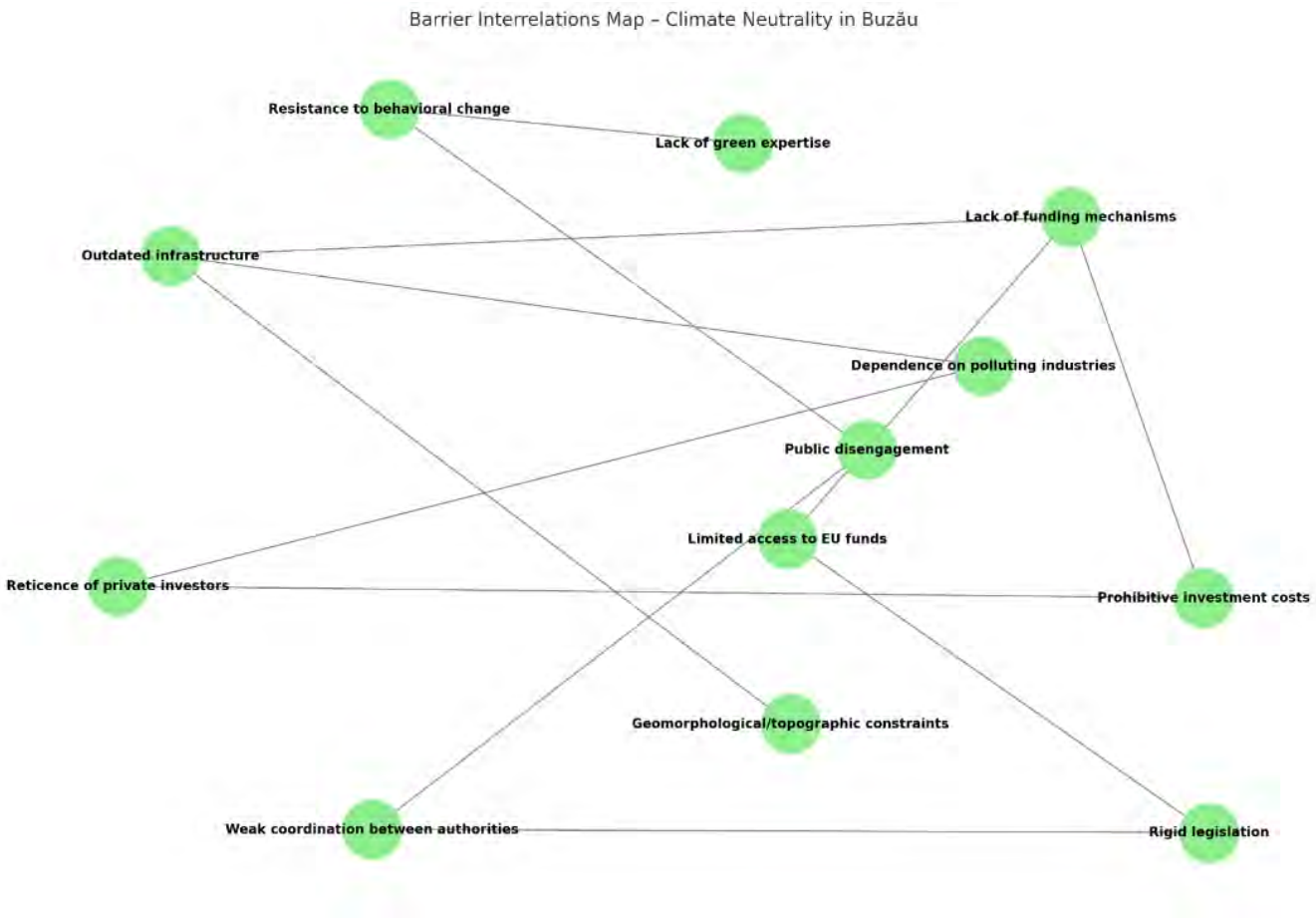
Although the barriers to climate neutrality have been clearly identified across financial, institutional, legislative, technical, and social dimensions, their progressive elimination requires a coherent and adaptive framework. This framework should remain active throughout the implementation period, ensuring that barriers are not only acknowledged but continuously managed, updated, and eventually removed.

The approach combines classification and prioritization of barriers with tailored responses for each type: innovative financing and partnerships for financial challenges, capacity-building for institutional gaps, regulatory harmonization for legislative issues, technology transfer for technical limitations, and awareness and education campaigns for social and behavioral obstacles. Responsibilities must be clearly allocated to municipal departments, local agencies, or external partners, with coordination mechanisms that guarantee integrated responses.

Monitoring and adaptive management play a central role, with progress assessed through measurable indicators such as the share of EU funds accessed, the volume of private investments mobilized, and the number of regulatory bottlenecks eliminated. Periodic reviews will ensure that strategies remain relevant as conditions evolve. At the same time, continuous stakeholder engagement—through dialogue with businesses, civil society, academia, and citizens—will support the identification of new barriers and co-creation of practical solutions.

By embedding this systematic and adaptive approach into the governance of the Buzău Climate City Contract, the municipality strengthens the credibility of its commitments, safeguards resilience against unforeseen challenges, and ensures that the path towards climate neutrality by 2035 remains realistic and achievable.

Figure 9 - BARRIER INTERRELATATIONSHIPS MAP



During the implementation phase, a priority should be the monitoring and management of

financial and funding barriers, by identifying and applying robust solutions that enable their effective overcoming. It is recommended to place particular and continuous emphasis (especially during the implementation period) on financial and funding-related barriers, as well as on the identification and application of robust solutions to overcome them.

RISKS

Provide a short summary of the main risks which may affect the achievement of the city's climate-neutrality goals by 2035.

- ➔ **For each risk, briefly outline its impact on hindering the climate neutrality achievement and describe the approach / intervention / solution for overcoming it through the implementation of the current Climate Neutrality Action Plan.**
- ➔ **Make sure to also incorporate the risks related to the financing of the climate investments.**

The Municipality of Buzău has committed to achieving climate neutrality by 2035, having been selected as part of the national M100 initiative alongside nine other cities in Romania. However, reaching this ambitious goal may be affected by several risks, including:

♦ **Financial Risks:**

- **Access to funding:** Although EU and national funding is available, competition is high. Application procedures can be complex, and project approvals may take longer than expected.
- **Co-financing capacity:** Some projects require financial contributions from the local administration, which may be difficult to sustain from the municipal budget. Currently, there is no budget to implement all the proposed projects aimed at achieving climate neutrality goals.
- **Hidden costs:** Implementing decarbonization measures may require large upfront investments, and long-term operational and maintenance costs must be properly managed.
- **Economic fluctuations, inflation, and poor fund management** may delay the implementation of climate projects.

♦ **Operational / Technological Risks:**

- **Lack of adequate infrastructure:** Transitioning to renewable energy, electric mobility, and energy efficiency requires infrastructure upgrades, which can be complex and expensive.
- **Availability and scalability of green technologies:** Some technologies are still under development, costly, or not suitable for the specific needs of the city.
- **Need for technical expertise:** Solutions such as smart buildings, efficient power grids, or green public transport require skilled professionals and well-trained human resources.
- **Issues with asset management and infrastructure**, as well as potential interruptions in technological systems.

♦ **Political, Leadership, and Strategic Planning Risks:**

- **Frequent political leadership changes** may disrupt climate policy continuity.
- **Lack of political consensus and poor alignment between local and national governance** may delay the adoption of necessary measures.
- **Bureaucratic decision-making and political instability** may slow progress toward climate neutrality.

♦ **Administrative and Governance Risks:**

- **Lack of a coherent strategy:** A clear vision and coordination across all local departments and with national authorities are necessary. Poor planning and inadequate monitoring can affect organizational efficiency.
- **Bureaucracy and cumbersome regulations:** Administrative processes can delay project implementation, especially regarding permits, authorizations, and public procurement.
- **Limited institutional capacity:** Some local administrations may lack sufficient human resources or expertise to manage complex climate transition projects. Recruitment and resource allocation issues can delay implementation.

♦ **Economic and External Risks:**

- **Changes in EU and national legislation:** Environmental policies may change due to the political and economic context, potentially affecting progress. Misalignment between local and national regulations may cause delays.
- **Dependence on global markets:** Rising prices for green materials, technologies, or renewable energy may hinder project implementation.
- **Geopolitical factors:** International crises (conflicts, economic instability) may lead to supply chain disruptions and project delays.

♦ **Environmental Risks:**

- **Natural disasters, pollution, and the urban heat island effect** pose significant threats.
- **Climate change increases vulnerability** of urban infrastructure and biodiversity.

♦ **Risks Related to Partnerships and Stakeholder Collaboration:**

- **Weak stakeholder relations and lack of clear communication** can lead to delays and misunderstandings.
- **Limited capacity of partners to contribute effectively** may impact project implementation.

♦ **Social Risks Related to Participation and Public Acceptance:**

- **Public reluctance and resistance to change:** Measures such as banning polluting cars, congestion charges, or stricter building regulations may trigger public discontent.
- **Social inequalities and limited access to green solutions:** Low-income individuals may struggle to adopt energy-efficiency measures (e.g., home insulation, electric vehicles); social housing and disadvantaged areas may lag behind in the green transition.
- **Lack of environmental education and public awareness:** A lack of information about the economic and health benefits of green measures can lead to distrust and passivity; few sustainability education programs may reduce community engagement.
- **Risks related to workforce and adaptation to new green industries:** The transition to a green economy may result in job losses in polluting sectors (e.g., conventional transport, energy-inefficient construction). Reskilling programs are needed to integrate workers into sustainable sectors.
- **Low business sector involvement:** The green transition also requires support from companies, but some firms may be reluctant to make costly sustainability investments.

♦ **Safety and Security Risks:**

- **Cybersecurity threats and civil society's ability to understand them** may disrupt climate measure implementation and affect critical infrastructure.
- **Price volatility and resource fluctuations** can create economic instability.

To mitigate these risks, the Municipality of Buzău can adopt the following measures:

- **Diversifying funding sources:** Buzău will explore alternative funding such as green bonds and EU funds, public-private partnerships, and private investments.
- **Creating a clear strategic plan** with measurable objectives, realistic deadlines, and well-defined responsibilities: Buzău will strengthen organizational capacity through effective collaboration, regular progress audits, early stakeholder engagement, and formal participation plans to prevent project execution risks.
- **Expanding green spaces and developing green infrastructure** (e.g., urban forests and green belts) gradually to ensure economic feasibility and long-term sustainability, reducing urban heat islands and absorbing CO_2.
- **Actively engaging the community** through awareness campaigns, environmental education, incentives for sustainable practices, inclusive measures for vulnerable groups, reskilling programs, public consultation, and active citizen participation in environmental decision-making.
- **Being flexible and adaptable to economic, political, and social changes** by adjusting plans according to the context.
- **Continuous monitoring of legislative changes** and collaboration with universities and NGOs will ensure quick adaptation to new requirements and compliance with EU standards.

- **Collaborating with environmental experts and research institutions** will enable proper risk assessment and the implementation of necessary preventive measures.
- **Working closely with NGOs** that provide expertise and resources will support successful initiatives.
- **Effective collaboration with local partners and ongoing monitoring** will ensure active engagement and quick solutions to potential challenges.
- **Strengthening cybersecurity:** Buzău will implement a robust crisis response plan, including regular simulations and risk assessments to ensure preparedness for cyber threats and market volatility.

The table below outlines **the significant risks associated with each action area analyzed**, which could affect the Municipality of Buzău's climate neutrality objectives, along with key solutions aimed at addressing them. This analysis includes both domain-specific and cross-cutting risks that may impact the entire Climate Neutrality Action Plan. Funding-related risks were also considered due to their influence on project implementation.

For each identified risk, we have developed specific mitigation solutions to ensure effective implementation of the investments and initiatives in the Plan. Many proposed actions serve dual purposes, supporting both climate neutrality and risk reduction. In addition, local authorities are committed to ongoing monitoring and adaptation to respond to recurring challenges and prevent emerging risks that could hinder the city's sustainable urban development goals.

This Action Plan also introduces additional measures targeting potential risks by identifying areas of vulnerability that could jeopardize the Municipality of Buzău's climate neutrality target for 2035. For implementation and progress monitoring, Buzău City Hall's technical experts will annually review the identified risks along with specific indicators included in the Action Plan.

Table 60 - MAIN RISKS

FIELD OF ACTION	IDENTIFIED RISK	RISK DESCRIPTION	MITIGATION SOLUTION
TRANSPORTATION	**Delays in National Infrastructure Projects**	The slow implementation of major transport infrastructure projects by central authorities results in insufficient connectivity and urban mobility challenges, particularly affecting Buzău's ability to develop a sustainable and efficient transport system. These delays hinder Buzău's integration into regional and national transport networks, limit economic growth, reduce accessibility for residents, and increase inner-city congestion. Additionally, postponed infrastructure projects—such as road expansions,	To counter the negative effects of delayed national infrastructure projects, the Municipality of Buzău will implement a multi-pronged strategy focused on improving local mobility, supporting policy advocacy, and fostering regional coordination. The approach includes alternative investments in urban transport, proactive collaboration with national authorities, and private stakeholder engagement to ensure continued progress in the city's mobility strategy despite external delays. ✦ Strengthening local and regional

		railway upgrades, and public transport improvements—prolong dependency on outdated, high-emission transport systems. This not only obstructs the transition to sustainable urban mobility but also worsens air pollution and carbon emissions. Uncertain project timelines also discourage private investment in green transport solutions and create challenges in aligning municipal mobility strategies with national policies. As a result, Buzău's ambition to enhance public transport, cycling, and pedestrian-friendly infrastructure is significantly constrained, weakening the overall effectiveness of climate neutrality actions.	transport infrastructure ✦ Proactive engagement with national authorities ✦ Leveraging alternative funding for local mobility projects ✦ Policy and regulatory adaptations ✦ Temporary and adaptive infrastructure solutions By implementing this multi-layered mitigation strategy, Buzău can reduce the impact of national-level infrastructure delays while ensuring ongoing improvements in urban mobility. This approach will allow the city to enhance public transport efficiency, encourage sustainable travel behavior, and maintain momentum toward climate-neutral mobility goals.
	Financial Uncertainty for Transport Projects	The successful implementation of sustainable urban mobility projects in Buzău faces significant financial risks due to the high costs associated with transport infrastructure investments. Rising construction material prices, inflation, and fluctuating energy costs create uncertainty in budget planning, often requiring project adjustments or leading to delays. One key challenge is that large-scale mobility infrastructure projects—such as public transport modernization, bike infrastructure expansion, or transitioning to electric bus fleets—require substantial upfront investment. Given the limited municipal budget, reliance on external funding is essential. However, delays in accessing EU funds or national government support, along with the complexity of grant applications, further strain financial planning and slow project execution. Additionally, energy price volatility—especially during the transition to electric and hydrogen-based transport solutions—poses a long-term financial burden. Operating costs for electric	To address these financial uncertainties, the Municipality of Buzău will implement a multi-pronged strategy to secure stable funding and optimize the return on mobility investments through: ✦ Diversifying funding sources ✦ Encouraging public-private partnerships (PPPs) ✦ Implementing dynamic financial planning ✦ Optimizing cost efficiency ✦ Promoting energy efficiency in transportation By proactively tackling financial uncertainties through these strategies, Buzău aims to ensure the long-term sustainability of its mobility infrastructure while aligning investments with its climate neutrality and economic development goals.

		vehicle (EV) fleets and public transport systems depend on electricity prices, which may fluctuate due to geopolitical and market factors. Without financial predictability, the shift to cleaner mobility solutions may become unsustainable, deterring investments in sustainable transport. Furthermore, public-private partnerships (PPPs) can provide alternative funding mechanisms but also introduce challenges such as negotiating favorable terms, ensuring financial viability, and managing risks associated with private sector involvement. If poorly structured, PPPs may lead to long-term financial commitments that do not always align with public interest.	
	Rising Number of Private Vehicles and Traffic Congestion	Buzău faces a continuous increase in motorization rates, driven by economic growth, higher disposable incomes, and the perception of private vehicles as a more convenient mode of transport. This trend presents multiple challenges for urban mobility, environmental sustainability, and overall quality of life. The rise in private vehicle ownership leads to increased traffic congestion, especially during peak hours, resulting in slower mobility, longer commute times, and reduced productivity. It also results in higher fuel consumption and CO_2 emissions, undermining the city's efforts to achieve climate neutrality. Excessive reliance on personal vehicles exacerbates air pollution through nitrogen oxides (NO_x) and particulate matter (PM), negatively impacting public health. Another major issue is the growing demand for parking, which puts pressure on urban land use. In densely populated areas, more space is allocated to parking than to green areas, pedestrian zones, or public facilities, contributing to inefficient land use and reduced availability of public spaces for community activities. Additionally, poorly managed parking	To counter the negative impact of the increasing number of private vehicles and congestion, Buzău will implement a comprehensive strategy promoting sustainable urban mobility and discouraging excessive car dependence: ✦ **Implementation of Sustainable Urban Mobility Plan (SUMP) measures:** The municipality will prioritize SUMP actions to improve traffic flow, encourage multimodal transport, and integrate digital traffic management solutions (e.g., smart traffic lights, congestion monitoring systems). ✦ **Public Transport Expansion and Modernization:** Investments will focus on increasing the efficiency, accessibility, and attractiveness of public transport—higher frequency and reliability of buses, route expansion, fleet modernization with electric/low-emission vehicles, and integrated smart ticketing systems. ✦ **Development of Cycling and Pedestrian Infrastructure:** The municipality will invest in expanding bike lanes, improving pedestrian paths,

		increases illegal parking on sidewalks and green areas, further limiting pedestrian mobility and urban aesthetics. The growing number of private vehicles also discourages public transport use, cycling, and walking, creating a feedback loop where car dependence increases further. Without sufficient investment in sustainable mobility alternatives, residents will continue to prioritize car use, leading to more congestion and environmental degradation.	and ensuring safe, connected, and accessible infrastructure for non-motorized transport users. New bike-sharing and e-scooter networks will also be introduced to offer alternative mobility options. ✦ **Low Emission Zones (LEZ) and Congestion Charges:** To discourage car dependence, Buzău will introduce LEZs restricting access for high-polluting vehicles. Congestion pricing models will also be explored to reduce unnecessary car trips in high-traffic areas and encourage public transport use. ✦ **Smart Parking Management and Car-Restrictive Policies:** The municipality will implement digital parking solutions to optimize space and prevent illegal parking. Measures such as higher parking fees in central areas, limited on-street parking, and park-and-ride facilities will be introduced to discourage car use in congested zones. ✦ **Public Awareness and Behavioral Change Campaigns:** A key strategy component is shifting public perception of private vehicle use. Awareness campaigns will highlight the benefits of sustainable mobility—including cost savings, reduced travel time, and improved health. Programs to promote carpooling and shared mobility solutions will also be promoted. By integrating these solutions, Buzău aims to reduce growing car dependence, improve urban mobility efficiency, and support its broader climate neutrality and sustainability goals.
BUILT ENVIRONMENT	**Aging Housing Stock and Seismic Risks**	Buzău's residential infrastructure includes a significant number of older buildings constructed before the implementation of modern seismic and	✦ **Integrate seismic reinforcement into energy renovation programs:** The municipality will ensure that structural

		energy efficiency standards. Many of these structures, especially those built prior to Romania's updated seismic codes, are structurally vulnerable to earthquakes. Given the region's exposure to seismic activity, these buildings pose a considerable safety risk to residents, with potential consequences including structural collapse, injuries, and economic loss. In addition to structural vulnerabilities, much of the housing stock is energy inefficient, resulting in high heating and cooling costs, excessive energy consumption, and increased greenhouse gas (GHG) emissions. Poor insulation, outdated heating systems, and inefficient windows and roofs lead to heat loss in winter and overheating in summer, putting additional strain on energy resources and household budgets. The combined risks of seismic vulnerability and energy inefficiency create a dual challenge: failing to address structural deficiencies exposes residents to earthquake-related hazards, while neglecting to improve energy efficiency contributes to carbon emissions and financial burdens for homeowners. Without coordinated action, these issues could slow the city's climate transition and compromise the safety and resilience of the built environment.	reinforcement measures are embedded into energy efficiency upgrades, maximizing modernization impact and avoiding fragmented, costly interventions. ✦ **Prioritize high-risk structures for intervention:** A citywide risk assessment will identify the most vulnerable buildings, prioritizing interventions based on structural deficiencies, year of construction, and occupancy levels (e.g., apartment blocks, schools, hospitals). ✦ **Access national and EU funding for seismic and energy improvements:** Buzău will actively pursue financial support from national resilience funds, EU grants, and public-private partnerships (PPPs) to finance large-scale modernization programs, easing the financial burden on homeowners. ✦ **Public awareness and incentives for private homeowners:** Residents and property owners will be encouraged to participate in voluntary upgrade programs through financial incentives, tax breaks, and awareness campaigns about the risks of seismic vulnerability and energy inefficiency. ✦ **Regulatory improvements and stricter building codes:** The municipality will enforce stricter seismic safety and energy efficiency requirements for all new buildings, while ensuring compliance with updated standards for existing structures undergoing renovation. ✦ **Local workforce development in construction and retrofitting:** Investments in local training programs will ensure a pool of skilled professionals to carry out large-scale modernization projects, fostering economic growth while improving

			residential resilience. By integrating these measures, Buzău will enhance the safety, sustainability, and climate resilience of its built environment, protecting residents from seismic risks while reducing energy consumption and emissions.
	Rising Construction Costs	Buzău's construction sector faces rising costs due to a combination of inflation, increased demand for raw materials, supply chain disruptions, and labor shortages. Prices for essential construction materials such as steel, concrete, insulation, and sustainable building technologies have risen significantly, impacting both public and private development projects. Additionally, geopolitical instability and energy price volatility contribute to unpredictable cost fluctuations, further straining municipal budgets. Another critical factor is the shortage of skilled labor in the construction industry. An aging workforce, migration of professionals to better-paying markets abroad, and insufficient vocational training programs have reduced the availability of qualified workers. This shortage drives up wages and delays project implementation, further exacerbating budget constraints. These escalating costs threaten the feasibility of climate neutrality projects, including energy-efficient building retrofits, green infrastructure development, and public transport expansion. Without proactive measures, the increased financial burden could delay key sustainability initiatives, making it harder for Buzău to achieve its climate and urban development goals.	✦ **Early project planning and cost-control strategies:** The municipality will conduct comprehensive feasibility studies and financial forecasts to anticipate cost fluctuations, ensuring better resource allocation and risk mitigation before project initiation. ✦ **Bulk and early procurement of materials:** Where feasible, the municipality will procure essential building materials in bulk or negotiate long-term contracts with suppliers to secure stable pricing and mitigate supply chain disruptions. ✦ **Public-private partnerships (PPPs) for cost stabilization:** Collaborating with private sector stakeholders—including developers, contractors, and suppliers—will help spread financial risk, optimize resources, and encourage investment in sustainable construction. ✦ **Diversify funding sources:** The municipality will mobilize EU grants, national funds, and alternative financing mechanisms, such as green bonds, to supplement budgetary constraints and support large-scale climate initiatives. ✦ **Invest in workforce development and training programs:** To address labor shortages, Buzău will support local training programs for construction professionals, encourage young workers to enter the sector, and promote the use of innovative building technologies.

			✦ **Promote locally sourced and recycled materials:** Encouraging the use of locally produced, sustainable, and recycled materials can reduce dependency on volatile global markets while supporting the local economy and lowering the carbon footprint. ✦ **Utilize digital construction and smart planning tools:** Adopting building information modeling (BIM) and other digital planning tools will enhance project efficiency, minimize waste, and optimize costs throughout the construction lifecycle. By implementing these measures, Buzău will improve the resilience of its urban development projects, ensuring that rising costs do not hinder progress toward climate neutrality and sustainable infrastructure goals.
	Limited Administrative Capacity to Implement Innovative Solutions	Successfully implementing smart, climate-neutral urban development projects in Buzău requires expertise in cutting-edge construction technologies, smart district planning, and nearly Zero Energy Buildings Plus (nZEB+) standards. However, the municipality faces administrative capacity constraints due to limited internal technical expertise, outdated regulatory frameworks, and insufficient exposure to best practices in sustainable urban planning. Emerging trends such as energy-efficient retrofitting, circular construction, digitized urban planning, and climate-resilient infrastructure require specialized knowledge and strategic coordination. A lack of trained personnel to oversee these complex projects leads to delays, higher implementation costs, and potential misalignment with EU and national sustainability goals. Additionally, integrating smart technologies—including IoT-based urban systems, green energy management, and smart mobility solutions—requires interdisciplinary	✦ **Collaboration with academic and research institutions:** Partner with universities, technical institutes, and research centers to develop specialized training programs and pilot projects in nZEB+ standards, energy-efficient construction, and smart district development. ✦ **Professional training for public administration staff:** Organize workshops, certification programs, and study visits for municipal staff to enhance their understanding of new building materials, digital urban planning tools, and sustainable construction policies. ✦ **Engagement with the Romania Green Building Council (RoGBC):** Consult with RoGBC and other sustainability organizations to align with international best practices, receive technical guidance, and facilitate knowledge exchange. ✦ **Creation of a dedicated innovation and sustainability task**

		collaboration and an advanced policy framework. Without strengthening administrative capacities, Buzău risks falling behind in adopting innovative solutions that could enhance its sustainability and resilience.	**force:** Establish an internal municipal unit focused on monitoring technology trends, coordinating climate action projects, and supporting interdepartmental collaboration to streamline decision-making for sustainable urban development. ✦ **Adoption of digital planning and simulation tools:** Invest in building information modeling (BIM), geographic information systems (GIS), and digital twins to optimize urban planning and infrastructure design. ✦ **Public-private partnerships (PPPs) for knowledge transfer:** Collaborate with private sector experts, startups, and technology providers to accelerate implementation of smart infrastructure and innovative construction solutions through co-funded pilot projects. ✦ **Active participation in EU and international networks:** Seek membership in EU-funded programs, international urban innovation initiatives, and climate resilience networks to gain direct access to funding, mentorship, and best practices in sustainable urban development. By enhancing administrative expertise and fostering collaboration with industry leaders, Buzău will strengthen its ability to implement cutting-edge, climate-neutral solutions, ensuring its urban development strategy remains at the forefront of innovation and sustainability.
ENERGY SYSTEMS	**Challenges in Modernizing the District Heating System**	Buzău's district heating system is outdated and inefficient, contributing to major energy losses, increased greenhouse gas (GHG) emissions, and higher operational costs. Many of the existing pipelines, heat production facilities, and distribution networks were developed decades ago and have	1. **Securing Diverse Sources of Funding for Modernization** Given the high costs of upgrading district heating systems, the municipality will diversify its funding mechanisms to ensure continued investment: ✦ **EU and Climate Funds**: o Actively seek funding from EU

		not undergone significant upgrades. This has led to low efficiency, frequent breakdowns, and unreliable service. Without urgent modernization, the system risks becoming financially unsustainable and will fail to meet climate neutrality targets. The district heating system faces significant inefficiencies due to aging infrastructure, high energy losses, and reliance on fossil fuels. Modernization is essential to reduce emissions, improve energy efficiency, and ensure affordability for residents. However, upgrades require substantial financial investment, regulatory adjustments, and technological innovation. The municipality will implement a comprehensive strategy focused on securing funding, integrating renewable energy sources, and improving system management.	programs, including the Just Transition Fund, the Recovery and Resilience Facility (RRF), and the Modernisation Fund. o Apply for grants under Horizon Europe and LIFE programs that support energy efficiency in urban heating. ✦ **Public-Private Partnerships (PPP)**: o Engage private investors and Energy Service Companies (ESCOs) to co-finance network upgrades, ensuring cost-effective implementation of new technologies. o Implement Energy Performance Contracts (EPCs), allowing private companies to finance and operate upgraded heating systems in exchange for a share of cost savings. ✦ **Municipal Bonds and Green Loans**: o Explore issuing green municipal bonds to attract investment in low-carbon heating infrastructure. o Partner with development banks and financial institutions to secure low-interest loans for energy transition projects. ✦ **User-Based Financing Models**: o Introduce progressive tariffs to encourage energy efficiency among consumers, while ensuring affordability for low-income households. o Implement demand-response pricing models, offering incentives for reduced consumption during peak hours. **2. Integrating Renewable and Waste Energy Sources** Transitioning to low-carbon and renewable energy sources will greatly enhance the sustainability of Buzău's district heating system: ✦ **Develop Waste-to-Energy Projects**: o Use biomass, biogas, and municipal solid waste (MSW) as alternative heat sources to reduce fossil fuel dependence. o Partner with industrial facilities to capture waste heat and feed it into the

			district heating network. ✦ **Expand Solar Thermal and Geothermal Heating**: o Install solar thermal collectors on public buildings and integrate them into the district heating system. o Assess the feasibility of deep geothermal heating as a stable and renewable heat source with minimal carbon impact. ✦ **Encourage Prosumer Participation in Heat Generation**: o Promote building-level solar thermal systems and heat pumps that can feed surplus energy into the district network. o Support energy cooperatives that allow communities and businesses to co-invest in decentralized heat production. ✦ **Enhance Energy Storage Capacity**: o Invest in Seasonal Thermal Energy Storage (STES) solutions to store heat generated in summer for winter demand. o Implement high-efficiency heat pumps to balance supply fluctuations and optimize renewable integration. **3. Modernizing Infrastructure and Reducing Heat Losses** Outdated pipelines and inefficient distribution networks contribute to major energy losses, making modernization a top priority: ✦ **Replace Old Pipelines with Smart, Insulated Networks**: o Phase out inefficient pipes and replace them with pre-insulated, low-temperature distribution systems to reduce heat losses. o Integrate smart heat meters and automated monitoring systems to detect leaks and optimize flow distribution. ✦ **Upgrade Heat Generation Facilities**: o Transition from outdated coal- and gas-fired boilers to modern, high-efficiency Combined Heat and Power

			(CHP) plants. o Introduce waste heat recovery solutions to enhance overall system efficiency. ✦ **Implement Demand-Side Management Technologies**: o Deploy advanced control systems that enable real-time supply adjustments based on consumption patterns. o Introduce smart thermostats and heating applications to help consumers monitor and optimize their energy use. **4. Regulatory Adjustments and Policy Support** A strong regulatory framework is essential to drive investment, ensure affordability, and encourage sustainable practices in district heating: ✦ **Advocate for National-Level Support**: o Collaborate with the national government to secure subsidies for low-carbon urban heating modernization. o Align local policies with national energy efficiency goals and climate commitments. ✦ **Develop Local Policy Incentives**: o Offer tax breaks or financial incentives for residential and commercial buildings that connect to upgraded district heating. o Mandate district heating connections in new developments where feasible. ✦ **Strengthen Consumer Protection and Engagement**: o Improve pricing transparency and service delivery, ensuring fair and predictable costs for residents. o Launch public awareness campaigns to promote energy-efficient behaviors and build consumer confidence in district heating. **5. Piloting Innovative Solutions and Future-Proofing the System** To ensure long-term sustainability, Buzău will actively explore cutting-edge district heating technologies and design

			innovative pilot projects: ✦ **Fifth-Generation (5G) District Heating Systems**: o Develop low-temperature heating with decentralized energy sources, improving efficiency and flexibility. o Integrate thermal networks with electricity grids, using surplus renewable electricity for heating. ✦ **Digitalization and AI-Based Optimization**: o Use AI-based predictive maintenance to minimize breakdowns and improve system reliability. o Implement blockchain-powered energy trading platforms to enable peer-to-peer heat exchange between buildings. ✦ **Building-Level Decentralized Heat Networks**: o Encourage local heat-sharing networks where buildings with surplus heat supply nearby users. o Promote hybrid heating solutions combining district heating with localized heat pumps and solar thermal systems. By implementing this multi-layered mitigation strategy, Buzău can overcome the challenges of modernizing its district heating system while ensuring a sustainable, cost-effective, and low-carbon future. The municipality's approach—centered on funding, renewable integration, infrastructure upgrades, and regulatory improvements—will transform district heating into a key pillar of the city's climate neutrality strategy.
	Slow Adoption of Renewable Energy Solutions	Bureaucratic hurdles, high upfront investment costs, and lack of incentives are delaying the transition to renewable energy.	Streamline permitting processes, offer financial incentives, and integrate decentralized renewable energy solutions (e.g., solar panels on public buildings).
GREEN INFRASTRUCTURE AND NATURE-BASED SOLUTIONS	**Environmental Risks Due to Urban Expansion**	Unplanned development encroaches on green spaces, leading to biodiversity loss and intensifying urban heat effects.	Enforce green infrastructure policies, expand urban parks, and implement nature-based solutions for climate adaptation.

	Gaps in Public Utility Infrastructure	Unequal distribution of water, sewage, and energy infrastructure—especially in peripheral areas—limits sustainable urbanization.	Expand utility networks in line with sustainable urban planning, implement smart metering, and invest in water-efficient technologies.
	Lack of Integrated Stormwater Management	Inadequate drainage systems cause urban flooding, damaging infrastructure and increasing disaster response costs.	Implement Sustainable Urban Drainage Systems (SUDS), green roofs, permeable pavements, and rainwater harvesting initiatives.
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	**Limited Community Engagement in Climate Neutrality Efforts**	Lack of public awareness and reluctance to adopt sustainable behaviors hinder climate action implementation.	Social innovation interventions, community-led sustainability programs, and public campaigns promoting environmental responsibility.
	Governance Constraints in Implementing Climate Policies	Bureaucratic obstacles and limited technical knowledge hinder effective climate governance.	The municipality will leverage EU technical assistance programs, collaborate with international climate networks, and develop digital governance tools to streamline processes.
WASTE & CIRCULAR ECONOMY	**Insufficient Infrastructure for Waste Sorting and Recycling**	The lack of proper sorting facilities results in low recycling rates and increased reliance on landfills.	Investment in modern sorting facilities, expansion of separate collection points, and digital monitoring of waste streams.
	Low Citizen Participation in Waste Separation	Limited public awareness and convenience contribute to poor recycling habits and high contamination rates in waste streams.	Public education campaigns, incentive programs for proper waste disposal, and improved accessibility to recycling infrastructure.
	Lack of Local Circular Economy Initiatives	Underdeveloped markets for recycled materials and upcycled products hinder the transition to a circular economy.	Support for local businesses in circular economy practices, development of repair and reuse centers, and incentives for companies using recycled materials.

Considering these risks and solutions, achieving climate neutrality in Buzău by 2035 is possible, but it requires a well-coordinated approach supported by all involved stakeholders.

To mitigate these risks, it is essential for local authorities to develop detailed strategies, ensure process transparency, and promote collaboration among all parties.

In this context, we also highlight the main natural vulnerabilities, environmental challenges, and climate risks faced by the Municipality of Buzău. The city is exposed to several natural and climate-related risks that could affect the achievement of climate neutrality goals and sustainable urban development.

The most important vulnerabilities include:

- **Flooding:**
  - Buzău is located in a high-risk flood area, especially due to the Buzău River and heavy rainfall;
  - The increasing frequency of extreme weather events may lead to urban flooding, affecting infrastructure and residential areas;
  - There is a need for a more efficient drainage system and flood protection measures.

- **Heatwaves and Extreme Temperatures:**
  - Climate change is driving up average annual temperatures, which can amplify the "urban heat island" effect;
  - Increased thermal discomfort for the population, especially the elderly and vulnerable groups;
  - Increased demand for energy to cool buildings, placing pressure on the electrical grid.

- **Drought and Water Stress:**
  - Reduced precipitation and high temperatures can affect drinking water resources;
  - Impacts on local agriculture and urban green spaces;
  - The need for efficient water consumption measures and expanded rainwater harvesting and reuse infrastructure.

- **Severe Storms and Wind Gusts:**
  - The intensification of extreme weather events such as strong winds and heavy rains can cause damage to infrastructure, power grids, and homes;
  - Risks to citizen safety and road traffic.

- **Landslides:**
  - Peri-urban areas and rugged terrain may be affected by landslides, especially after periods of heavy rainfall;
  - They can impact road infrastructure and buildings in vulnerable zones.

- **Air Pollution:**
  - Increased emissions from transport, industry, and residential heating contribute to poor air quality;
  - Negative effects on public health, especially for people with respiratory conditions;
  - The need to implement emission reduction measures and promote sustainable mobility.

- **Seismic Risks:**

- High-magnitude earthquakes: Buzău is located in a high seismic risk area, affected by quakes originating from the Vrancea zone;
- Vulnerability of infrastructure and buildings: older buildings are most exposed, and those with seismic risk endanger resident safety, while utility networks may suffer damage affecting city functionality;
- Risks to public safety: lack of education on earthquake safety measures can lead to more victims and damage; traffic and evacuation may be hindered by inadequately prepared road infrastructure.

Proposed solutions to reduce natural and climate-related risks:

- ✓ *Improvement of flood protection infrastructure – modernization of drainage and development of absorbent green areas;*
- ✓ *Expansion of green surfaces and shaded spaces to combat the urban heat island effect;*
- ✓ *Promotion of energy efficiency and renewable sources to reduce the impact of extreme temperatures;*
- ✓ *Sustainable water resource management – rainwater collection and reuse systems;*
- ✓ *Creation of an early warning and rapid response system for extreme weather events;*
- ✓ *Implementation of an urban plan adapted to climate change, considering identified risks;*
- ✓ *Seismic risk management is essential to protect the population and infrastructure of the Municipality of Buzău, and preventive measures can significantly reduce the impact of a major earthquake: retrofitting buildings with seismic risk, updating construction codes, modernizing critical infrastructure, implementing a seismic warning system, etc.*

To reduce the vulnerability of residents to climate change, the Climate Neutrality Action Plan is grounded in the principles of climate justice. These principles will guide the implementation of all measures aimed at reducing the municipality's carbon footprint. Through proactive measures and investments in resilient infrastructure, the Municipality of Buzău can reduce the impact of these risks and support a model of sustainable urban development adapted to climate change.

OPPORTUNITIES

Outline the main opportunities you aim to leverage in order to accelerate the local transition towards climate neutrality.

Buzău has the opportunity to accelerate the transition to climate neutrality by accessing European and national funding programs.

Leveraging funding from the European Green Deal, the Just Transition Mechanism, the Modernization Fund, and the National Recovery and Resilience Plan will enable investments in sustainable infrastructure. Additionally, financial support provided through the Horizon Europe and LIFE programs will facilitate research, innovation, and the development of pilot projects in clean energy and sustainable mobility. National funding schemes and public-private partnerships (PPPs) will be key tools for the co-financing of large-scale climate projects.

The city also holds significant potential in the field of renewable energy and prosumer engagement. Expanding photovoltaic installations on public buildings, industrial facilities, and residential complexes will contribute to the shift toward clean energy. Developing energy communities will allow citizens and companies to produce, store, and trade renewable energy, while geothermal and waste-to-energy projects will play a critical role in decarbonizing district heating systems and industrial processes.

Other opportunities in the energy sector include:

- Improving local and national policies: producer-oriented and consumer-oriented policies;
- Implementing local energy markets;
- Involving the private sector and other stakeholders in achieving zero carbon emissions in energy systems;
- Promoting green hydrogen and battery energy storage solutions to enhance energy security and grid flexibility;
- Increasing hydrogen production and storage capacities;
- Favorable local regulations for expanding district heating systems;
- Availability of new and innovative technologies;
- Favorable market conditions.

Advancements in sustainable urban mobility will support emission reductions and reduced traffic congestion.

The implementation of the Sustainable Urban Mobility Plan (PMUD) will facilitate the expansion of low-emission public transport, pedestrian zones, and cycling infrastructure. Electrification of municipal transport fleets and the introduction of incentives for the adoption of electric vehicles and charging infrastructure expansion will accelerate the transition to cleaner transportation. Developing multimodal

transport hubs will improve connectivity and reduce reliance on private cars, while integrated mobility platforms (MaaS) and smart traffic management solutions will enhance overall transport system efficiency.

Other opportunities in urban mobility include:

- Opportunity to collaborate with other European cities experienced in zero-emission mobility through knowledge exchange, best practice transfer, and replication activities;
- Availability of generous national and European funds dedicated to green mobility and transport;
- The attractiveness of the "Walkable City" initiative, driven by growing interest in the "15-minute city" concept;
- Increased public interest in using electric bicycles for urban commuting;
- Organizing civic imagination and innovation sessions to raise awareness and engagement in clean and active mobility;
- The process of introducing a new legal framework for hydrogen use in transport;
- Improving transport efficiency through the use of connected autonomous vehicles (CAVs) in Mobility on Demand systems.

In the field of circular economy and sustainable industry, Buzău can promote industrial symbiosis by encouraging local companies to reuse waste and by-products. Green production and sustainable construction practices, such as the use of recycled materials, low-emission cement, and wood-based solutions, will contribute to emission reduction. Improving separate collection, recycling, and composting programs will reduce landfill dependence, while businesses will be encouraged to adopt eco-design principles and circular supply chains.

Other opportunities in the circular economy include:

- Untapped potential for using waste to generate electricity for electric vehicle infrastructure;
- The idea of adopting a municipal-level food waste platform — proposed by the "Reducing Food Waste, Feeding People" project — and expanding it to include other types of waste;
- Substantial EU funding dedicated to the circular economy under the European Green Deal and the new EU Circular Economy Action Plan.

The transition to energy-efficient buildings and smart infrastructure represents another major opportunity.

Expanding deep energy renovation works for residential, commercial, and public buildings will incorporate standards for nearly zero-energy and positive-energy buildings (nZEB+). The implementation of smart grids, energy-efficient public lighting, and centralized cooling solutions will help optimize urban energy consumption. Additionally, adopting digital twin technologies and automated building systems will improve resource efficiency and sustainability in the built environment.

Other opportunities in the built environment include:

- Availability of substantial non-reimbursable funds for building renovation through the South-East Regional Program 2021–2027;
- Potential for implementing energy-efficient practices;
- Integration of green building design principles, such as passive solar design, natural ventilation, and green roofs to reduce energy consumption and improve indoor environmental quality;
- Conducting building life-cycle assessments (LCAs), with the support of ROAT and the municipal energy manager, to identify opportunities to reduce carbon footprints;
- Policies and regulations that can incentivize energy efficiency, renewable energy use, and sustainable construction practices;
- Improved collaboration among stakeholders, including building owners, developers, architects, engineers, policymakers, and financiers.

Strengthening green governance and citizen engagement will be essential for the long-term success of climate neutrality initiatives.

Creating a local climate governance body will facilitate the coordination of cross-sector climate policies and projects. Stronger partnerships with academic institutions, research centers, and NGOs will stimulate innovation and knowledge sharing. Citizen-led climate initiatives will enable communities to co-create local sustainability projects, while climate education programs in schools and universities will raise awareness and prepare the workforce for the green transition.

Nature-based solutions and climate resilience measures will amplify Buzău's sustainability efforts.

Expanding urban green spaces, implementing tree planting programs, and developing green roofs will support biodiversity and reduce the urban heat island effect. Flood prevention and water retention strategies, including the use of permeable surfaces and blue-green infrastructure, will enhance climate adaptation. Sustainable and agroforestry practices will help lower emissions from food production and land use, while also promoting environmental health.

Other opportunities in the built environment include:

- The large number of local NGOs active in environmental protection;
- Growing resident interest in healthy habits and active lifestyles;
- Potential to expand green infrastructure projects due to strong municipal-level cooperation;
- High interest from citizens and entrepreneurs when presented with innovative carbon-neutral project solutions.

Finally, digitalization and smart city technologies will play a crucial role in optimizing climate action.

Real-time energy and emissions monitoring systems will enable more informed decision-making, while AI, IoT, and blockchain-based applications will support smart energy grids, traffic management, and circular economy initiatives. Creating a smart city innovation hub will attract tech startups and green solution providers, positioning Buzău as a leader in smart and sustainable urban development.

By strategically leveraging these opportunities, Buzău can accelerate its transition to climate neutrality, while strengthening economic resilience, social inclusion, and environmental sustainability.

ASSISTANCE NEEDS

Provide a brief overview of the key areas or aspects where external support would be required, in order to overcome the local barriers, mitigate the external risks and capitalise on the available opportunities, such as to achieve climate neutrality.

- ➔ **Take into account the gaps that need to be fulfilled (eg., financing, data collection, monitoring and assessment, knowledge deficiencies, governance, citizen engagement, stakeholder collaboration, innovative approaches etc.).**

In its effort to achieve climate neutrality by 2035, the Municipality of Buzău aims to implement a coherent set of integrated measures to reduce CO_2 emissions at the local level. This transition will be based on a combination of structural interventions and complementary initiatives designed to support sustainable development.

However, to accelerate this process and maximize the impact of the adopted measures, **external support is essential**. Technical assistance plays a crucial role in strengthening climate change mitigation actions, ensuring the implementation of effective solutions with significant direct effects and broad-scale benefits.

In this context, there are several **key areas where additional guidance is needed** to overcome local challenges, manage external risks, and fully leverage available opportunities.

A critical area of support is access to funding and investment, including increasing financial resources from European and national sources for sustainable infrastructure, energy efficiency, and green mobility projects. Additionally, technical assistance for project preparation is necessary to improve the quality of funding applications and ensure long-term financial sustainability. Support for innovative financing models, such as green bonds, climate funds, and public-private partnerships (PPPs), will be crucial for attracting private investment.

Another key area is data collection, monitoring, and impact evaluation. The development of an integrated climate data system will allow tracking of emissions, energy consumption, and progress in climate adaptation. Real-time monitoring technologies will help assess air quality, mobility patterns, and the energy efficiency of buildings. Moreover, expertise in life-cycle assessments (LCA) and carbon footprint analyses will support evidence-based decision-making and the development of more effective climate policies.

Capacity building and knowledge transfer will be essential for equipping municipal staff, policymakers, companies, and citizens with the skills needed to actively participate in the green transition. Training programs will focus on emerging climate technologies, nearly zero-energy buildings with positive energy balances (nZEB+), and energy management. Partnerships with universities, research centers, and European cities will facilitate the exchange of best practices in climate-neutral urban development.

Educational and awareness initiatives will also strengthen the engagement of both the public and private sectors in sustainability efforts.

Strengthening governance and policy integration is another area where external support is necessary.
Better coordination between local, regional, and national authorities will facilitate the alignment of policy objectives and infrastructure development plans. Creating a climate governance framework, including a dedicated working group or advisory council, will ensure strategic oversight. In addition, legal guidance and clear regulations will be needed to facilitate the implementation of policies on renewable energy, sustainable mobility, and the circular economy.

Citizen engagement and stakeholder collaboration will play a crucial role in ensuring an inclusive transition.
Participatory decision-making mechanisms will enhance community involvement in climate policies, and support for local businesses and industries will help them adopt greener practices through training and incentives. Public awareness campaigns and digital engagement tools will encourage behavioral change toward more sustainable practices and cultivate a sense of climate responsibility.

Finally, adopting innovative approaches and smart solutions will accelerate progress toward climate neutrality.
The implementation of “digital twin” technologies and AI-based analytics will improve urban planning and energy optimization. Technical assistance for the implementation of nature-based solutions—such as green roofs, urban forests, and water management systems—will strengthen climate resilience. Additionally, pilot projects in the circular economy, clean mobility, and decentralized renewable energy production will stimulate innovation and set new benchmarks for sustainability.

By ensuring external support in these essential areas, Buzău can close existing gaps, minimize risks, and accelerate its path to climate neutrality, securing a resilient, green, and future-ready city.

III. INVESTMENT PLAN

EXISTING FUNDING AND FINANCING

Outline, analyse and evaluate the past and current funding and financing allocated to climate-related initiatives across each field of action.

Emphasize, analyze, and evaluate past and current funds and financing allocated to climate-related initiatives in each area of action.

The total budget of the Municipality of Buzău (excluding subordinate institutions with activities irrelevant to climate neutrality**) reached a value of €88 million collected in 2024**, almost double the amount registered in 2019.

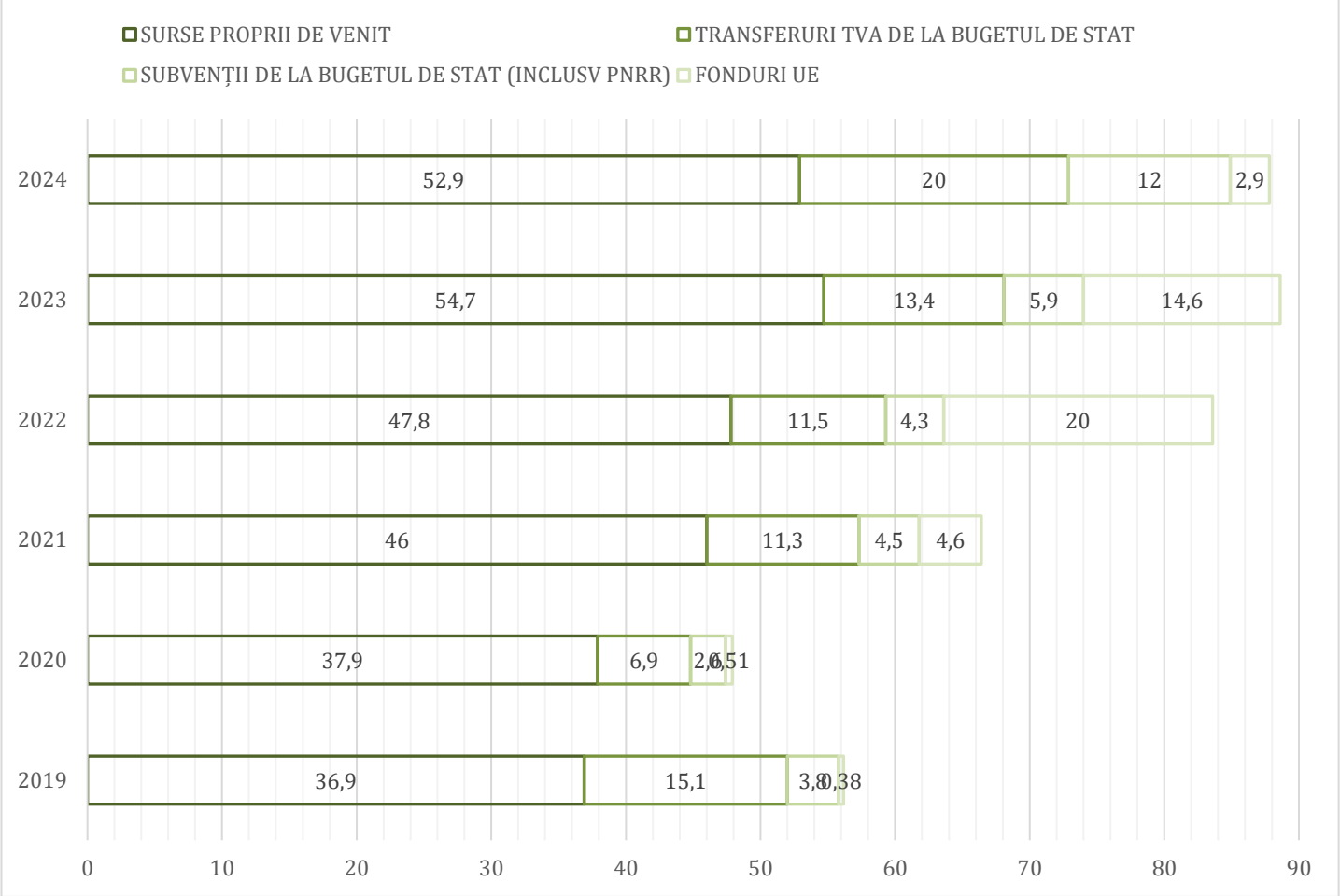
The projected budget, currently under approval, for the year 2025 indicates a record income of approximately €180 million, due to the generous contribution of EU funds, particularly from the National Recovery and Resilience Plan (NRRP).

Table 61. REVENUE SOURCES FOR THE MUNICIPALITY OF BUZĂU BASED ON BUDGET EXECUTION FOR THE PERIOD 2019–2024[1]

Action Domains	2019	2020	2021	2022	2023	2024
OWN REVENUE SOURCES	€ 36,9 mil.	€ 37,9 mil.	€ 46 mil.	€ 47,8 mil.	€ 54,7 mil.	€ 52,9 mil.
VAT TRANSFERS FROM THE STATE BUDGET	€ 15,1 mil.	€ 6,9 mil.	€ 11,3 mil.	€ 11,5 mil.	€ 13,4 mil.	€ 20 mil.
SUBSIDIES FROM THE STATE BUDGET (INCLUDING NRRP)	€ 3,8 mil.	€ 2,6 mil.	€ 4,5 mil.	€ 4,3 mil.	€ 5,9 mil.	€ 12 mil.
EU FUNDS	€ 0,38 mil.	€ 0,51 mil.	€ 4,6 mil.	€ 20 mil.	€ 14,6 mil.	€ 2,9 mil.
TOTAL BUDGET	€ 56,3 mil.	€ 48 mil.	€ 66,1 mil.	€ 83,9 mil.	€ 88,7 mil.	€ 87,9 mil.

[1] *Source: Buzău Municipality, Economic Division, Department of Budget Finance*

Figure 10 - REVENUE SOURCES FOR BUZĂU MUNICIPALITY BASED ON BUDGET EXECUTION FOR THE PERIOD 2019-2024



Over 35% of the projected local budget for 2024 was allocated to relevant climate policies, such as the energy renovation of public and private buildings, public transport, waste collection, infrastructure for electric vehicles, green spaces, and district heating. These allocations include both capital investments and current expenditures, such as subsidies for the operation of public transport, subsidies for heating homes connected to the district heating system, and the maintenance and cleaning costs of green areas.

FUNDING ALLOCATION BY FIELD OF ACTION

Table 62. PROJECTED FINANCIAL ALLOCATION BY AREAS OF ACTION ACCORDING TO THE APPROVED LOCAL BUDGET FOR THE YEAR 2024 [2]

FIELDS OF ACTION	SECTOR SUBSECTION	% CURRENT BUDGET ALLOCATION
TRANSPORTATION	*Public transport*	*6,05%*
	Unmotorized mobility	*2,59%*
	Infrastructure for electric vehicles	*3,63%*
BUILT ENVIRONMENT	*Energy renovation of public buildings*	*6.20%*
	Energy renovation of residential buildings	*3.72%*
	nZEB + public buildings	*1%*
ENERGY SYSTEMS	*District heating*	*2.63%*
	Public lighting	*1.06%*
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS	*Parks, green and recreational areas*	*3.38%*
WASTE AND CIRCULAR ECONOMY	*Waste collection and sanitation*	*5.37%*

– The capital flow table also includes the capital stock –

The energy renovation of buildings received the highest level of public funding - **approximately €9.5 million** - most of which comes from EU-funded projects implemented under the National Recovery and Resilience Plan (NRRP).

Public transport ranks second in terms of annual subsidies - **over €10 million** - and requires substantial investment to modernize the system.

Waste collection and public sanitation are also costly, with significant funds allocated - **approximately €4.7 million** - for improving separate waste collection systems.

Not least, **green spaces, public lighting, pedestrian and cycling infrastructure, and district heating can play a central role in achieving municipal climate neutrality**. Budget allocations for these areas are still modest, but the municipality has concrete plans to attract external financing to prioritize them.

[2] *Source: Own calculations based on the local budget approved by the Local Council of the Municipality of Buzău, published on the official website.*

These initiatives cover a wide range of measures aimed at reducing carbon emissions and improving residents' quality of life, from energy efficiency and sustainable transport to the expansion of green spaces and educational projects.

Among the key initiatives and projects supporting the transition to climate neutrality are:

- **Energy efficiency projects for residential and public buildings** – 20 residential buildings and 3 public buildings – with an average emission reduction of 54%, according to energy audits.
- **Energy efficiency and seismic risk consolidation projects** – 46 residential buildings and 6 public buildings – with an average emission reduction of 58% post-implementation, based on energy audits.
- All new buildings developed under NRRP-funded projects will be **nZEB (nearly zero-emission) and ZEB (zero-emission)** buildings – using minimal or no fossil fuels, such as the **Dual Education Campus**, which operates entirely without fossil fuel use.

To promote a sustainable future, the Municipality of Buzău launched an innovative project – the **"Technical Dual Education Campus"**. This campus offers vocational training opportunities for young people wishing to specialize in green energy, energy efficiency, and environmental protection technologies. Through partnerships with private sector companies, the campus provides practical internships and skill development aligned with the needs of a green economy. This initiative contributes to creating a qualified workforce to support the development and implementation of sustainable technologies and practices in the city.

The **"Green School"** project is a flagship initiative of the Municipality of Buzău, aimed at educating and raising awareness among the younger generation about environmental protection and the importance of reducing carbon emissions. The program includes educational activities, workshops, and awareness campaigns encouraging students to adopt sustainable behaviors. Students participate in recycling projects, learn about renewable energy, and engage in tree-planting activities. This initiative not only educates young people about sustainability but also helps shape a responsible generation conscious of their environmental impact.

Through integrated projects to modernize public transport—including the acquisition of electric buses and minibuses, traffic and fleet management systems, intermodal transport hubs, a fleet of 500 municipal bicycles, and dedicated lanes for public transit—a **50% reduction in transport-related emissions** is projected.

At the same time, the Municipality of Buzău is implementing projects to develop **38 electric vehicle charging stations**, funded through the Environmental Fund Administration (AFM) and the NRRP. These EV charging stations are essential for reducing emissions and enabling the shift to sustainable transport. As this infrastructure expands, its positive impact on the environment and economy will grow significantly. In this

way, Buzău is solidifying its position as a city focused on a green future by promoting eco-friendly mobility solutions.

For public lighting, the Municipality of Buzău has completed and is currently implementing three major projects funded by the local budget and AFM. Through the rehabilitation of the public lighting system, approximately **70% of lighting fixtures have been replaced** with energy-efficient, dimmable LED units with a significantly longer lifespan. A **remote management system** has also been implemented, enabling additional energy savings by allowing for scheduled dimming and precise control over lighting hours.

Additionally, under the **Modernization Fund (FM)**, through Key Program No. 1 – *Supporting investment in new electricity generation capacities from renewable sources for self-consumption* – the Municipality of Buzău submitted a project to develop a **solar power park with a capacity of 3.531 MWp**, designed to cover the city's energy needs.

To support responsible waste management and recycling, Buzău has inaugurated a **Voluntary Drop-off Collection Center (CAV)**. This center enables residents to selectively deliver and dispose of various types of waste, including recyclables and bulky waste. The project aims to increase recycling rates and reduce the amount of waste sent to landfills. The CAV contributes to the development of a circular economy in Buzău and encourages the community to adopt more sustainable consumption practices.

As a complementary project aimed at emissions reduction and environmental and biodiversity protection, the Municipality of Buzău has signed a reforestation contract for a **13.6-hectare area**, funded through NRRP – Component 3.

Other projects aimed at reducing greenhouse gas emissions include **urban regeneration initiatives**, transforming degraded or unused areas in neighborhoods into green spaces that enhance quality of life.

In addition, the Municipality of Buzău aspires to become a pioneer in implementing **integrated projects to combat climate change**, through major investments in **green-blue infrastructure**. This type of infrastructure is vital for cities pursuing climate neutrality, providing nature-based solutions for resource management, emission reductions, and building more climate-resilient communities.

It can be stated that, to date, the **total value of investments in energy efficiency and climate change mitigation**, including completed and ongoing projects, amounts to approximately **€350,000,000**.

STRATEGIC FUNDING AND FINANCING

Assess the city's current financial policies, in order to illustrate how the public administration is allocating capital towards becoming climate neutral.

- ➔ **This evaluation should encompass the existing strategies and resources available to the city to facilitate the transition.**
- ➔ **Identify the various forms of capital available for the city, particularly those specific to local climate neutrality targets.**

The Municipality of Buzău has implemented and envisions a variety of programs and financing mechanisms to support climate actions and reduce greenhouse gas emissions. These initiatives are carried out both at the municipal level and through targeted projects in high-emission sectors.

- **Municipal-level programs and financing mechanisms:**
  - **Contracting reimbursable financing:** The Municipality of Buzău has pursued and continues to pursue reimbursable financing to carry out public investment objectives, particularly for projects funded through external non-reimbursable sources under the South-East Regional Program 2021–2027.
  - **EU funds for green projects:** As one of the ten Romanian cities selected to receive part of the €1 billion allocated for green projects, Buzău will develop initiatives aimed at reducing emissions and promoting sustainability.
- **Project-based programs and financing mechanisms in specific sectors:**
  - **Green energy production:** The Municipality has launched a project to build a photovoltaic solar park to produce green energy and reduce reliance on traditional energy sources. This project is funded through the **Modernization Fund of Romania**, under **Key Program 1: Renewable Energy Sources and Energy Storage**.
  - **Energy efficiency in public buildings:** Financing opportunities exist for the energy renovation of public buildings, targeting both moderate and deep renovations. These funds aim to improve energy efficiency and reduce energy-related emissions in the public sector.
  - **National programs for green energy and composting:** The Ministry of Environment has launched funding programs to promote green energy and composting, accessible to local authorities including the Municipality of Buzău. These programs aim to reduce emissions by supporting renewable energy sources and sustainable organic waste management.

By accessing and implementing these programs and financing mechanisms, the Municipality of Buzău strengthens its efforts to become climate-neutral and reduce emissions across multiple sectors, thus contributing to national and European environmental objectives.

In terms of total municipal budget revenues, these have **doubled between 2019 and 2024**, mainly due to the doubling of income from local sources. The main revenue source for the Municipality of Buzău is the **personal income tax**, which is directly proportional to the number of employees and their average salary. The economic growth reported by the city over the past five years has led to higher income tax collections. Meanwhile, **property and vehicle taxes** saw only a **modest increase of 34%** compared to 2019 levels. Other local revenue sources—such as concession, rental and dividend income, fines, special taxes, and various public services provided to residents and businesses—continue to follow a positive growth trend.

EU funds are the second most important source of income for the municipality, after local taxes and services. Between 2019 and 2024, the volume of EU funds increased **sevenfold**, thanks to sustained efforts by the City Hall in preparing, submitting, and successfully implementing projects. As of 2024, ongoing EU-funded projects amount to **€168 million from the NRRP alone**. Additionally, the city benefits from a **pre-allocation of approximately €80 million** under the South-East Regional Program 2021–2027, with further funds obtained through other EU programs. Realistically, the city has strong potential to **significantly increase EU fund absorption by 2030** compared to previous funding cycles.

At the same time, **national subsidies for investment projects** have played an essential role for the Municipality of Buzău during this period. These were primarily obtained through the **Modernization Fund**, the **Environmental Fund Administration (AFM)**, and various national programs. The funding has been directed toward key areas necessary for achieving climate neutrality, including **green energy production, cogeneration, modernization of public lighting, development of EV charging stations, seismic strengthening and energy renovation of central-area apartment blocks**, and **energy efficiency improvements in public buildings**. The number of programs managed at the national level continues to expand, and some—such as those implemented by the AFM—actively support the transition to a green economy. The City Hall plans to continue leveraging these funding opportunities to support the sustainable development of the city.

Regarding the **2025 budget**, it is currently pending approval by the Local Council of the Municipality of Buzău and anticipates **total budget revenues of €178 million**. Of this amount:

- **€55.8 million** will come from own sources
  - €37.9 million from income tax
  - €14 million from property and vehicle taxes
  - €3.9 million from other local sources
- **€12.2 million** from VAT transfers
- **€108.6 million** from national subsidies
- **€1.4 million** from EU funds (including NRRP).

INCOME SOURCES FOR THE CITY

Table 63. PROJECTED REVENUE SOURCES FOR THE MUNICIPALITY OF BUZĂU, ACCORDING TO THE LOCAL BUDGET, FOR THE YEAR 2025 [3]

INCOME CATEGORY	CITY INCOME	% OF CITY BUDGET
Income taxes	€ 37,9 mil.	21,32%
Property taxes (buildings, land, vehicles)	€ 14,0 €mil.	7,9%
Revenue from concessions, rentals, and dividends	€ 1,5 mil.	0,84%
Capitalization of public assets	€ 0,0 mil.	0,0%
Fines and penalties	€ 1,2 mil.	0,66%
Other taxes and services delivered to residents and businesses	€ 0,0 mil.	0,0%
VAT transfers	€ 12,2 mil.	6,84%
Subsidies	€ 108,6 mil.	60,98%
EU funds (including NRRP)	€ 1,4 mil.	0,78%
Other sources	€ 1,2 mil.	0,68%
TOTAL INCOME	**€ 178 mil.**	**100%**

Of the total estimated revenues, 73% (approximately €131 million) are allocated for investments, most of which are financed through European funds.

To support these investments, the local administration has proposed a reduction in operating expenditures by approximately €5 million. Among the major planned projects are:

- Rehabilitation and structural strengthening of 40 apartment blocks
- Development of a university and dual education campus
- Afforestation of the area adjacent to the Municipality of Buzău
- Construction of an Aqua Park
- Development of a municipal cemetery
- Road infrastructure rehabilitation

Full budget project details, including summaries of the operational and development sections, as well as the list of investment objectives for 2025, can be accessed on the official website of the Municipality of Buzău

[3] *Source: Local budget pending approval by the Local Council of the Municipality of Buzău*

(primariabuzau.ro).
To encourage citizen participation, the City Hall has published the budget draft both on its official website and at the institution's public notice board, inviting residents to express their opinions and suggestions.
These measures reflect the local administration's commitment to implementing transparent and development-oriented financial policies, allocating substantial resources to projects aimed at improving the quality of life in the municipality.

Implementation of the Climate Neutrality Action Plan (CNAP) is strongly influenced by a framework of international, national, regional, and local policies and regulations.
These regulations determine funding mechanisms, investment priorities, and compliance with European and global climate and sustainability standards.

- **International Policies and Regulations:**
- **EU Taxonomy for Sustainable Finance**
  • Regulates how investments can be labeled as "sustainable," affecting access to funding for CNAP projects
  • Establishes clear criteria for classifying investments in green infrastructure, renewable energy, and energy efficiency
  • *Impact*: CNAP projects must align with the taxonomy to access EU financing (e.g., Just Transition Fund, InvestEU, Horizon Europe)
- **Task Force on Climate-related Financial Disclosures (TCFD)**
  • Set of recommendations for climate risk transparency in financial strategies
  • *Impact*: The Municipality of Buzău must adopt TCFD reporting to facilitate access to private and EU funds
- **European Green Deal & "Fit for 55" Package**
  • Increases energy efficiency standards and regulates the transition to green energy
  • *Impact*: Access to EU structural funds and other financing is contingent on compliance with these policies
- **Paris Agreement and EU Climate Governance Regulation**
  • Imposes GHG emission reduction obligations
  • *Impact*: CNAP must align with the EU's climate neutrality target for 2050
- **National Policies and Regulations:**
- **Integrated National Energy and Climate Plan (NECP 2021–2030)**
  • Sets Romania's strategic direction in energy and climate
  • *Impact*: Municipal investments must be compatible with NECP objectives to access national and EU funds
- **National Sustainable Development Strategy**
  • Defines priorities for green transition, financing, and environmental policy

• *Impact*: Municipal policies must align to attract funding from NRRP and other governmental sources

- **Law no. 121/2014 on Energy Efficiency**
  • Imposes obligations on local administrations for energy efficiency in buildings and transport
  • *Impact*: Buildings and public transport infrastructure in CNAP must comply to be eligible for funding
- **Regional and Local Policies and Regulations:**
- **South-East Regional Program (PR) 2021–2027**
  • Main funding source for local green infrastructure and urban mobility projects
  • *Impact*: CNAP investments must align with PR priorities to be financed
- **Integrated Urban Development Strategy (SIDU)**
  • Defines the city's development goals within the regional context
  • *Impact*: CNAP must be aligned with this strategy to secure local and EU funding
- **Sustainable Urban Mobility Plan (PMUD)**
  • Local policy on public transport, bike infrastructure, and pedestrian areas
  • *Impact*: Funding for sustainable transport projects in CNAP depends on compliance with PMUD

In conclusion, to maximize funding access, CNAP must:

- ✓ Be aligned with the EU Taxonomy to obtain European funding
- ✓ Adopt TCFD principles to attract private investment
- ✓ Comply with the Paris Agreement and NECP to qualify for government funding
- ✓ Integrate local and regional strategies (PR, SIDU, PMUD) for efficient financing

This strategic alignment will enable the Municipality of Buzău to access diverse financial resources essential for the successful implementation of the Climate Neutrality Action Plan.

Assessing Buzău Municipality's capacity to access and utilize capital involves analyzing how the local administration manages financial resources and attracts investments for development.
This includes four key components: the municipal budget, procurement policies, incentive schemes, and public sector financing instruments.

- **The municipal budget** is the main financial tool of the local administration, providing resources for public service operations, infrastructure development, and the implementation of strategic projects. The city's ability to attract external funds—whether national or European—significantly contributes to sustainable development and the diversification of financial resources.
- **Public procurement policies** play a vital role in efficient resource management, ensuring transparency, competitiveness, and compliance with national and EU regulations through public tenders and adherence to applicable legislation. By optimizing these policies (e.g., selecting best-

value offers), the Municipality of Buzău can reduce costs and improve project quality. An effective procurement process increases the city's capacity to use resources strategically and sustainably.

- **Incentive schemes**, such as tax reliefs or subsidies, can encourage private investment in strategic areas like energy efficiency, sustainable urban development, and green mobility. Through such measures, the local administration can attract new public-private partnerships (PPPs) for infrastructure and urban services projects and support the city's economic development.
- **Public sector financing instruments** include both traditional sources—such as loans from international financial institutions (e.g., EBRD or EIB) and municipal bond issuance—and innovative mechanisms like public-private partnerships, grants, and national programs offered by the government for urban modernization, renewable energy, and infrastructure, as well as EU non-reimbursable funds available through various operational programs (e.g., NRRP, PR 2021–2027). Diversifying these sources can increase the city's financial resilience and improve the implementation of investment projects.

By strengthening these elements—an efficient budget, transparent procurement policies, attractive incentives, and diversified financing sources—the Municipality of Buzău can significantly enhance its capacity to access and effectively use the capital needed for sustainable development.

CAPITAL SOURCES FOR THE CITY

Table 64. PROJECTED CAPITAL SOURCES FOR THE MUNICIPALITY OF BUZĂU FOR THE PERIOD 2026–2035 [4]

IPALE

TYPE	SIZE RANGE	LEVEL	DESCRIPTION
LOCAL SOURCES (LOCAL BUDGET REVENUES FROM TAXES AND SERVICES)	**€100,9 million**	*Public*	The allocation of the local budget targets the co-financing of EU projects, infrastructure investments, and the provision of essential public services such as subsidies for district heating, public transport, street lighting, park maintenance, sanitation, etc.
MUNICIPAL LOANS	**€152 million**	*Public*	The municipality will contract loans from the State Treasury, Romanian commercial banks, international financial institutions (such as the European Investment Bank, the European Bank for Reconstruction and Development, and, more rarely, the World Bank—typically via the Government), as well as from other specialized funds or instruments to finance

[4] *Source: Own estimates*

			strategic investments in areas such as public transport, district heating, green initiatives, etc.
NRRP (National Recovery and Resilience Plan)	**€44.8 million**	*Public*	Among the already contracted projects are the modernization of the public transport fleet and service digitalization, energy renovation of public and residential buildings, construction of nZEB+ public housing, and the development of eco-islands and voluntary waste collection centers.
SOUTH-EAST REGIONAL PROGRAM 2021–2027	**€73.5 million**	*Public*	The Municipality of Buzău benefits from a pre-allocation of €80 million for sustainable urban mobility, green infrastructure, and urban regeneration, supplemented by opportunities through competitive calls.
OTHER EU PROGRAMS FOR THE 2021–2027 PROGRAMMING PERIOD	**€140 million**	*Public*	Projects submitted under competitive calls (e.g., the Modernization Fund, Sustainable Development Program for energy-related projects, environmental protection programs managed by the Environmental Fund Administration, national programs, etc.)
EU FUNDING POST-2027	**€181 million**	*Public*	For the upcoming financing period, an increase is estimated in EU funds allocated to local projects focused on the climate transition, including public transport, energy efficiency, renewable energy production, green infrastructure, and climate change adaptation measures.
PRIVATE FINANCING	**N/A**	*Private*	

In conclusion, the Municipality of Buzău has significant opportunities to attract and efficiently utilize capital; however, success depends on responsible budget management, optimization of public procurement, implementation of attractive incentive schemes, and diversified access to funding sources. Strengthening these aspects can transform the city into a model of sustainable and efficient development.

COST SCENARIOS AND CAPITAL PLANNING

Present the estimated costs and capital planning associated with the actions outlined in the Climate Neutrality Action Plan. These should ideally serve as targets to optimise towards.

- ➔ **Assess the anticipated financial implications for the city, both as implementation and ongoing operational costs, to inform adjustments to the city budget for their incorporation.**
- ➔ **Make sure that all the proposed actions are listed, including those pertaining to Governance Innovation and Social Innovation.**
- ➔ **Feel free to provide cost projections for the measures detailed in the Action Plan as appropriate.**
- ➔ **Outline the city's capital objectives and how you aim to achieve them, by leveraging various sources of capital.**

The **Climate Neutrality Action Plan of the Municipality of Buzău** includes a series of strategic measures aimed at reducing carbon emissions and supporting the transition towards a sustainable city.

Regarding the **assessment of financial implications** for the Municipality of Buzău, the implementation of the Climate Neutrality Action Plan requires substantial financial effort, both in terms of **initial implementation costs** and **ongoing operational costs**. These aspects must be integrated into the municipal budget adjustment strategy to ensure economic sustainability and the success of the projects.

In total, it is estimated that the Municipality of Buzău will need approximately €479,490,885 million for the implementation of the measures in the Climate Neutrality Action Plan by 2035. These costs will serve as targets for optimizing financing strategies, diversifying capital sources, and increasing the absorption rate of available funds.

❖ **Implementation Costs (Initial Investments)**

The estimated implementation costs for the period 2025–2035 amount to approximately **€463,986,211 million**, depending on the scale of the projects and the available financing sources.

❖ **Necessary Budget Adjustments:**

- Increase in the absorption rate of European funds;
- Prioritization of long-term impact investments to reduce operational costs;
- Establishment of public-private partnerships (PPPs) for major projects;
- Contracting of advantageous loans for co-financing.

❖ **Ongoing Operational Costs:**

In addition to initial investments, the municipality must allocate resources for the maintenance and operation of the new infrastructure.

Total estimated operational costs: €15,504,674 million

- **Necessary Budget Adjustments:**
  - Increase in revenue from local taxes and energy efficiency gains;
  - Implementation of progressive pricing schemes for sustainable public services;
  - Attraction of governmental and European funding for operational costs (e.g. subsidies for green public transport).

- **Impact on the Municipal Budget**

Given the high implementation and operational costs, the municipal budget must be strategically adjusted to accommodate these expenses.

- **Financial Adaptation Scenarios:**
  - Optimization of current expenditures – Redirecting part of the existing budget toward energy efficiency and sustainable mobility;
  - Increase in local revenues – Introduction of ecological taxes (e.g. for pollution, use of diesel vehicles in central areas);
  - Maximizing European funds absorption – Ensuring an efficient administrative capacity for rapid access to available funding;
  - Attracting private funds – Developing partnerships with the private sector for co-financing major projects (e.g. public lighting, renewable energy).

In conclusion, the Municipality of Buzău must adapt its budget structure to integrate both the implementation and operational costs of the Climate Neutrality Action Plan. A combination of European funds, public-private partnerships, and local budget optimization is essential for the financial sustainability of the project.

COSTS, CAPITAL PLANNING AND ECONOMIC INDICATORS BY ACTION

Make sure to list every one of the actions proposed in the previous chapter.

- ➔ **If feasible, in the fifth column, divide the costs based on the mentioned funding sources and indicate the amount that can be secured from each source individually.**

Table 65 - COSTS, CAPITAL PLANNING AND ECONOMIC INDICATORS BY ACTION

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
ENERGY SYSTEMS	Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)	€ 104.218.200,00	€ 3.908.183,00	South-East Regional Programme 2021–2027 PNRR 2021–2027 Post-2027 European Funds National Programme (AFM) SEE & Norwegian Funds / Swiss Funds Loans and Bonds Municipality Budget	22,46%	0,23%
	Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)	€ 18.742.500,00	€ 374.850,00	South-East Regional Programme 2021–2027 Post-2027 European Funds National Programme (AFM) SEE & Norwegian	4,04%	0,17%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
				Funds / Swiss Funds Loans and Bonds Municipality Budget		
	Implementing a only LED street lighting system	€ 6.911.889,00	€ 319.995,00	National Programme (AFM) SEE & Norwegian Funds / Swiss Funds Loans and Bonds Municipality Budget	1,49%	0,32%
	Green energy production through the construction of a photovoltaic panel park in Buzău Municipality	€ 4.586.151,00	€ 404.660,00	Romanian Modernization Fund National Programme (AFM) Municipality Budget	0,99%	1,42%
	Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property	€ 1.190.000,00	€ 23.800,00	South-East Regional Programme 2021–2027 Climate Social Fund Post-2027 European Funds Loans and Bonds Municipality Budget	0,26%	0,36%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
	Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings	€ 67.670.577,00	€ 1.353.412,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Climate Social Fund Post-2027 European Funds Loans and Bonds Municipality Budget	14,58%	2,10%
	Implementation of a waste-to-energy system for organic waste	€ 4.760.000,00	€ 190.400,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Climate Social Fund Post-2027 European Funds Municipality Budget	1,03%	1,27%
MOBILITY AND TRANSPORT	Urban Traffic Optimization and Heavy Vehicle Diversion Plan	€ 2.975.000,00	€ 59.500,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Loans and Bonds Municipality Budget	0,64%	0,29%
	Integrated portal for active urban mobility	€ 2.142.000,00	€ 42.840,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Loans and Bonds	0,46%	0,07%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
				Municipality Budget		
	A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard	€ 7.139.317,00	€ 356.966,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Municipality Budget	1,54%	0,21%
	Expand public transportation infrastructure and services	€ 47.075.698,00	€ 2.824.542,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Loans and Bonds Municipality Budget	10,15%	0,43%
	Smart Mobility Zone	€ 2.380.000,00	€ 119.000,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Municipality Budget	0,51%	0,25%
	Charging stations for electric vehicles in Buzău Municipality	€ 11.900.000,00	€ 238.000,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Municipality Budget	2,56%	0,25%
WASTE AND CIRCULAR ECONOMY	New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection	€ 5.355.000,00	€ 481.950,00	South-East Regional Programme 2021–2027 PNRR 2021–2027 Municipality Budget	1,15%	36,06%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
	Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms	€ 1.190.000,00	€ 59.500,00	South-East Regional Programme 2021–2027 PNRR 2021–2027 Municipality Budget	0,26%	0,44%
	Market & Hub	€ 952.000,00	€ 47.600,00	South-East Regional Programme 2021–2027 Municipality Budget	0,21%	0,02%
	Energy Recovery from Waste through Gasification and Molecular Dissociation Projects	€ 1.190.000,00	€ 23.800,00	PNRR 2021–2027 Sustainable Development Program South-East Regional Programme 2021–2027 Municipality Budget	0,26%	9,24%
	Compost city station	€ 1.190.000,00	€ 35.700,00	PNRR 2021–2027 Sustainable Development Program South-East Regional Programme 2021–2027 Municipality Budget	0,26%	5,16%
	Integrated Center for Separate Waste Collection through Voluntary	€ 14.908.339,00	€ 596.334,00	PNRR 2021–2027 Sustainable Development Program	3,21%	3,11%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
	Contribution in Buzău Municipality			South-East Regional Programme 2021–2027 Municipality Budget		
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS	Urban regeneration of collective housing areas through actions to revitalize interstitial spaces	€ 42.436.540,00	€ 961.106,00	PNRR 2021–2027 South-East Regional Programme 2021–2027 Municipality Budget	9,15%	3,77%
	NEB evaluation of on-going projects before construction	€ 952.000,00	€ 21.561,00	South-East Regional Programme 2021–2027 Municipality Budget	0,21%	1,76%
	Urban Forest	€ 35.700.000,00	€ 808.537,00	South-East Regional Programme 2021–2027 Municipality Budget	7,69%	3,50%
	Afforestation of the area adjacent to Buzău Municipality – 13.26 ha	€ 12.495.000,00	€ 282.988,00	South-East Regional Programme 2021–2027 Municipality Budget	2,69%	2,49%
BUILT ENVIRONMENT	New residential bio-districts	€ 11.900.000,00	€ 357.000,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Sustainable Development Program Post-2027 European Funds Loans and Bonds	2,56%	2,79%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
				Municipality Budget		
	Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."	€ 8.925.000,00	€ 446.250,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Climate Social Fund Post-2027 European Funds Loans and Bonds Municipality Budget	1,92%	3,05%
	Construction of a structural system for an air purification unit within the "Buzău City Air – Smart Air Quality Management Systems" project	€ 1.428.000,00	€ 42.840,00	South-East Regional Programme 2021–2027 Post-2027 European Funds Municipality Budget	0,31%	0,29%
	Smart building management platform	€ 1.190.000,00	€ 23.800,00	Post-2027 European Funds Loans and Bonds Municipality Budget	0,26%	3,19%
	Construction of a residential complex for young people in Buzău Municipality nZEB	€ 16.660.000,00	€ 333.200,00	PNRR 2021-2027 South-East Regional Programme 2021–2027	3,59%	0,90%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
				Post-2027 European Funds Municipality Budget		
	Positive Energy Districts	€ 17.850.000,00	€ 535.500,00	PNRR 2021-2027 South-East Regional Programme 2021–2027 Post-2027 European Funds Municipality Budget	3,85%	2,77%
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	Centralized information system for management and decision support in strategic development projects	€ 1.190.000,00	€ 23.800,00	South-East Regional Programme 2021–2027 Private funding / Public – Private Partnership (PPP) Municipality Budget	0,26%	0,76%
	Local products and service market	€ 1.190.000,00	€ 59.500,00	Other UE Programmes Private funding / Public – Private Partnership (PPP) Municipality Budget	0,26%	2,09%
	School workshops for recycling and creation	€ 1.190.000,00	€ 59.500,00	Private funding / Public – Private Partnership (PPP) Municipality Budget	0,26%	0,01%

FIELDS OF ACTION	ACTION	IMPLEMENTATION COSTS/ CAPEX	OPERATIONAL COSTS	POSSIBLE SOURCES OF CAPITAL	% OF THE TOTAL CLIMATE NEUTRALITY BUDGET	% OF THE TOTAL CO2 REDUCTION
	”Too Good To Go”/”Food Hunt	€ 119.000,00	€ 2.380,00	Private funding / Public – Private Partnership (PPP) Municipality Budget	0,03%	0,23%
	Climate-smart urban design programme	€ 1.428.000,00	€ 28.560,00	Other UE Programmes Private funding / Public – Private Partnership (PPP) Municipality Budget	0,31%	1,77%
	Center of Excellence for Dual-Technical Pre-University and University Education Buzău	€ 1.547.000,00	€ 30.940,00	PNRR 2021-2027 Municipality Budget	0,33%	4,25%
	Hydrogen based innovative solutions programme	€ 1.309.000,00	€ 26.180,00	Other UE Programmes Private funding / Public – Private Partnership (PPP) Municipality Budget	0,28%	4,97%
TOTAL		**€ 463.986.211,00**	**€ 15.504.674,00**	**-**	**100%**	**100%**

Table 66 - SUMMARISED COSTS AND CO2 REDUCTIONS BY FIELD OF ACTION

FIELDS OF ACTION	TOTAL COSTS FOR ALL THE COVERED ACTIONS	% OF THE TOTAL BUDGET	TOTAL CO2 REDUCTIONS FOR ALL THE COVERED ACTIONS	% OF THE TOTAL CO2 REDUCTION
ENERGY SYSTEMS	€ 208.079.317,00	44,85%	11.560,00	5,86%
MOBILITY AND TRANSPORT	€ 73.612.015,00	15,87%	2.960,10	1,50%
WASTE AND CIRCULAR ECONOMY	€ 24.785.339,00	5,34%	106.605,82	54,03%
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS	€ 91.583.540,00	19,74%	22.736,47	11,52%
BUILT ENVIRONMENT	€ 57.953.000,00	12,49%	25.651,87	13,00%
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	€ 7.973.000,00	1,72%	27.776,81	14,08%
TOTAL	**€ 463.986.211,00**	**100,00%**	**197.291,07**	**100,00%**

FINANCIAL INDICATORS FOR MONITORING, EVALUATION AND LEARNING

Briefly present the used monitoring indicators and explain them, if necessary.

Table 67 - FINANCIAL INDICATORS BY FIELD OF ACTION

FIELDS OF ACTION	INDICATOR	INDICATOR VALUE AND UNIT
ENERGY SYSTEMS	Energy efficiency improvement and implementation of non-polluting electricity generation systems in public buildings (health, educational, cultural, sports, and administrative)	0,0043 CO2 kg / euro
	Thermal rehabilitation, modernization of energy sources, and interior installations in public buildings (educational, cultural, sports, and administrative)	0,017 CO2 kg / euro
	Implementing a only LED street lighting system	0,092 CO2 kg / euro
	Green energy production through the construction of a photovoltaic panel park in Buzău Municipality	0,610 CO2 kg / euro
	Smart monitoring of electrical consumption in educational institutions and other public buildings in Buzău Municipality's property	0,595 CO2 kg / euro
	Energy and thermal efficiency improvement and implementation of non-polluting electricity generation systems in housing buildings	0,061 CO2 kg / euro
	Implementation of a waste-to-energy system for organic waste	0,525 CO2 kg / euro
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM** 11.560,00 / € 208.079.317,00
MOBILITY AND TRANSPORT	Urban Traffic Optimization and Heavy Vehicle Diversion Plan	0,189 CO2 kg / euro
	Integrated portal for active urban mobility	0,065 CO2 kg / euro
	A sustainable corridor in the central area of Buzău Municipality – Nicolae Bălcescu Boulevard	0,059 CO2 kg / euro
	Expand public transportation infrastructure and services	0,018 CO2 kg / euro

	Smart Mobility Zone	0,207 CO2 kg / euro
	Charging stations for electric vehicles in Buzău Municipality	0,041 CO2 kg / euro
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM** 2.960,10 / € 73.612.015,00
WASTE AND CIRCULAR ECONOMY	New nature-based solutions for stormwater management and the development of a separate infrastructure for wastewater collection	13,286 CO2 kg / euro
	Smart IoT System for Proactive Municipal Waste Collection and Development of a Free Recycling Collection Center – QR Code Readers for Eco-Friendly Waste Collection Platforms	0,731 CO2 kg / euro
	Market & Hub	0,049 CO2 kg / euro
	Energy Recovery from Waste through Gasification and Molecular Dissociation Projects	15,313 CO2 kg / euro
	Compost city station	8,555 CO2 kg / euro
	Integrated Center for Separate Waste Collection through Voluntary Contribution in Buzău Municipality	0,412 CO2 kg / euro
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM** 106.605,82 / € 24.785.339,00
GREEN INFRASTRUCTURE & NATURE-BASED SOLUTIONS	Urban regeneration of collective housing areas through actions to revitalize interstitial spaces	0,175 CO2 kg / euro
	NEB evaluation of on-going projects before construction	3,652 CO2 kg / euro
	Urban Forest	0,193 CO2 kg / euro
	Afforestation of the area adjacent to Buzău Municipality – 13.26 ha	0,393 CO2 kg / euro
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM** 22.736,47 / € 91.583.540,00
BUILT ENVIRONMENT	New residential bio-districts	0,462 CO2 kg / euro
	Innovative pilot project for the use of wastewater, for the first time in Romania, from the Buzău Municipality treatment plant to create biodiversity areas by supplying water to the dried-up lakes in the southeastern part of Buzău County, utilizing the gravitational canal "Iazul Morilor."	0,675 CO2 kg / euro
	Construction of a structural system for an air purification unit within the "Buzău City Air –	0,402 CO2 kg / euro

	Smart Air Quality Management Systems" project	
	Smart building management platform	5,293 CO2 kg / euro
	Construction of a residential complex for young people in Buzău Municipality nZEB	0,107 CO2 kg / euro
	Positive Energy Districts	0,306 CO2 kg / euro
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM** 25.651,87 / € 57.953.000,00
	Centralized information system for management and decision support in strategic development projects	1,260 CO2 kg / euro
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	Local products and service market	3,471 CO2 kg / euro
	School workshops for recycling and creation	0,017 CO2 kg / euro
	„Too Good To Go"/"Food Hunt"	3,78151 CO2 kg / euro
	Climate-smart urban design programme	2,451 CO2 kg / euro
	Center of Excellence for Dual-Technical Pre-University and University Education Buzău	5,415 CO2 kg / euro
	Hydrogen based innovative solutions programme	7,487 CO2 kg / euro
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM** 27.776,81 / € 7.973.000,00

Learning Tools from Indicator Data

For this framework to become a living system, it must be accompanied by adaptive learning mechanisms:

- **Annual audits** of climate and financial performance;
- **Publication of open dashboards** for transparency and public analysis;
- **Annual hackathons and urban labs** to test data-driven solutions;
- **Partnerships with universities and research centers** (e.g., UHI monitoring, CO_2 modeling);
- **Review of the Climate Neutrality Plan** every 2–3 years, based on financial progress and the impact of measures.

Support tools:

- Interactive web interface (publicly accessible)
- Annual PDF factsheets by domain

- Internal database for modeling and forecasting (Excel/SQL)
- GIS mapping for spatial impact.

Learning Instruments	Description	Scope	Frequency	Responsible
Data Analysis Workshops	Interactive sessions for interpreting indicators and identifying trends	Enhancing data-driven decision-making capacity	Annual	City Hall / Partner Universities
Digital Data Visualization Platform	Online dashboard with real-time indicator updates	Transparency and community engagement	Quarterly	City Hall / Local IT department
Public Progress Report	Document with comparative analysis of indicators vs. targets	Accountability and effective communication	Annual	City Hall / Consultants
Case Studies and Best Practices	Documentation of successful projects and lessons learned	Replication of effective solutions	Semi-annual	City Hall / NGOs / Universities
Participatory Community Feedback	Surveys and forums to validate results and adjust plans	Strategy adaptation based on real community needs	Annual	City Hall / Youth Centers / Civil Society

Risk and Contingency Planning

The Municipality of Buzău is aware that the absorption of European funds and policy changes at the national level may generate delays or require adjustments in implementation. In this regard, a **risk management plan** will be developed, including alternative financing scenarios, phased project adjustments, and mechanisms for prioritizing essential actions to ensure an adaptive response to such situations.

The risk management plan for implementing M100 projects in Buzău aims to secure effective delivery by identifying, assessing, and managing risks that could affect deadlines, costs, quality, and project outcomes. In the first stage, potential risks are identified, including strategic, financial, operational and technical, environmental and social, legal and contractual, reputational, or schedule-related risks. Each risk is evaluated based on its probability of occurrence and impact on the project, using a prioritization matrix or numerical scores to facilitate ranking. For significant risks, response measures are defined, including preventive actions — designed to reduce the likelihood of risk occurrence — and contingency measures — intended to mitigate effects if the risk materializes.

For example, delays in infrastructure works can be managed through realistic planning and phased monitoring, while community opposition can be reduced by public consultations and transparent communication. Risk monitoring will be carried out through a regularly updated risk register with performance indicators and periodic evaluation meetings. Responsibilities are clearly defined: the project manager ensures risk identification and reporting, the risk committee prioritizes and approves measures, while technical and financial teams implement preventive and contingency actions. This systematic and proactive approach reduces the likelihood of problems and increases the success rate of M100 projects in Buzău.

Stages of Risk Management for Projects:

1. Risk Identification:

Risk Type	Possible Examples
Strategic	Legislative changes, political shifts, changing priorities of local administration
Financial	Budget overruns, insufficient funding sources, payment delays
Operational / Technical	Technical issues with infrastructure, lack of technical expertise, execution delays
Environmental / Social	Environmental impact, community opposition, conflicts with NGOs or citizens

Legal / Contractual	Contractual issues, litigation, non-compliance with public procurement law
Reputational	Poor communication, citizen dissatisfaction, public scandals
Schedule-related	Unrealistic deadlines, bottlenecks in procurement or permitting

2. Risk Assessment:

Each risk will be assessed using two criteria — probability and impact — applying a simple 3×3 matrix:

Probability \ Impact	Low	Medium	High
Low	Green	Green	Yellow
Medium	Green	Yellow	Red
High	Yellow	Red	Red

A numerical score (1–5) will be added to support prioritization.

4. Risk Response Plans:

Risk	Preventive Measure	Contingency Measure
Implementation delays	Realistic planning, time buffers, contracts with penalties	Resource reallocation, renegotiation of deadlines
Budget overruns	Rigorous cost estimation, cost monitoring, reserve fund	Reduction of non-essential costs, securing extra funds
Technical problems	Selecting certified suppliers, prototype testing	External expertise, revision of technical solutions
Community opposition	Public consultations, proactive communication	Adjustments based on feedback, information campaigns

4. Monitoring and Reporting:

- ✓ Creation of a **risk register** updated monthly.
- ✓ Periodic monitoring meetings with the project team.
- ✓ Risk-related performance indicators (e.g., number of technical issues, delays, budget overruns).

5. Roles and Responsibilities:

- ✓ **Project Manager** – risk identification, assessment, and reporting.
- ✓ **Risk Committee** – approval of measures, prioritization, and strategic decisions.
- ✓ **Technical & Financial Teams** – implementation of preventive and contingency actions.

Involvement of the Private Sector

During the implementation of M100 projects, the Municipality of Buzău will place a strong emphasis on the **active engagement of the business sector**, recognizing its essential role in achieving sustainable development goals. Collaboration with private stakeholders will be encouraged through **local fiscal incentives and benefits** to stimulate green investments, promote environmentally friendly technologies, and reduce initial implementation costs.
Public–private partnerships (PPPs) will be promoted for major projects, enabling the mobilization of private financial and technological resources while ensuring a fair distribution of responsibilities and benefits between public authorities and investors. Administrative and procedural barriers for companies adopting sustainable technologies will be reduced by simplifying permitting processes, providing dedicated guidance, and technical assistance to meet environmental standards. This approach will empower the private sector to actively participate in the transition to sustainable urban development, amplifying the positive impact of projects on the community and environment.

Concrete actions for private sector engagement:

- ✦ **Development of public–private partnerships for major projects (2025–2026)**
  - ★ Identification of 3–5 priority projects (e.g., modernization of public transport, digitalization of public services, refurbishment of public buildings) where private investors can contribute financial and technical resources.
  - ★ Signing of PPP framework agreements with clear allocation of responsibilities and benefit sharing.
- ✦ **Simplifying administrative procedures for sustainable companies (2025–2026)**

- ★ Creation of an online, step-by-step guide for green project permitting.
- ★ Establishing a dedicated support line for companies adopting sustainable technologies.
- ★ Organizing training and consultation sessions for local entrepreneurs on financing opportunities and environmental regulations.

- ✦ **Monitoring and evaluation of private sector collaboration impact (2025–2027)**
  - ★ Defining KPIs for each PPP and green investment (e.g., emissions reduction, increased energy efficiency, number of jobs created).
  - ★ Conducting semi-annual assessments and publishing public reports on project progress and socio-economic impact.

- ✦ **Promoting innovation and sustainable technologies (2026–2027)**
  - ★ Annual urban innovation competition for companies and local startups.
  - ★ Piloting innovative solutions in infrastructure, transport, and digitalization with private sector involvement.

Monitoring and Evaluation

Each M100 project implemented in Buzău will have its own monitoring system to track technical, financial, and operational progress, ensuring compliance with deadlines and objectives. Simultaneously, local authorities will develop a **consolidated monitoring and evaluation system**, integrating project-level indicators with those in the city's Action Plan. This will include public periodic reports, citizen and stakeholder feedback mechanisms, and comparative analyses across projects to assess the overall impact of investments, PPPs, and sustainable technology adoption.

Monitoring Plan for M100 Projects – Buzău

- ➲ **Monitoring Objective:**
  Ensuring efficient implementation of M100 projects by tracking progress, early identification of risks, and rapid corrective actions. Monitoring will cover technical, financial, and operational aspects, as well as specific risk and performance indicators for each project.

- ➲ **Monitoring System Structure:**
  - ➢ **Risk Register:**

✓ Centralized monthly-updated risk register.
✓ Includes for each risk: description, probability, impact, priority score, preventive and contingency measures, current status, and responsible party.
✓ Serves as a basis for periodic reporting and strategic decision-making.

➢ **Performance Indicators:**

- ✓ Clear KPIs related to project progress and risks, such as:
  - Number of reported and resolved technical issues
  - Delays vs. planned schedule
  - Budget overruns and their magnitude
  - Compliance with quality standards of works or services.
- ✓ Indicators monitored individually and consolidated at municipal level.

➢ **Periodic Meetings:**

- ✓ Monthly monitoring meetings with project teams to review progress and identify issues.
- ✓ Analysis of risk register and performance indicators; establishing corrective actions.
- ✓ Quarterly strategic review meetings with municipal leadership to evaluate global progress of the Action Plan.
- ✓

➢ **Reporting and Transparency:**

- ✓ Public periodic reports (quarterly and annual) covering project evolution, risk status, KPIs, and corrective actions.
- ✓ Reports accessible to citizens and local stakeholders to encourage transparency and community involvement.
- ✓ Feedback mechanisms for continuous improvement.

➢ **Integrated Monitoring:**

- ✓ Consolidation of project-level and city-wide Action Plan indicators.
- ✓ Supports strategic decision-making and timely adjustments to ensure efficient and coherent implementation of projects through 2027.

Public Engagement and Communication

The Municipality of Buzău aims to **expand and strengthen public participation** in M100 projects, acknowledging that the success of the transition toward sustainable development and climate neutrality depends greatly on community support and active involvement.

Key engagement methods:

Regular public debates and thematic workshops:

- ♦ Monthly or quarterly meetings for each major project, enabling citizens, NGOs, and business representatives to express opinions, propose solutions, and flag issues.

- Workshops focused on specific themes (e.g., sustainable urban mobility, public building energy efficiency, digital public services).
- Interactive tools such as brainstorming sessions, live polls, thematic working groups, and practical demonstrations of green technologies.

Digital platforms for consultation and information

- Integrated online platform where citizens can access project status, progress indicators, budget, and implementation timelines.
- Online feedback forms, surveys, and consultations for real-time community input.
- Regular updates to ensure transparency and showcase the impact of citizen contributions.

Educational and awareness campaigns

- Thematic campaigns on climate neutrality, energy efficiency, and sustainable technology adoption.
- Use of diverse channels: social media, posters, informative leaflets, public events, and partnerships with schools, universities, and local NGOs.
- Aim to shape public perception, fostering a sense of collective effort for city well-being rather than mere administrative action.

Continuous feedback and engagement mechanisms

- Clear processes for receiving, analyzing, and responding to feedback, including communication of corrective measures taken.
- Community involvement in monitoring project progress through access to reports and participation in public evaluations, reinforcing shared responsibility.

Through this integrated approach, the Municipality of Buzău seeks not only to inform but to **create a continuous, participatory dialogue**, strengthening transparency, trust, and public support. This approach will transform citizen engagement into an active success factor for the M100 projects, ensuring efficient, coherent, and sustainable implementation.

CLIMATE POLICIES FOR CAPITAL FORMATION AND DEPLOYMENT

Shortly describe the climate policies you will develop and use for capital accumulation and deployment.

To date, **most climate policies implemented at the local level have been closely tied to the objectives of cohesion policy**. The city's investment budget relies heavily on funding from EU and national sources. In this context, the substantial allocation of European funds for climate change mitigation and adaptation measures in recent programming periods has significantly influenced the local administration's priority directions. As a result, considerable resources have been dedicated to areas such as building energy efficiency, public transport development, urban regeneration, and the creation of green infrastructure.

In the long term, the plan is to integrate climate neutrality into all aspects of local policy, transforming it into the main pillar of development and a key factor in attracting talent and investment. A systematic approach—comprising coordinated measures across various sectors of the local economy—will not only enable CO_2 emission reductions but also foster an environment conducive to innovation and sustainability. These efforts will further stimulate the creation of new green jobs and contribute to the growth of the local economy.

To achieve this ambitious goal, it is essential that public funds are consistently directed toward climate solutions, while also mobilizing additional private investment. Closer collaboration between local authorities, the private sector, and research organizations will support the development of innovative solutions based on green technologies and sustainable practices. At the same time, education and public awareness initiatives will be crucial in gaining community support and encouraging behavioral changes toward a more circular and environmentally friendly economy.

Throughout the entire **implementation period**, the application of measures to mobilize private capital contributes to supplementing the financial resources available from the local budget and non-reimbursable funding sources.

Table 68 - CLIMATE POLICIES TO ENABLE CAPITAL DEPLOYMENT

CLIMATE POLICY	DESCRIPTION OF THE POLICY	INTENDED OUTCOME FOR CAPITAL FORMATION

REFORM OF LOCAL FISCAL POLICIES	To support the transition toward climate neutrality, additional public and private funding is required. Current local fiscal policies do not offer sufficient incentives for individuals and companies willing to actively contribute to this process through environmentally friendly behaviors and actions. In this regard, tax exemptions will be implemented for those who invest in building energy renovations, produce renewable energy, replace polluting vehicles with electric ones, or recycle waste. Simultaneously, more restrictive fiscal measures will be adopted to encourage engagement among those who have delayed action.	Stimulate investment in strategic sectors supporting the transition to climate neutrality and the city's sustainable development. This would entail mobilizing both public and private funds for projects in energy renovation, renewable energy, electric mobility, and efficient waste management. Additionally, fostering an investment-friendly climate through fiscal policies that reward green behavior and penalize inaction will contribute to the development of a green and sustainable economy, where capital is invested in projects that protect the environment and improve quality of life. Ultimately, the goal is sustainable capital growth in climate solutions, driving climate neutrality targets while generating new jobs, attracting talent, and fostering innovation in green technologies.
GREEN BUDGETING	The municipality aims to implement an integrated system of climate key performance indicators (KPIs), monitored in real time via a dedicated digital platform. This will enable continuous evaluation of the environmental impact of public spending and ensure transparency in decision-making. Each budget item will be analyzed based on its contribution to climate neutrality and sustainable development goals. The ecological impact of each financial allocation will be identified and assessed, with budget decisions aligned to climate priorities such as CO_2 emissions reduction, promotion of renewable energy, public building energy efficiency, and sustainable transport.	The creation of a sustainable financial system where public funds are efficiently allocated to support the transition to a green economy and achieve climate neutrality. This includes: • Efficient resource allocation for green, sustainable projects that protect the environment and combat climate change; • Mobilizing private capital and attracting external investment through fiscal incentives and policies that encourage private sector involvement in green projects; • Enhancing transparency and accountability in budgeting through identification and monitoring of each budget line's ecological impact; • Promoting greener economic behavior among local authorities, businesses, and citizens by funding initiatives that support sustainability, energy efficiency, and emission reductions; • Establishing social and institutional capital dedicated to managing and implementing ecological policies, involving the community and private

		sector to ensure long-term financial sustainability. These measures aim to build financial capital that supports sustainable economic growth while reducing the carbon footprint and protecting the environment.
GREEN PROCUREMENT	A significant share of the local budget is allocated to the procurement of goods and services required by public administration—such as fuel, electricity, office supplies, etc. By integrating strict environmental standards into public procurement processes, the municipality can support climate goals and positively influence local market behavior. This approach will stimulate demand for green products and services, promote innovation, and foster a sustainable economic sector. Additionally, green procurement will help reduce the administration's carbon footprint and improve natural resource efficiency. Environmental criteria will be embedded at all stages of the procurement process—from supplier selection to performance evaluation of acquired goods and services.	Create a sustainable and resilient economic ecosystem to support the transition to a green development model. This includes: • Stimulating the local market for green goods and services, fostering the development of new green industries, and encouraging technological innovation; • Direct contribution to emission reductions and climate objectives by allocating public funds toward green procurement; • Sustainable investments in green infrastructure and technologies, attracting private capital and creating jobs in green economic sectors; • A stronger and more diverse local economy, capable of long-term sustainable development and aligned with global carbon reduction targets.
DEVELOPING A SUSTAINABLE CIRCULAR ECONOMY IN BUZĂU	Through investments in separate waste collection infrastructure and the expansion of public services, the Municipality of Buzău is laying the foundation for a strong and sustainable circular economy. These initiatives are essential not only for reducing waste and protecting the environment but also for creating green jobs and stimulating local economic opportunities. By promoting innovative recycling and resource reuse solutions, the city will support the development of local recycling industries, waste management, and sustainable material production. This will improve economic efficiency, reduce dependence on natural resources, and foster green entrepreneurship. Moreover, integrating circular economy principles into local policy will attract private investment and strengthen a responsible and resilient community.	Establish a robust local economic ecosystem based on circular economy principles, contributing to community prosperity. This entails: • **Creating green jobs** in recycling, waste management, and eco-material production, helping reduce unemployment and build a skilled sustainable workforce; • **New business opportunities** through investments in the green sector and support for local entrepreneurship in resource reuse and recycling, diversifying the economy and attracting external capital; • **Reducing dependence on natural resources** by encouraging responsible raw material use, creating a more

		sustainable long-term economic environment; • **Stimulating public-private partnerships** to support circular solutions via green investment funds and innovative technologies; • **Improving residents' quality of life** through a cleaner, healthier environment and greater economic opportunities. In essence, capital formation here refers to consolidating a sustainable local economy that aligns environmental protection with economic growth, creating a long-term prosperity model for Buzău.
MOBILIZING PRIVATE CAPITAL	The proposed action plan includes soft initiatives aimed at mobilizing private capital to support climate neutrality projects. By promoting civic engagement and raising community awareness, the plan encourages active participation from local stakeholders—especially companies with international presence. These companies will be encouraged to adopt and comply with ESG (Environmental, Social, and Governance) standards, thus contributing to the city's climate objectives. Another key instrument is **crowdfunding**, which can raise private funds for implementing small-scale environmental projects. This method engages citizens and local entrepreneurs in financing green initiatives, fostering active and responsible participation. Collaboration platforms between authorities, the private sector, and citizens can further stimulate innovation and the generation of creative solutions to achieve climate neutrality.	Attract a significant flow of private investments to support climate neutrality projects. This includes: • **Increasing private investments** in green and sustainable sectors through crowdfunding and ESG-aligned company engagement; • **Developing a local ecosystem** favorable to green investments, encouraging active cooperation between public and private actors in implementing innovative environmental solutions; • **Diversifying funding sources** for green projects by mobilizing private funds from citizens and local entrepreneurs, especially for small and medium-sized initiatives with positive environmental impact; • **Promoting public-private partnerships** to ensure strategic allocation of private funds to community-beneficial and sustainable projects, stimulating green economic development and job creation. Ultimately, the goal is to create a business environment where private capital becomes a key resource in financing and sustaining the transition to a climate-resilient and sustainable city.

Regarding the **strengthening Performance Evaluation Frameworks and Adaptive Management**, the Municipality of Buzău aims to ensure the **efficient and transparent implementation of M100 projects** through an integrated system of monitoring, performance evaluation, and active community engagement, built on the **Kaizen principles**, already successfully applied within the local administration.

- **Monitoring and Reporting:**

Each M100 project will have its own **monitoring system** to track specific technical, financial, and operational indicators, ensuring compliance with deadlines and objectives. In parallel, a **consolidated monitoring and evaluation system** will be developed, integrating project-level indicators with those defined in the municipal Action Plan. This system will include **public periodic reports**, feedback mechanisms from citizens and local stakeholders, and comparative analysis procedures between projects. The **risk register** will be updated monthly, while performance indicators will track elements such as technical issues, delays, and budget overruns. Regular meetings with project teams and quarterly strategic reviews will allow for **rapid corrective actions**, maximizing the efficiency and impact of the Action Plan through 2027.

- **Public Engagement and Communication:**

The success of the projects depends on **community support and participation**. To achieve this, the following methods will be applied:

- **Regular debates and thematic workshops**, where citizens, NGOs, and private sector representatives can actively contribute to identifying problems and solutions. Workshops will be interactive, featuring brainstorming sessions, live polls, and practical demonstrations.

- **Digital consultation and information platforms**, providing access to project status, progress indicators, budgets, and implementation timelines. The platform will include feedback forms, online surveys, and consultations to collect real-time community input.

- **Educational and awareness campaigns**, carried out through social media, public events, posters, and collaborations with schools, universities, and NGOs, to inform the community about the benefits of transitioning to climate neutrality and adopting sustainable technologies.

These initiatives aim to create a **continuous, participatory dialogue**, turning citizen involvement into an active driver of project success and reinforcing the sense of collective effort.

- **Strengthening Performance Evaluation Frameworks and Adaptive Management:**

The Municipality of Buzău will leverage its **Kaizen experience** to implement robust **performance evaluation frameworks** and **adaptive management mechanisms** for all M100 projects.
This approach will enable the **early detection of deviations** from the plan and the prompt adoption of corrective actions. The framework will include:

- **Continuous monitoring and periodic reporting**, reflecting project progress and risk evolution;
- **Comparative analysis and benchmarking** to identify best practices and replicate them across projects;
- **Consistent feedback** from project teams and local stakeholders to guide strategy adjustments and resource prioritization;
- **Integrated evaluations**, combining performance indicators, risk register data, and results of public engagement to provide a comprehensive view of project efficiency and impact.

By embedding **Kaizen principles**, this framework ensures **continuous improvement, flexibility, and transparency**, maximizing the efficiency of M100 project implementation and strengthening community trust in local government and project sustainability.

Regarding the strengthening Institutional Capacity and Resource Allocation, the Municipality of Buzău acknowledges that the **human resources available internally** may not always be sufficient to implement all projects included in the Action Plan. However, the local administration is committed to making all necessary efforts to ensure successful implementation by **prioritizing major projects**, efficiently allocating available resources, and identifying the most effective implementation methods.

Key measures will include:

- **Mobilizing qualified staff** from existing structures and, when necessary, hiring external experts or collaborating with public–private partners;
- **Planning and coordinating resources** based on project importance and impact, ensuring strategic initiatives receive the necessary support;
- **Optimizing administrative processes** by applying Kaizen principles, already proven effective within the municipality, to increase efficiency and implementation capacity without compromising project quality;

- **Continuous monitoring and adjustments**, ensuring resources can be quickly reallocated where needed to overcome bottlenecks and meet objectives.

Through this approach, the Municipality of Buzău seeks to **maximize investment impact** and ensure the **efficient delivery of M100 projects**, even in the context of limited institutional resources, with a strong focus on strategic planning, prioritization, and effective collaboration.

IV. OUTLOOK AND NEXT STEPS

Provide a short overview of the future steps for the Action Plan, including the methods, tools, frequency, and milestones for implementation, monitoring, updating and improvement.

- ➔ **Mention the main implementation thresholds and areas requiring future improvement of documentation, including the envisioned approach for addressing them.**
- ➔ **Make note of periodic iteration and review sessions.**

The Climate Neutrality Action Plan of the Municipality of Buzău *is conceived as a dynamic and adaptable process, grounded in progressive implementation, continuous monitoring, and periodic updates and improvements. This strategy is intended to ensure a coherent and effective transition toward a sustainable and competitive city by 2035.*

During the preparation phase of the Climate City Contract documentation, several methodological (and other) issues emerged that may impact the implementation of the Action Plan. The most significant and pressing concern relates to the procedures and practices for monitoring and reporting greenhouse gas (GHG) emissions at both national and local levels.

Secondly, although the timeframe for preparing the Action Plan was sufficient to engage the entire local ecosystem actively, it was not adequate to conduct a climate neutrality perception survey among citizens—particularly in the current global context of rising energy poverty risks.

Thirdly, the development of the Investment Plan was complicated by persistently high inflation rates in Romania (over 15% year-on-year) and across the EU, as well as the considerable uncertainty involved in projecting investment, operational, and maintenance costs through 2030. For example, the cost of various imported construction materials has tripled over the past two years. High energy prices may also influence individual behavior, as preliminary data indicate year-on-year declines in household consumption.

In conclusion*, it is expected that financial indicators within the Investment Plan will need to be updated throughout its implementation.*

Next Steps for the Implementation of the Climate Neutrality Action Plan of the Municipality of Buzău:

- ❖ **In 2024, the primary objective pursued by the Municipality of Buzău was to join the M100 Hub, Romania's Mirror Mission to the EU Mission for Climate-Neutral and Smart Cities.**

Through this affiliation, the municipality aims to access upcoming national initiatives that could support its transition to climate neutrality. Moreover, by leveraging this hub, the Municipality of Buzău intends to engage in knowledge exchange with the three Romanian cities participating in the EU Mission for Climate-Neutral and Smart Cities.

At the same time, the Municipality of Buzău will focus on promoting strategic partnerships with key national institutions, including the Ministry of Investments and European Projects, the Ministry of Research,

Innovation and Digitalization, the Ministry of Development, Public Works and Administration, the Ministry of Energy, the Ministry of Environment, Waters and Forests, the Ministry of Education and Research, and other relevant bodies.

❖ Initiation Phase (2025–2026) – Strengthening the Implementation Framework

Objective: To create a collaborative ecosystem between the local administration, the private sector, and citizens; establish monitoring tools; and attract the first wave of investments.

Key Actions:

- *Operationalize the **Local Net Zero City Coalition**, composed of public and private stakeholders who will collaborate on Plan implementation;*
- *Develop a **climate KPI system** to measure the impact of each project on the transition to climate neutrality;*
- *The municipality will design and implement, by 2027, a portfolio of investment projects focused on **sustainability, performance, resilience, and cohesion**, supported by the **South-East Regional Program**;*
- *Launch a **digital monitoring platform** to publicly report progress toward climate neutrality;*
- *Initiate **pilot projects**, such as energy efficiency investments in public buildings, the development of electric mobility infrastructure, and the expansion of urban green space;*
- *Identify funding sources from other relevant **national programs** (e.g., Sustainable Development, Transport, Education and Employment, Health, Social Inclusion and Dignity), **EU funds**, **national grants**, and **private investments** for implementing the first round of projects.*

Implementation Milestones:

- ✓ Define a **carbon emissions monitoring methodology** at the municipal level;
- ✓ Launch the first **energy efficiency subsidy programs**;
- ✓ Develop a **detailed private capital mobilization plan**.

❖ Expansion and Consolidation of Major Projects (2027–2030)

Objective: Increase the impact of implemented measures and integrate them into a holistic urban model, transforming Buzău into a sustainable, attractive, and competitive city.

Key Actions:

- *Expand the green procurement program to include sustainability criteria in all public tenders;*
- *Implement an ecological taxation system to penalize pollution and encourage investment in green technologies;*

- *Modernize public transport infrastructure through the acquisition of electric vehicles and improved connectivity between neighborhoods;*
- *Accelerate the transition to a circular economy by creating a municipal-level recycling and circular economy hub;*
- *Implement a green urban regeneration program, including large-scale tree planting and restoration of urban ecosystems.*

Implementation Milestones:

- ✓ Integrate climate KPIs into all local budgetary decisions;
- ✓ Reduce emissions from buildings and transport by at least 30%;
- ✓ Establish a mixed (public-private) financing system for climate neutrality projects.

After the current programming period ends (in 2027) and until 2033, local efforts will focus on attracting additional financial resources, both public and private, to ensure the necessary funding for planned climate neutrality measures.

In the final two years of implementing the Climate Neutrality Action Plan, emphasis will be placed on expanding and scaling up existing projects in Buzău Municipality through strengthened partnerships, exchange of best practices, mobilization of external resources, and intensified promotion efforts at the national and European levels.

❖ Monitoring and Periodic Updates (2025-2030)

Objective: Ensure effective implementation and adapt measures based on collected data.

Monitoring Methods and Tools:

- ✓ A digitized reporting system to track the progress of sustainability indicators;
- ✓ Annual public consultations, allowing citizens and the business community to provide feedback on the city's progress;
- ✓ Comparative analyses with other European cities to adjust the strategy based on best practices.

Monitoring and Update Frequency:

- ✓ Quarterly – Evaluation of each project's progress;
- ✓ Annually – Publication of an implementation progress report;
- ✓ Every 2 years – Strategic audit of the Plan and its update by the Implementation and Monitoring Working Group, with support from the Local Net Zero Coalition, which will contribute domain-specific content.

If necessary, updates may occur more frequently and will include completed actions, new interventions, and evolving contextual factors, ensuring that the Plan reflects local changes while remaining aligned with European and national climate directives.

❖ Continuous Improvement of the Plan and Integration of Innovations

Objective: Adapt the Action Plan to new economic, technological, and social realities to maximize the impact of implemented measures.

Priority Areas for Improvement:

- ✓ Accelerate decarbonization of the industrial sector through partnerships with major local companies;
- ✓ Develop a system of green fiscal incentives to attract private investment in sustainable technologies;
- ✓ Optimize funding attraction mechanisms by identifying new investment opportunities.

Approach:

- ✓ Public consultation sessions to collect suggestions for updating the strategy;
- ✓ Collaboration with research institutes to implement the latest technological solutions;
- ✓ Biannual review of the document to update its objectives and measures.

Both the monitoring and updating processes will inherently lead to multiple improvements of the Climate Neutrality Action Plan, as it is a dynamic document that will evolve alongside local and metropolitan progress. Accordingly, the main enhancements will stem from experiential learning gained during the implementation of the Plan's interventions, as well as from seizing new opportunities that arise throughout the journey toward climate neutrality.

❖ Post-2030 Stage – Impact Assessment and Definition of New Strategic Directions

Objective: Develop a long-term strategy to transform Buzău into a 100% climate-neutral city.

Key Post-2030 Measures:

- ✓ Transform the city into a regional hub for climate innovation and sustainable urban development;
- ✓ Expand international collaborations to integrate Buzău into global networks of climate-neutral cities;
- ✓ Attract strategic investments for complete decarbonization.

Throughout this process, the municipality will continue implementing the projects outlined in other local strategies and plans, while actively seeking additional opportunities (funding, training, cooperation, visibility) to support the transition toward climate neutrality. At the same time, the municipality will advocate for more ambitious climate neutrality objectives among its counterparts in Romania and across Europe, while

leading the citizens it represents and collaborating with the local private sector throughout this ambitious journey.

Thus, with respect to the actual implementation of the Action Plan, several critical stages and iterations are envisaged, as follows:

❖ Major Investments in Climate Neutrality:

The Buzău Municipality has finalized and operationalized, as of 2024, a number of European-funded projects through the 2014–2020 Regional Operational Programme, including:

- ✓ Priority Axis 4 – Supporting Sustainable Development, Specific Objective 1: Urban Mobility – *7 projects*;
- ✓ Priority Axis 4 – Specific Objective 4.2: Urban Regeneration – *1 project*;
- ✓ Priority Axis 4 – Specific Objective 4.4: Improving Infrastructure Quality to Ensure Increased Access to Early Education – *2 projects*;
- ✓ Technical Assistance Programme (POAT) 2014–2020 – *2 projects*.

The municipality has also initiated the implementation of several investment projects related to climate neutrality, funded through the National Recovery and Resilience Plan (NRRP / PNRR). Over 10 projects have been submitted, selected for funding, and are currently under implementation, including:

- ✓ Moderate and integrated energy renovation of residential buildings;
- ✓ Construction of a nZEB housing complex for young people;
- ✓ Integrated Center for Separate Waste Collection via Voluntary Drop-Off;
- ✓ Digitalized ecological waste collection islands;
- ✓ Afforestation of the area adjacent to Buzău Municipality – 13.26 hectares;
- ✓ Modernization of the local public transport vehicle fleet, including associated electric charging infrastructure;
- ✓ Center of Excellence for Dual-Technical Pre-university and University Education;
- ✓ Smart city projects (e.g., “Electronic Public Transport Platform for implementing the Mobility-as-a-Service concept and ensuring integrated design of all solutions to converge toward the Smart City concept”, “Digital elaboration of the Sustainable Urban Mobility Plan for Buzău Municipality”, etc.);
- ✓ LUDOTECA – an educational, recreational, and creative space for disadvantaged children from the Mihai Viteazu and Poşta neighborhoods in Buzău Municipality;
- ✓ Etc.

The municipality has also submitted and continues to submit projects for funding through the 2021–2027 South-East Regional Programme (PR Sud-Est), targeting:

- ✓ **Urban regeneration** – *1 project*;
- ✓ **Circular economy** – Strengthening and implementing the circular economy concept and energy efficiency in *3 schools* in Buzău Municipality;
- ✓ **Transport hub and bus depot** – *1 project*;
- ✓ **Energy renovation of public buildings** – *"Palatul Comunal"* in Buzău Municipality;
- ✓ **Energy renovation of private buildings** – *20 apartment blocks* in Buzău Municipality.

In addition, other climate neutrality-relevant projects are being financed through various programs, such as:

- ✓ **Environmental Fund –**
  Project financed through the *Public Lighting Infrastructure Energy Efficiency Enhancement Program*.
- ✓ **Modernization Fund in Romania – KEY PROGRAM 1: Renewable Energy Sources and Energy Storage:**
  - Production of renewable electricity for Buzău Municipality's own consumption by installing a photovoltaic power plant;
  - Increasing energy efficiency in the district heating system through the installation of thermal engines in Buzău Municipality.
- ✓ **National Programme for the Consolidation of Buildings with High Seismic Risk:**
  - *Subprogramme for the design and execution of intervention works on multi-storey residential buildings – 6 projects*;
  - *Subprogramme for the design and execution of intervention works on public interest and utility buildings owned or managed by central or local public authorities/institutions – 1 project*.
- ✓ **National Investment Programme "Anghel Saligny" – PNI-AS:**
  "Rehabilitation and modernization of 14 streets in Buzău Municipality."
- ✓ **Projects funded in partnership with the South-East RDA and the European Investment Bank:**
  Projects under the *Intelligent Energy Europe Programme – ELENA (European Local ENergy Assistance) technical assistance facility* and the *E.E.A. Grants Programme (European Energy Association) – 3 projects*.

Overall, the year 2025 will bring greater clarity regarding the maturity of the measures included in the Action Plan, which may require an update of both the Plan and the Investment Strategy by the end of 2025 or early 2026.

❖ Evaluation of Projects with Major Impact:

The evaluation of projects carried out by Buzău Municipality that have a significant impact on the Climate Neutrality Action Plan (CNAP) can be conducted systematically. Authorities may apply a combination of technical criteria, performance indicators, and participatory mechanisms, as follows:

- **Establishing Evaluation Criteria:**

  These must be aligned with the objectives of the CNAP and may include:

  - *Reduction* of GHG emissions (e.g., tons of CO_2 equivalent/year);
  - Increase in energy efficiency (kWh saved/year);
  - Increase in the share of green energy (% of total consumption);
  - Impact on sustainable mobility (km of bicycle lanes, % electric public transport);
  - Circular economy (tonnage of waste recycled, reused, etc.);
  - Air quality and biodiversity (local environmental indicators);
  - Degree of community involvement (number of participants, co-created initiatives).

- **Classification and Selection of Projects by Relevant Axes:**

  - Energy (e.g., modernization of public lighting with LED technology);
  - Green public buildings (e.g., thermal rehabilitation);
  - Transport (e.g., electric buses, cycling infrastructure);
  - Environment and green spaces (e.g., urban parks, forest belts);
  - Digital infrastructure for climate monitoring;
  - Circular economy and waste management.

- **Application of a KPI System:**
  Each project should include a set of climate impact indicators.

- **Public Consultation & Feedback:**

  - Participatory workshops to validate public perception of project impacts;
  - Online surveys for citizens: “Which project had the most visible impact on quality of life and the environment?”;
  - Dialogue with NGOs, experts, and the business community.

- **External Audit or Independent Evaluation:**
  A professional step is to involve external bodies (e.g., universities, research institutes, sustainability consultants) that can:

  - Measure the actual impact on emissions and environmental indicators;

- Assess long-term sustainability;
- Recommend adjustments for future projects.

- **Creation of a Continuous Monitoring System:**
  Ideally, Buzău should have:
  - A public digital dashboard tracking progress toward neutrality (e.g., CO_2 saved / CO_2 remaining to neutrality);
  - Annual CNAP reports, including lessons learned and adjustments made;
  - Integration with ESG reporting systems (to support partnerships with the private sector).

Specifically, among the projects completed or currently being implemented by Buzău Municipality, several initiatives stand out due to their direct, significant, and measurable impact on the objectives of the Climate Neutrality Action Plan (CNAP). These initiatives contribute to reducing carbon emissions, increasing energy efficiency, promoting the circular economy, and improving urban resilience. Below is a narrative justification of the most relevant ones:

- Energy renovation of public and private buildings (including the *"Palatul Comunal"* and *20 residential blocks*) has a major impact on reducing energy consumption and associated heating emissions. Such investments significantly decrease the carbon footprint of the built environment—one of the primary sources of emissions in urban areas. By enhancing building energy performance, this also sets a vital precedent for local construction and renovation standards.
- Installation of a photovoltaic power plant for generating renewable energy for municipal self-consumption is a tangible step toward local energy autonomy. This project directly replaces fossil energy sources with renewable ones and reduces pressure on the national grid. Moreover, it serves as a model for businesses and residents in the transition to green energy.
- Modernization of the public transport fleet and associated electric infrastructure delivers a dual benefit: it reduces transport emissions (a key sector for decarbonization) and promotes sustainable mobility. This project not only upgrades public transportation but also makes it a more attractive alternative for citizens, thus lowering reliance on private vehicles.
- Energy renovation of collective housing and construction of an nZEB (Near Zero Energy Building) housing complex for young people are strategic interventions. They support both energy efficiency and social inclusion, enabling sustainable living and reducing maintenance costs. The nZEB model aligns with European construction standards and is critical in achieving climate neutrality.
- Circular economy projects in schools and the development of an Integrated Waste Collection Center, alongside digitalized ecological waste islands, are transforming the city's approach to resource and waste management. These initiatives reduce landfill-bound waste volumes, cut emissions from transport and storage processes, and encourage behavioral change within the community regarding consumption.

- Afforestation of over 13 hectares adjacent to Buzău Municipality is a clear example of a climate change mitigation and adaptation measure. In the long term, such actions contribute to carbon capture, improved air quality, reduced urban heat island effects, and the creation of a healthier microclimate.
- Implementation of the digital transport platform and updating the Urban Mobility Plan in digital format reflect a coherent vision of data-driven mobility policy, efficiency, and sustainability. A smart city is more adaptive, more energy-efficient, and better equipped to make real-time, evidence-based decisions.

The key projects of Buzău Municipality, along with the justification of their climate impact and estimated impact indicators, are presented in the table below:

Table 69. KEY PROJECTS WITH MAJOR IMPACT

PROJECT	CLIMATE JUSTIFICATION	ESTIMATED IMPACT INDICATORS
Energy renovation of residential buildings	Reduces energy consumption and CO_2 emissions; improves energy efficiency of the existing building stock	☆ Energy consumption reduction: 30–50% ☆ CO_2 emission reduction: 40–60 kg/m²/year ☆ Energy-efficient households: 200–400/building
nZEB housing complex for young people	Near Zero Energy Buildings using renewable energy sources	☆ Primary energy consumption: < 60 kWh/m² ☆ Near-zero operational CO_2 emissions ☆ Replicable model for other neighborhoods
Modernization of public transport and electric infrastructure	Reduces transport emissions, enhances the appeal of green public transport	☆ CO_2 avoided: 0.7–1.2 t/vehicle/day ☆ Electric vehicles: 20+ ☆ Increase in public transport use: +15–25%
Photovoltaic panels for municipal self-consumption	Renewable energy, reduced dependence on fossil fuels	☆ Installed capacity: 1–2 MWp ☆ Energy produced: 800–1,500 MWh/year ☆ CO_2 avoided: 400–700 t/year
Afforestation – 13.26 ha	CO_2 capture, heat island mitigation, increased green space	☆ CO_2 captured: 130–200 t/year ☆ New green area: 132,600 m²

PROJECT	CLIMATE JUSTIFICATION	ESTIMATED IMPACT INDICATORS
		☆ Biodiversity and microclimate benefits
Waste collection center and ecological islands	Landfill diversion, increased recycling, reduced methane emissions	☆ Recycling rate: +20–30% ☆ CH_4 avoided: 0.5–1 t/1,000 inhabitants/year ☆ Digitalized ecological islands: 20–40
Energy renovation of public and private buildings (Palatul Comunal + 20 blocks)	Reduces energy consumption in institutions and homes, models of good practice	☆ Consumption reduction: 35–60% ☆ CO_2 avoided: 20–40 kg/m^2/year ☆ Increased energy efficiency in public spaces
Smart City projects (digital SUMP, transport platform)	Integrated planning, reduced traffic, optimized transport	☆ CO_2 reduced: 5–15% ☆ Public transport usage increase: +20% ☆ Data-driven urban decision-making
Transport hub and bus depot	Intermodality, emission reductions through optimized routes and logistics	☆ CO_2 reduced: 10–20%/vehicle ☆ Waiting time reduced: 15–30% ☆ Fleet efficiency increased: 25–35%
Increased efficiency of district heating (thermal engines)	Reduces energy losses and emissions in centralized systems	☆ Efficiency increased: +20–35% ☆ CO_2 avoided: 500–800 t/year ☆ Improved thermal comfort for users
Circular economy in 3 schools	Sustainability education, waste reduction, fostering eco-responsible generations	☆ Students involved: 1,500+ ☆ Waste reduction: 30–50% ☆ Green practices learned and replicated

In conclusion, these projects systematically contribute to achieving climate neutrality by reducing direct emissions, increasing resource efficiency, promoting clean mobility, and transforming urban behavior. They are not merely isolated investments, but integral components of a sustainable urban ecosystem that positions Buzău as an emerging model in Romania's green transition.

For the **2024–2027 period**, the main focus is expected to be on the implementation of projects funded through the **National Recovery and Resilience Plan (NRRP)**, which must be completed by the end of 2026, alongside investments under the **2021–2027 South-East Regional Programme**, as well as other projects that have secured various funding sources.
By the end of 2026, it is expected that the **Coalition for Climate Neutrality** will be fully operational, supporting the update, implementation, and monitoring of the Action Plan.

The year **2027 will be critical** for shaping the **post-2027 programming period** at both national and regional levels. Strong support from the local ecosystem will be essential to ensure the allocation of a greater volume of resources toward climate neutrality objectives.

Given the **political stability of Buzău's local administration** (with the same Mayor and a solid majority in the Local Council), no significant shifts in strategic vision are anticipated for the 2025–2027 period.

For the **2028–2030 period**, the primary focus will be on:

- Expanding "soft" interventions city-wide and even at the regional level;
- Finalizing all investment projects funded through the **2021–2027 Regional Programme**, which will have a significant impact on reducing greenhouse gas emissions from the construction and transport sectors;
- Updating strategic documents for the post-2027 programming period, including the **Integrated Urban Development Strategy (IUDS)**, the **Sustainable Urban Mobility Plan (SUMP)**, the **Sustainable Energy and Climate Action Plan (SECAP)**, and the **Climate Neutrality Action Plan**, to reconfirm and expand the measures dedicated to climate neutrality.

Through this strategic approach, **Buzău Municipality aims to become a national leader in climate neutrality**, providing a model of best practices for other cities in Romania and across Europe. The transition will be supported by intersectoral collaboration, smart financing, and continuous adaptation to new challenges and opportunities.

V. ANNEXES

Include any annexes you consider to be necessary for a better comprehension and / or for the consolidation of the Climate Neutrality Action Plan.

ANNEX 1. LETTERS OF SUPPORT

ANNEX 2. DECISION OF THE BUZĂU LOCAL COUNCIL ON THE APPROVAL OF THE CLIMATE NEUTRALITY ACTION PLAN OF BUZĂU MUNICIPALITY

ANNEX 3. PUBLIC DEBATE REPORT

ANNEX 1. LETTERS OF SUPPORT

MINISTRY OF INTERNAL AFFAIRS

PREFECTURE OF BUZAU COUNTY

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Prefecture of Buzău County, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzău Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

Liliana SBÎRNEA
Prefect
Prefecture of Buzau County

Semnat digital de catre
Sbirnea Liliana
Data: 09.05.2025 13:50:36

Mirror Mission
Cities Hub Romania

ROMÂNIA
JUDEŢUL BUZĂU

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e-mail:cjbuzau@cjbuzau.ro, consjudbuzau@gmail.com

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of the Buzău County Council, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

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Thank you for your commitment to a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,

Lucian ROMAȘCANU
Președinte Consiliul Județean Buzău

Mirror Mission
Cities Hub Romania

Transbus
Compania de Transport Buzău
Nr. Reg. J10/370/1998 - C.U.I. 10622337
sos. Constantei, nr.10, Buzau,
Cont: RO 45BTRL01001202H73645XX,
deschis la Banca Transilvania Buzau
tel: 0238 426 392, fax: 0238 724 734,
office@transbusbuzau.ro www.transbusbuzau.ro

ISO 14001:2015 ISO 45001:2015 ISO 9001:2015 IAS ACCREDITED

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of SC TRANS BUS SA , I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

Toader Gică
Executive Director
SC TRANS BUS SA

MOD
Mirror Mission
Cities Hub Romania

Compania de Apă Buzău
Ne pasă de apă

COMPANIA DE APA S.A. BUZĂU • Adresa Strada Spiru Haret nr. 6, Buzău
Nr. Reg. Com. J2007001610102 • C.U.I. RO 22987337
Capital Social 4.613.700 Lei • Call Center 0238.938
Secretariat: Tel/Fax 0238.720356/ 0238445786
office@cabuzau.ro • call.center@cabuzau.ro • www.cabuzau.ro

CERTIFIED
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

Nr. Inregistrare: 20454/06.05.2025

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Compania de apă S.A. Buzău, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzău Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

Săvulescu Simona

Director general Compania de apă S.A. Buzău

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of RER SUD S.A., I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,

LIVIU MIHAI MOCANU
GENERAL MANAGER
RER SUD S.A.

MOCANU
LIVIU-MIHAI

Semnat digital de
MOCANU LIVIU-MIHAI
Data: 2025.05.06 14:38:26
+03'00'

LETTER OF SUPPORT FOR GALAȚI MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of "Dunărea de Jos" University of Galați, I am writing to express our strong support for the Buzau Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzau Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzau Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to folow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city!
We look forward to supporting this important journey.

Sincerely,

Professor Marian BARBU, PhD, Eng., Habil.

ROMÂNIA MINISTERUL EDUCAȚIEI ȘI CERCETĂRII UNIVERSITATEA „DUNĂREA DE JOS" DIN GALAȚI RECTORAT

Rector,

"Dunărea de Jos" University of Galați

COMUNA MĂRĂCINENI

Str. Centrală nr. 96, Sat Căpăţâneşti, Com. Mărăcineni, Jud. Buzău, România - 127326,

ISO 9001 ISO 14001

Tel. 0238-556547, Fax 0238-556788, primariamaracineni@yahoo.com

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Commune Maracineni , am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzău Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,

Name - Constantin Dumitru
Title -Primary
Organization- Commune Maracineni

CONSTANTIN DUMITRU
Digitally signed by CONSTANTIN DUMITRU
Date: 2025.04.30 14:08:01 +03'00'

ROMÂNIA

PRIMĂRIA COMUNEI TINTESTI - JUDEŢUL BUZĂU

Com. Tintesti 4088227, Tel/Fax:0238/532070,0238.532233
E-mail: primariatintesti@yahoo.com

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of UAT Tintesti, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,

Vasile Victor
Primar
UAT Tintesti

VASILE VICTOR
Digitally signed by VASILE VICTOR
Date: 2025.05.05 10:07:01 +03'00'

MDD
Mirror Mission Cities Hub Romania

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TEL.+40 238 788 109 ,FAX +40 238 788 419
e-mail: primaria.vadupasii@yahoo.com , web: www.comunavadupasii.ro

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of COMUNA VADU PASII I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

GHEORGHE FIRON
MAYOR
VADU PASII MUNICIPALITY, BUZAU COUNTY

FIRON GHEORGHE
Semnat digital de FIRON GHEORGHE
Data: 2025.05.05 14:00:16 +03'00'

Mirror Mission Cities Hub Romania

ROMÂNIA
JUDEŢUL BUZĂU
COMUNA VERNEŞTI
Tel/fax:0238705017
e-mail: primariavernesti2018@yahoo.com

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of PRIMARIA COMUNEI VERNESTI am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

NASTASE DANIEL
PRIMAR
PRIMARIA COMUNEI VERNESTI

ROMÂNIA COMUNA VERNEŞTI JUDEŢUL BUZĂU

MDD
Mirror Mission
Cities Hub Romania

asociatia
PRO EUROCULT

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of ASOCIAŢIA PRO EUROCULT, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

Dogaru Monica
Asociaţia Pro Eurocult

Mirror Mission
Cities Hub Romania

BANCA DE RESURSE GENETICE VEGETALE BUZĂU
-PENTRU LEGUMICULTURA, FLORICULTURA, PLANTE AROMATICE SI MEDICINALE

Bulevardul Nicolae Balcescu, nr. 56, Buzau-ROMÂNIA,
CIF 41748972
Email: brgveg.bz@gmail.com, tel.: +40 238 507 756

Nr. înreg. 678/05.05.2025

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Plant Genetics Resources Bank Buzau, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

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Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

Costel VÎNĂTORU
Director,
PLANT GENETIC RESOURCES BANK BUZAU

Mirror Mission
Cities Hub Romania

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Tel: +40(0)238711155 | Fax: +40(0)238710697 | E-mail: office@romcarbon.com | Website: www.romcarbon.com

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of S.C. ROMCARBON S.A., I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzău Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city.
We look forward to supporting this important journey.

Sincerely,

Carmen Manaila
Administrative Dep. General Manager
S.C.ROMCARBON S.A.

Carmen Manaila
Semnat digital de Carmen Manaila
Data: 2025.05.08 15:37:32 +03'00'

Green | Tech
A GREENGROUP COMPANY

Aleea Industriilor nr. 17, Jud. Buzău, 120224, România
J2004000972109| CUI: RO 16848342
ROONRC.J2004000972109
Capital Social Subscris și Vărsat: 35.805.000 lei
Societate administrată în sistem dualist
Telefon: 0238.711.020 | Fax: 0238.717.686
E-mail: office@greentech.ro | Web: www.greentech.ro

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of GREENTECH S.A, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzău Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,
Genes Alina Elena
CEO
GREENTECH S.A

SOCIETATEA COMERCIALA GREENTECH ROMANIA

COMPANIILE GREENGROUP
Tech | WEEE | Glass | Resources | verdum
Cleaning | ECSO | SIGAD | ZALVARIS | Ventures

voestalpine Railway Systems Romania S.A

LETTER OF SUPPORT FOR BUZĂU MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of VOESTALPINE RAILWAY SYSTEMS ROMANIA S.A., a Romanian legal entity, with its registered office in Buzau, Brailei Street, no. 2, Trade Register number J10/3013/1991, CUI RO 1151753, I am writing to express our strong support for the Buzău Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Buzău Municipality for its proactive leadership in mitigating climate change. We are eager to collaborate with the Municipality and other stakeholders to ensure the effective implementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Buzău Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

We also invite other organisations and community members to join us in this ambition. Together, we can make a significant impact in combating climate change and create a future free of greenhouse gas emissions.

Thank you for your commitment to a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,
VOESTALPINE RAILWAY SYSTEMS ROMANIA S.A,
Chief Executive Manager
Adascalitei Marius

Chief Operational Manager
Alexandrescu Dorian

S.C. voestalpine Railway Systems Romania S.A. voestalpine 1 J10/3013/1991

Mirror Mission Cities Hub Romania

ANNEX 2. DECISION OF THE BUZĂU LOCAL COUNCIL ON THE APPROVAL OF THE CLIMATE NEUTRALITY ACTION PLAN OF BUZĂU MUNICIPALITY

ROMÂNIA
JUDEŢUL BUZĂU
MUNICIPIUL BUZĂU
- CONSILIUL LOCAL -

HOTĂRÂRE

privind aprobarea Contractului Climatic al Municipiului Buzău (*CLIMATE CITY CONTRACT-C.C.C.) privind „MISIUNEA 100 ORAŞE INTELIGENTE ŞI NEUTRE DIN PUNCT DE VEDERE CLIMATIC PÂNĂ ÎN ANUL 2035", iniţiativă a Comisiei Europene*

Consiliul Local al Municipiului Buzău, judeţul Buzău, întrunit în şedinţă ordinară;
Având în vedere:

- Referatul de aprobare al Primarului municipiului Buzău, înregistrat la nr.203/CLM/07.08.2025, prin care se propune aprobarea *CLIMATE CITY CONTRACT (C.C.C.) AL MUNICIPIULUI BUZAU PRIVIND „MISIUNEA 100 ORAŞE INTELIGENTE ŞI NEUTRE DIN PUNCT DE VEDERE CLIMATIC PÂNĂ ÎN ANUL 2035", INIŢIATIVĂ A COMISIEI EUROPENE*;
- Raportul de specialitate al Serviciului Investiții, Programe/Proiecte cu Finanțare Externă/Internă și Achiziții Publice, înregistrat la nr. 119.808 din 07.08.2025;
- avizul Comisiei pentru amenajarea teritoriului, urbanism, administrarea domeniului public și privat al municipiului;
- avizul Comisiei juridice, pentru administraţie publică locală, disciplină, respectarea drepturilor şi libertăţilor cetăţeneşti;
- avizul Comisiei pentru tranziția la economia circulară, buget, finanțe, agricultură, turism și relații internaționale;
- Hotărârea Consiliului Local al Municipiului Buzău nr. 161 din 30.09.2021 privind aprobarea „PLANULUI DE MOBILITATE URBANĂ DURABILĂ AL MUNICIPIULUI BUZĂU 2021-2027", document finanțat în cadrul proiectului PROMOVAREA DEZVOLTĂRII URBANE DURABILE PRIN ELABORAREA DOCUMENTELOR DE PLANIFICARE STRATEGICĂ PENTRU PERIOADA 2021-2027 Programul Operațional Capacitate Administrativă POCA/661/2/1 CP13/2019, actualizat prin Hotărârea Consiliului Local al Municipiului Buzău nr. 179 din 31.07.2024;
- Hotărârea Consiliului Local al Municipiului Buzău nr. 123 din 14.07.2021 privind aprobarea „STRATEGIEI INTEGRATE DE DEZVOLTARE URBANĂ A MUNICIPIULUI BUZĂU 2021-2027", document finanțat în cadrul proiectului *PROMOVAREA DEZVOLTĂRII URBANE DURABILE PRIN ELABORAREA DOCUMENTELOR DE PLANIFICARE STRATEGICĂ PENTRU PERIOADA 2021-2027 Programul Operațional Capacitate Administrativă POCA/661/2/1 CP13/2019,* completat prin Hotărârea Consiliului Local al Municipiului Buzău nr. 177 din 31.08.2023;
- Hotărârea Consiliului Local al Municipiului Buzău nr. 87 din 28.03.2024 privind actualizarea Planului de Acţiune pentru Energie Durabilă şi Climă al municipiului Buzău (PAED), aprobat prin Hotărârea Consiliului Local al municipiului Buzău nr. 220 din 14.11.2016 privind aprobarea "Planului de Acţiune pentru Energie Durabilă 2015 – 2020" al municipiului Buzău, cu modificările şi completările ulterioare, precum şi aprobarea Programului de Îmbunătăţire a Eficienţei Energetice (PIEE) al municipiului Buzău;
- Hotărârea Consiliului Local al Municipiului Buzău nr. 166 din 20.07.2020 pentru aprobarea Strategiei pentru tranziția la economia circulară în municipiul Buzău 2020-2030;
- prevederile Legii nr. 52/2003, republicată, privind transparența decizională în administrația publică, cu modificările și completările ulterioare;

- adresa nr. 140.560 din 19.09.2025 a responsabilului cu societatea civilă, din cadrul Serviciului Relații cu Publicul, Organizare Alegeri,

În temeiul prevederilor art. 129, alin. (2), lit. b) și lit. c), alin. (4), lit. a) și f), alin. (7), lit.k), art. 139, alin. (3), lit. d) și f), coroborat cu art. 5, lit. cc) din Ordonanța de urgență a Guvernului nr. 57/2019 privind Codul administrativ, cu modificările și completările ulterioare,

HOTĂRĂȘTE:

Art.1. Se aprobă, potrivit ANEXEI la prezenta hotărâre, următoarele documente:

a. *„Planul de acțiune pentru neutralitate climatică al Municipiului Buzău"* privind *„Misiunea 100 orașe inteligente și neutre din punct de vedere climatic până în anul 2035"*.
b. *„Planul de investiții pentru neutralitate climatică al Municipiului Buzău"*, privind *„Misiunea 100 orașe inteligente și neutre din punct de vedere climatic până în anul 2035"*.
c. *„Angajamentele de neutralitate climatică ale Municipiului Buzău"* privind *„Misiunea 100 orașe inteligente și neutre din punct de vedere climatic până în anul 2035"*.

Art.2. Planul de acțiune, Planul de investiții și Angajamentele de neutralitate climatică ale Municipiului Buzău, documente menționate la art. 1 din prezenta hotărâre, constituie *Contractul Climate City (C.C.C.).*

Art.3. Primarul Municipiului Buzău, prin intermediul Serviciului Dezvoltare şi Implementare Proiecte, va aduce la îndeplinire prevederile prezentei hotărâri.

Art.4. Prezenta hotărâre se va comunica de către secretarul general al Municipiului Buzău, în vederea ducerii sale la îndeplinire, primarului Municipiului Buzău și Serviciului Investiții, Programe/Proiecte cu Finanțare Externă/Internă și Achiziții Publice, precum și Instituției Prefectului – Județul Buzău.

Art.5. Prezenta hotărâre va fi adusă la cunoştinţa publică prin publicare pe site-ul propriu al Primăriei Municipiului Buzău.

PREŞEDINTELE ŞEDINŢEI,
Consilier local Oana-Ramona-Cătălina Gheorghiu

ROMÂNIA
JUDEȚUL BUZĂU, MUNICIPIUL BUZĂU
CONSILIUL LOCAL

CONTRASEMNEAZĂ,
SECRETARUL GENERAL AL MUNICIPIULUI BUZĂU,
Eduard Pistol

Buzău, 30.09.2025
Nr. 176

Această hotărâre a fost adoptată de Consiliul Local al Municipiului Buzău, cu respectarea prevederilor art. 139, alin. (1), alin. (3), lit. d) și f), coroborat cu art. 5, lit. cc) din Ordonanța de urgență a Guvernului nr. 57/2019 privind Codul administrativ, cu modificările și completările ulterioare, cu un număr de 14 voturi pentru, 6 abţineri şi 3 voturi împotrivă, din numărul total de 23 consilieri locali în funcţie şi 23 consilieri locali prezenţi la şedinţă.

ANNEX 3. PUBLIC DEBATE REPORT

PUBLIC DEBATE REPORT

Regarding the public debate on the M100 Environmental Project

Organizer: Buzău Municipality City Hall
Implementation period: [e.g., September 10–17, 2025]

1. Purpose of the activities

The public debate and related activities aimed primarily to inform the citizens of Buzău Municipality about the M100 Environmental Project, to gather opinions, proposals, and observations from the community, and to increase awareness of the importance of transitioning toward a green, digital, and resilient city.

At the same time, the event sought to present the strategic objectives of the M100 initiative, which include: reducing carbon emissions, improving energy efficiency, digitalizing public services, creating green spaces, and enhancing sustainable urban mobility.

2. Activities

2.1 Public debate at the City Hall

- **Date:** September 18, 2025, 11:30 AM
- **Location:** Nicu Constantinescu Hall, Buzău Municipality City Hall
- **Participants:** representatives of the City Hall and Local Council, the M100 project team, environmental NGOs, business representatives, and citizens.

Topics addressed:

- Detailed presentation of the M100 objectives and proposed project types: green infrastructure, eco-friendly public transport, digitalization of local administration, and energy efficiency of buildings.
- Direct benefits for the community: improved air quality, reduced pollution, increased access to digital public services, and redevelopment of public spaces.
- Ways to encourage the active involvement of citizens, NGOs, and the private sector in the implementation process.

Results: The debate lasted three hours and featured active dialogue between participants and organizers. Suggestions included the location of new green areas, the expansion of electric public transport, and the creation of clear public reporting mechanisms for project progress.

2.2 Meetings with residents in neighborhoods

- **Duration:** one week
- **Locații vizitate:** Micro XIV, Dorobanți, Micro III – Parcul Iazul Morilor, Punctul Infoturism Piața Daciei etc.
- **Participare:** peste 500 de persoane.

Observations: Residents expressed concerns about traffic, air quality, and the lack of green spaces. Frequent proposals included planting trees, redeveloping degraded areas, and expanding cycling infrastructure. Additionally, the community emphasized a desire for greater involvement in monitoring project implementation.

2.3 Distribution of informational materials

- **Total distributed:** approx. 14,000 brochures
- **Content:** general information about the M100 Project, examples of completed and planned initiatives, community benefits, environmental impact, and practical ways to participate in civic engagement

Impact: The brochures contributed to increasing public awareness and served as a support tool for debates and further consultations.

2.4 Informational posters and visual campaigns

- **Quantity:** 500 informational posters and 200 posters displaying the event schedule.
- **Placement:** bus stops, markets, residential building entrances, public institutions, shopping centers.

Purpose: To increase the visibility of consultation events and stimulate citizen participation.

3. Conclusions

The public consultation activities significantly contributed to informing and engaging the community in the decision-making process regarding the M100 Project. Citizens showed interest and constructive critical thinking, expressing both support and reservations about certain components. These contributions are valuable for refining projects and strengthening transparency in decision-making.

4. Recommendations

- Continue organizing regular public consultations on major topics of interest, not only related to the environment but also to digitalization and sustainable urban mobility.
- Establish a permanent communication and feedback channel between citizens and local administration, including interactive digital platforms.
- Integrate community proposals into the planning and monitoring process of projects.
- Regularly publish progress reports on M100 implementation, accessible both digitally and in printed format.

Buzău
M100

Brașov
Bistrița
București
Alba Iulia
Constanța
Timișoara
Oradea
Reșița
Iași
M100 Buzău

Orașele M100 vor beneficia de sprijin intensiv pentru a reduce emisiile de carbon până în 2035 și a se transforma în orașe verzi.

PRIMĂRIA MUNICIPIULUI BUZĂU

M100
Mirror Mission Cities Hub Romania

Platforma națională pentru orașe inteligente și neutre climatic.

70% CO2

Orașele sunt responsabile pentru
~**65%** consum de energie
~**70%** din emisii de CO_2

Buzău M100
O ȘANSĂ DE NERATAT, nu un risc!

Ce câștigăm cu M100 la Buzău

Eficiență energetică
Consum redus, energie locală (prosumatori)

Aer mai curat
și cartiere mai răcoroase prin zonele verzi

Străzi mai sigure
cu iluminat inteligent și trafic mai calm

Transport mai rapid & curat:
electric, velo, pietonal

Locuri de muncă
și proiecte finanțabile

Deșeuri & economie circulară
colectare separată, reutilizare, reciclare

O VIAȚĂ MAI BUNĂ!

Ne aflăm aici

Se mai poate face ceva.

ÎMPREUNĂ pentru un Buzău sustenabil, inteligent, neutru climatic.

NET ZERO CO_2

Neutru climatic (zero emisii nete) = emisiile produse nu depășesc emisiile reduse sau captate.

Scanează pentrua vedea **Contractul de oraș climatic**

2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035

Acționăm: strategic, rapid, împreună.

Buzău neutru climatic, Buzău mai bun

Buzău
M100

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Reșița
Iași
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PRIMĂRIA MUNICIPIULUI BUZĂU

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Platforma națională pentru orașe inteligente și neutre climatic.

Vă așteptăm la ATELIERE DESCHISE

Buzău M100

Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Joi, 18.09, 11:30, Palatul Comunal
Sala Nicu Constantinescu • DEZBATERE PUBLICĂ

Luni, 22.09, 17:00, Piața Micro XIV

Marți, 23.09, 17:00, Piața Dorobanți

Joi, 25.09, 17:00, Parcul Iazul Morilor (Micro 3)

Vineri, 26.09, 14:00, Piața Daciei
Centrul Info Turism

70% CO2

Orașele sunt responsabile pentru
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NET ZERO CO_2

Neutru climatic (zero emisii nete) = emisiile produse nu depășesc emisiile reduse sau captate.

Scanează pentrua vedea
Contractul de oraș climatic

Buzău M100 - O ȘANSĂ DE NERATAT, nu un risc!

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PRIMĂRIA MUNICIPIULUI BUZĂU

M100
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Platforma națională pentru orașe inteligente și neutre climatic.

Vă așteptăm la ATELIERE DESCHISE
Buzău M100

Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Joi, 18.09, 11:30, Palatul Comunal
Sala Nicu Constantinescu (Dezbatere Publică)

Luni, 22.09, 17:00, Piața Micro XIV

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Joi, 25.09, 17:00, Parcul lazul Morilor (Micro 3)

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Centrul Info Turism

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Buzău M100 - O ȘANSĂ DE NERATAT, nu un risc!

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PRIMĂRIA MUNICIPIULUI BUZĂU

M100
Mirror Mission Cities Hub Romania

Platforma națională pentru orașe inteligente și neutre climatic.

Vă așteptăm la ATELIERE DESCHISE Buzău M100

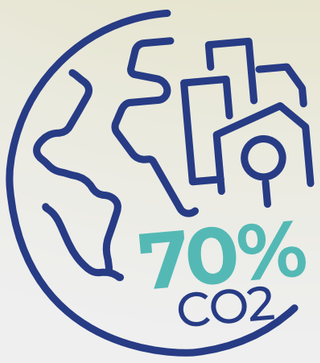
Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Dezbatere Publică

Joi, 18.09, de la 11:30

Palatul Comunal

– Sala Nicu Constantinescu



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Buzău M100 - O ȘANSĂ DE NERATAT, nu un risc!

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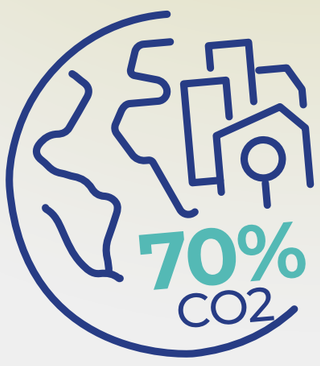
Vă așteptăm la ATELIERE DESCHISE Buzău M100

Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Luni, 22.09, 17:00

Piața Micro XIV



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Buzău M100 - O ȘANSĂ DE NERATAT, nu un risc!

Buzău
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Reșița
Iași
M100 Buzău

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Mirror Mission Cities Hub Romania

Platforma națională pentru orașe inteligente și neutre climatic.

Vă așteptăm la ATELIERE DESCHISE
Buzău M100

Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Marți, 23.09, 17:00

Piața Dorobanți

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~65% consum de energie
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Buzău M100 - O ȘANSĂ DE NERATAT, nu un risc!

Buzău
M100

Brașov
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PRIMĂRIA MUNICIPIULUI BUZĂU

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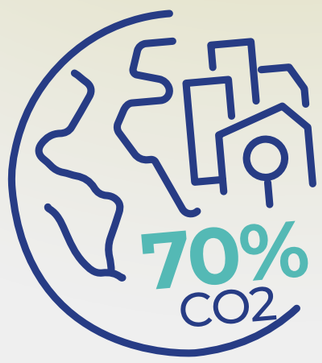
Platforma națională pentru orașe inteligente și neutre climatic.

Vă așteptăm la ATELIERE DESCHISE Buzău M100

Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Joi, 25.09, 17:00

Parcul lazul Morilor
(Micro 3)



Orașele sunt responsabile pentru
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Buzău M100 - O ȘANSĂ DE NERATAT, nu un risc!

Buzău
M100

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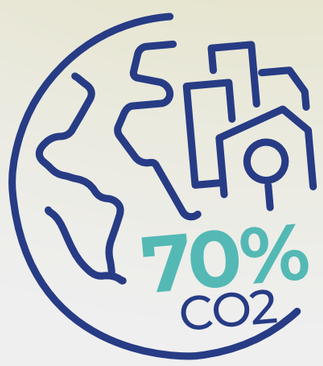
Platforma națională pentru orașe inteligente și neutre climatic.

Vă așteptăm la ATELIERE DESCHISE Buzău M100

Împreună pentru un Buzău sustenabil, inteligent, neutru climatic!

Vineri, 26.09, 14:00

Piața Daciei
Centrul Info Turism



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Buzău M100
O ȘANSĂ DE NERATAT, nu un risc!

Scanează pentrua vedea **Contractul de oraș climatic**

Ce câștigăm cu M100 la Buzău

Eficiență energetică
Consum redus, energie locală (prosumatori)

Aer mai curat
și cartiere mai răcoroase prin zonele verzi

Străzi mai sigure
cu iluminat inteligent și trafic mai calm

Transport mai rapid & curat:
electric, velo, pietonal

Locuri de muncă
și proiecte finanțabile

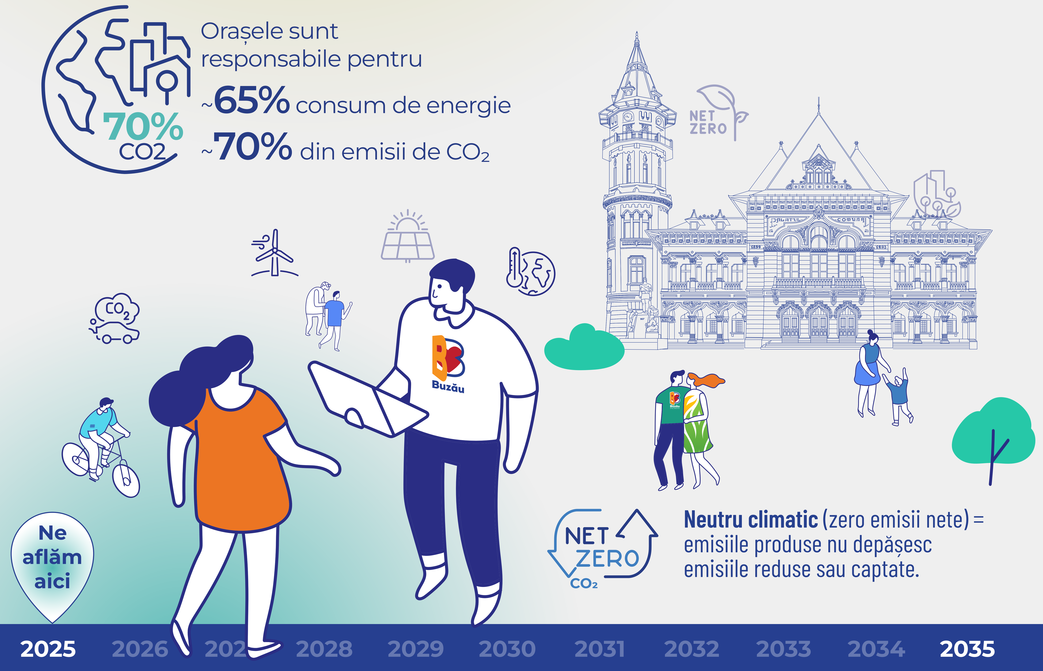
Deșeuri & economie circulară
colectare separată, reutilizare, reciclare

O VIAȚĂ MAI BUNĂ!

ÎMPREUNĂ pentru un Buzău sustenabil, inteligent, neutru climatic.

70% CO_2

Orașele sunt responsabile pentru
~**65%** consum de energie
~**70%** din emisii de CO_2



NET ZERO CO_2

Neutru climatic (zero emisii nete) = emisiile produse nu depășesc emisiile reduse sau captate.

2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 **2035**

Acționăm: strategic, rapid, împreună.

Buzău neutru climatic, Buzău mai bun

Buzău
M100

PRIMĂRIA MUNICIPIULUI BUZĂU

M100
Mirror Mission Cities Hub Romania

Platforma națională pentru orașe inteligente și neutre climatic.

Buzău M100
O ȘANSĂ DE NERATAT,
nu un risc!

Autor
Data

Buzău M100

Buzău M100
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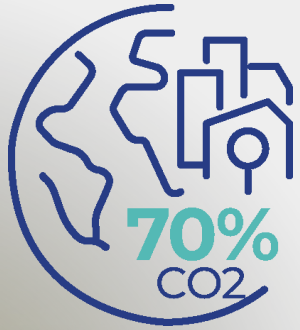

Orașele sunt responsabile pentru
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Buzău M100

Buzău M100
O ȘANSĂ DE NERATAT,
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PRIMĂRIA MUNICIPIULUI BUZĂU

M100 Mirror Mission Cities Hub Romania

Platforma națională pentru orașe inteligente și neutre climatic.

Primăria Municipiului Buzău a reușit, participând la o **competiție jurizată internațional**, să fie integrată în **proiectul Uniunii Europene M100**, alături de orașe importante din România **și din Europa: Copenhaga** (Danemarca)**, Stockholm (Suedia), Barcelona (Spania), Sofia (Bulgaria), Budapesta (Ungaria), Istanbul (Turcia), Atena (Grecia), Madrid (Spania), Milano (Italia), Oslo (Norvegia) ș.a**.

Orașele M100 vor beneficia de sprijin intensiv pentru a reduce emisiile de carbon până în 2035 și a se transforma în orașe verzi.

Buzău M100

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Misiunea **M100** face parte din **inițiativa Uniunii Europene** de a sprijini și transforma cel puțin 100 de orașe europene pentru a atinge neutralitatea climatică până în 2030.

Planul de acțiuni pentru neutralitatea climatică prevede:

- reducerea emisiilor de CO_2 cu **80% până în 2035** (și 55% până în 2030);
- extinderea **energiei regenerabile**;
- modernizarea clădirilor publice la standarde de **consum aproape zero**.

Buzău M100

Buzău M100
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Viziunea orașului nostru este de a deveni un **oraș magnet, sustenabil, inteligent, atractiv și competitiv**, prin **integrarea economiei circulare, a mobilității inteligente, a eficienței energetice și a inovării digitale.**

Buzău M100

PRIMĂRIA MUNICIPIULUI BUZĂU

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Domenii acoperite de M100

Sănătate și calitatea vieții — reducerea poluării aerului, crearea de spații verzi și soluții bazate pe natură.

Energie verde și bioenergie — acces la tehnologii care reduc dependența de resurse poluante și costisitoare.

Transport modern și infrastructură verde — investiții în clădiri eficiente energetic și transport public electric.

Buzău M100

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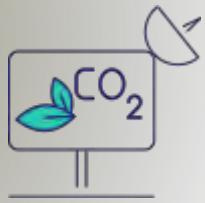
Domenii acoperite de M100

Economie verde și locuri de muncă — promovarea energiei regenerabile și a industriilor nepoluante.

Economie circulară și gestionarea resurselor — reciclare și reutilizare, reducerea risipei.



Inovație și tehnologie digitală — monitorizarea emisiilor și optimizarea consumului de resurse prin soluții moderne.

Proiecte realizate

Buzău M100

Proiecte realizate

PRIMĂRIA MUNICIPIULUI BUZĂU

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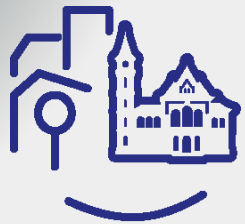
- **Reabilitarea Pieței Dacia și a Aleii Trandafirilor** – transformarea zonei centrale în zonă pietonală, reconfigurare cu zone verzi și spații de ședere, fântâni decorative, iluminat public, piste de biciclete, mobilier urban și centru de informare turistică.
- **Prima „Școală circulară" din UE** – proiect unic, cu măsuri de economie circulară și eficiență energetică, implementat la Școala Gimnazială nr. 11.
- **Reabilitarea pentru creșterea eficienței energetice** a unităților de învățământ: Liceul „Henri Coandă", Școala Gimnazială nr. 11, Grădinița „Cei 7 pitici".
- **Înlocuirea rețelei de apă și canalizare pe 43 de străzi**, proiect de peste 26 milioane euro.
- **Instalarea a 22 de garaje pentru biciclete în cartiere**, prima etapă a unui proiect de montare a peste 100 de garaje de acest tip.
- **Amenajarea a 4 parcuri noi** (68.740 mp): „Sfinții Martiri Brâncoveni", „Iazul Morilor", „Tineretului 2" și „Drăgaica".

Proiecte realizate

- **Readucerea în patrimoniul municipiului a Pădurii Crâng** (177,78 ha) pentru regenerare și transformare în pădure-parc și a Canalului Iazul Morilor (20,3 km) pentru reabilitare și extindere.
- **Sistem inteligent de management al traficului** – 24 intersecții semaforizate, monitorizare video, informare trafic și centru operațional.
- **22 km de piste de biciclete** și implementarea proiectului european „Velocity” cu 500 de biciclete în 50 de stații în toate cartierele.
- **Modernizarea transportului public:** 13 autobuze electrice + stații de încărcare, 10 stații noi pe Bd. Unirii, sistem e-ticketing, monitorizare flotă și centru operațional.
- **Centru intermodal de transport** integrat cu park-and-ride pentru reducerea traficului auto personal și încurajarea transportului public.

Proiecte propuse sau în desfășurare

Proiecte propuse sau în desfășurare



CLĂDIRI

- **Îmbunătățirea eficienței energetice** și implementarea sistemelor nepoluante de producere a energiei electrice în clădirile publice (sănătate, educație, cultură, sport și administrație);
- **Reabilitare termică**, modernizarea surselor de energie și a instalațiilor interioare în clădiri publice (educaționale, culturale, sportive și administrative);
- **Finalizarea proiectului de iluminat public cu LED, inclusiv în cartiere**;
- **Monitorizarea inteligentă** a consumului de energie electrică în instituțiile de învățământ și alte clădiri publice aflate în proprietatea Municipiului Buzău;
- **Creșterea eficienței energetice și termice** și implementarea sistemelor de producere a energiei electrice nepoluante în clădiri de locuit.
- **Reabilitare energetică a 40 de blocuri.**
- **Parc fotovoltaic de 3,6 MW** pentru producerea de energie verde, destinat acoperirii consumului de iluminat public și al clădirilor administrative.

Proiecte propuse sau în desfășurare

TRANSPORT

- **Plan de optimizare a traficului urban** și deviere a traficului greu;
- **Extinderea infrastructurii și a serviciilor de transport public**;
- **Construirea unui sistem** structural pentru o unitate de purificare a aerului în cadrul proiectului **„Buzău City Air – Sisteme Inteligente de Management al Calității Aerului”**.
- **16 autobuze electrice și 20 microbuze electrice** achiziționate împreună cu comunele Mărăcineni, Țintești, Vadu Pașii și Vernești pentru extinderea transportului metropolitan verde.
- **8 stații de reîncărcare pentru vehicule electrice**, amplasate în 5 locații: Aleea Trandafirilor, Bd. 1 Decembrie 1918, Bd. Unirii, Șoseaua Brăilei și Șoseaua Spătarului.

Buzău M100

Proiecte propuse sau în desfășurare

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DEȘEURI

- **Sistem Smart IoT** pentru colectarea proactivă a deșeurilor municipale;
- **Proiecte de recuperare a energiei din deșeuri** prin gazificare și disociere moleculară;
- **Proiect pilot** inovator pentru **utilizarea apelor uzate**, pentru prima dată în România, de la stația de epurare a Municipiului Buzău, pentru crearea de zone de biodiversitate prin alimentarea cu apă a lacurilor secate din partea de sud-est a județului Buzău, utilizând canalul gravitațional „Iazul Morilor”;
- **Noi soluții** bazate pe natură pentru **gestionarea apei pluviale** și dezvoltarea unei infrastructuri separate pentru colectarea apelor uzate — proiect pilot;
- **Stație de compostare urbană.**
- **Centru de colectare voluntară** a deșeurilor care nu sunt preluate prin sistemul actual (deșeuri din construcții și demolări, mobilier, anvelope, electrocasnice etc.).

Buzău M100

Proiecte propuse sau în desfășurare

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MEDIU, AGRICULTURĂ ȘI SPAȚII VERZI

- **Regenerarea urbană** a zonelor de locuințe colective prin acțiuni de revitalizare a spațiilor interstițiale;
- **Împădurirea** zonei adiacente Municipiului Buzău – 30 ha;
- **Piața produselor și serviciilor locale.**
- **Centrul Educațional pentru permacultură și hrană sănătoasă** (Parcul Marghiloman) – va oferi activități educaționale în domeniul permaculturii și alimentației sănătoase.

Buzău M100

Buzău M100
O ȘANSĂ DE NERATAT,
nu un risc!

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Mituri privind proiectul M100

1. „Se aruncă banii pe prostii verzi.”
2. „Nu contează, e doar propagandă ecologistă.”
3. „Mai bine făceau drumuri decât prostii verzi.”
4. E o pierdere de timp, nimic nu se schimbă.”
5. „M100 înseamnă că nu vom mai putea consuma carne.”

Care e realitatea?

Buzău
M100

Ce câștigăm cu M100 la Buzău

PRIMĂRIA MUNICIPIULUI BUZĂU

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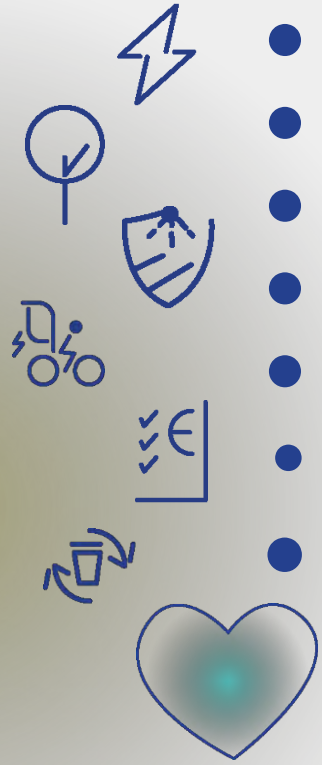

- **Eficiență energetică** Consum redus, energie locală
- **Aer mai curat** și cartiere mai răcoroase prin zonele verzi
- **Străzi mai sigure** cu iluminat inteligent și trafic mai calm
- **Transport mai rapid & curat:** electric, velo, pietonal
- **Locuri de muncă** și proiecte finanțabile
- **Deșeuri & economie circulară**
- **O VIAȚĂ MAI BUNĂ!**

Buzău M100

Buzău M100
O ȘANSĂ DE NERATAT,
nu un risc!

PRIMĂRIA MUNICIPIULUI BUZĂU

Mirror Mission Cities Hub Romania

Platforma națională pentru orașe inteligente și neutre climatic.

Buzău M100 înseamnă **colaborare, inovație și impact**. Prin proiecte concrete și o viziune comună, vom demonstra că Buzăul poate fi **prosper economic, cât și responsabil față de mediu**, având astfel grijă de viitor.

Buzău M100

O ȘANSĂ DE NERATAT, nu un risc!

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Vă invităm să sprijiniți acest proiect și să fim împreună parte din reușită. Viitorul orașului nostru depinde de pașii pe care îi facem astăzi, iar faptul că Buzăul este oraș M100 confirmă că putem fi un exemplu pentru întreaga țară.

Buzău
M100

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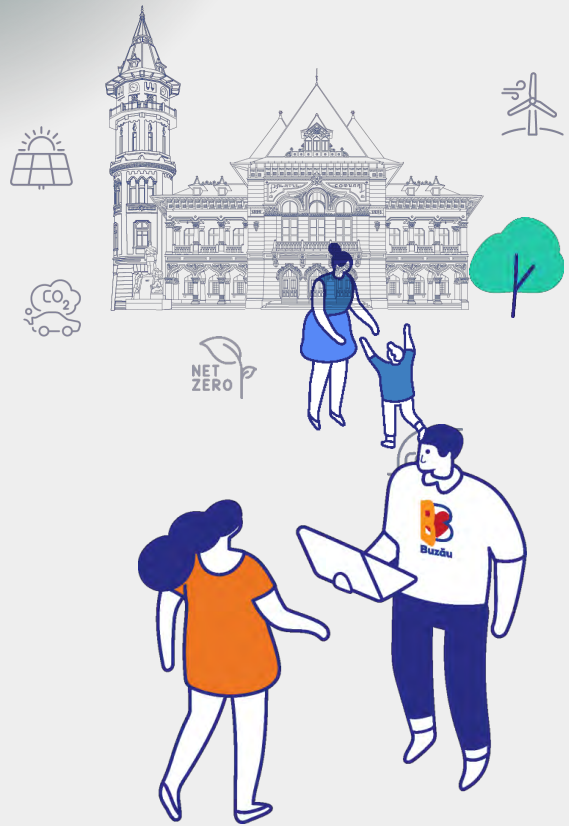

Scanează pentrua vedea
Contractul de oraș climatic

PRIMĂRIA
MUNICIPIULUI
BUZĂU

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Cities Hub Romania
Platforma națională
pentru orașe inteligente
și neutre climatic.

Buzău
M100

O ȘANSĂ DE NERATAT, nu un risc!

ÎMPREUNĂ pentru un oraș sustenabil, eficient, inteligent, neutru climatic.

2025

Buzău M100: O ȘANSĂ de neratat, nu un risc!

Dragi buzoieni,

Primăria Municipiului Buzău a reușit, participând la o competiție jurizată internațional, să fie integrată în proiectul Uniunii Europene M100, alături de orașe importante din România — **București, Brașov, Constanța, Iași, Oradea, Timișoara, Cluj-Napoca** — și din Europa: **Copenhaga (Danemarca), Stockholm (Suedia), Barcelona (Spania), Sofia (Bulgaria), Budapesta (Ungaria), Istanbul (Turcia), Atena (Grecia), Madrid (Spania), Milano (Italia), Oslo (Norvegia)** ș.a.

Misiunea M100 face parte din inițiativa Uniunii Europene de a sprijini și transforma cel puțin 100 de orașe europene pentru a atinge **neutralitatea climatică până în 2030**. Misiunea UE pentru orașe inteligente și neutre din punct de vedere climatic vizează orașele ca centre esențiale în combaterea schimbărilor climatice, prin reducerea emisiilor și adoptarea de practici și infrastructuri sustenabile. Municipiul Buzău s-a angajat să atingă neutralitatea climatică până în 2035, printr-o colaborare solidă între autoritățile locale, părțile interesate și societatea civilă.

Planul de acțiuni pentru neutralitatea climatică prevede:

- reducerea emisiilor de CO_2 cu **80% până în 2035** (și 55% până în 2030);
- extinderea **energiei regenerabile**;
- modernizarea **clădirilor publice** la standarde de **consum aproape zero**.

Viziunea orașului nostru este de a deveni un **oraș magnet**, sustenabil, inteligent, atractiv și competitiv, prin integrarea **economiei circulare, a mobilității inteligente, a eficienței energetice și a inovării digitale**.

Acest proiect ne ajută să continuăm ceea ce am început prin alte inițiative importante pentru Buzău, oferindu-ne șansa de a accelera dezvoltarea orașului prin acces la noi finanțări.

Din păcate, în spațiul public au apărut opinii neavizate și insuficient documentate cu privire la acest proiect. **Buzău M100 este o șansă de neratat, nu un risc!**

Prin dezbaterea publică a acestui proiect, așteptăm din partea dumneavoastră — cetățenii Buzăului — idei și opinii care să ne ajute să optimizăm inițiativa. **Dorim să vă ascultăm întrebările**, să răspundem și să construim împreună viitorul orașului nostru. Prin implementarea M100, Buzăul poate deveni un **model al tranziției verzi în România**, demonstrând că modernizarea poate merge mână în mână cu respectul față de oameni și mediu.

Selectarea Buzăului de către Comisia Europeană, în cadrul proiectului M100, este o mândrie pentru comunitatea noastră și o dovadă că, deși nu suntem un oraș foarte mare, putem realiza foarte multe, indiferent de dificultățile prin care trecem.

Vă invităm să sprijiniți acest proiect și să fim împreună parte din reușită. **Viitorul orașului** nostru depinde de pașii pe care îi facem astăzi, iar faptul că Buzăul este oraș M100 confirmă că putem fi un **exemplu pentru întreaga țară**.

CONSTANTIN TOMA
Primarul Municipiului Buzău

PRIMĂRIA
MUNICIPIULUI
BUZĂU

Orașele sunt responsabile pentru
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Domenii acoperite de M100

Sănătate și calitatea vieții – reducerea poluării aerului, crearea de spații verzi și soluții bazate pe natură.

Energie verde și bioenergie – acces la tehnologii care reduc dependența de resurse poluante și costisitoare.

Transport modern și infrastructură verde – investiții în clădiri eficiente energetic și transport public electric.

Economie verde și locuri de muncă – promovarea energiei regenerabile și a industriilor nepoluante.

Economie circulară și gestionarea resurselor – reciclare și reutilizare, reducerea risipei.

Inovație și tehnologie digitală – monitorizarea emisiilor și optimizarea consumului de resurse prin soluții moderne.

Proiecte realizate

M100 ne va ajuta să continuăm ceea ce am început prin intermediul altor inițiative importante pentru Buzău, oferindu-ne oportunitatea de a accesa noi finanțări.

Iată câteva dintre proiectele realizate până la acest moment:

- **Reabilitarea Pieței Dacia și a Aleii Trandafirilor** – transformarea zonei centrale în zonă pietonală, reconfigurare cu zone verzi și spații de ședere, fântâni decorative, iluminat public, piste de biciclete, mobilier urban și centru de informare turistică.
- **Prima „Școală circulară" din UE** – proiect unic, cu măsuri de economie circulară și eficiență energetică, implementat la Școala Gimnazială nr. 11.
- **Reabilitarea pentru creșterea eficienței energetice** a unităților de învățământ: Liceul „Henri Coandă", Școala Gimnazială nr. 11, Grădinița „Cei 7 pitici".
- **Înlocuirea rețelei de apă și canalizare pe 43 de străzi**, proiect de peste 26 milioane euro.
- **Instalarea a 22 de garaje pentru biciclete în cartiere**, prima etapă

a unui proiect de montare a peste 100 de garaje de acest tip.

- **Amenajarea a 4 parcuri noi** (68.740 mp): „Sfinții Martiri Brâncoveni", „Iazul Morilor", „Tineretului 2" și „Drăgaica".
- **Readucerea în patrimoniul municipiului a Pădurii Crâng** (177,78 ha) pentru regenerare și transformare în pădure-parc și a Canalului Iazul Morilor (20,3 km) pentru reabilitare și extindere.
- **Sistem inteligent de management al traficului** – 24 intersecții semaforizate, monitorizare video, informare trafic și centru operațional.
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- **Centru intermodal de transport** integrat cu park-and-ride pentru reducerea traficului auto personal și încurajarea transportului public.

Proiecte propuse sau în desfășurare

Iată câteva dintre inițiativele M100 propuse până în acest moment. Puteți consulta lista completă a proiectelor scanând codul QR aflat pe coperta finală. Vă așteptăm sugestiile pentru îmbunătățirea proiectelor la adresa de e-mail BUZAUM100@GMAIL.COM sau pe parcursul întâlnirilor din cartiere.

CLĂDIRI

- **Îmbunătățirea eficienței energetice** și implementarea sistemelor nepoluante de producere a energiei electrice în clădirile publice (sănătate, educație, cultură, sport și administrație);
- **Reabilitare termică**, modernizarea surselor de energie și a instalațiilor interioare în clădiri publice (educaționale, culturale, sportive și administrative);
- **Finalizarea proiectului de iluminat public cu LED, inclusiv în cartiere**;
- **Monitorizarea inteligentă** a consumului de energie electrică în instituțiile de învățământ și alte clădiri publice aflate în proprietatea Municipiului Buzău;
- **Creșterea eficienței energetice și termice** și implementarea sistemelor de producere a energiei electrice nepoluante în clădiri de locuit.

- **Reabilitare energetică a 40 de blocuri.**
- **Parc fotovoltaic de 3,6 MW** pentru producerea de energie verde, destinat acoperirii consumului de iluminat public și al clădirilor administrative.

TRANSPORT

- **Plan de optimizare a traficului urban** și deviere a traficului greu;
- **Extinderea infrastructurii și a serviciilor de transport public**;
- **Construirea unui sistem** structural pentru o unitate de purificare a aerului în cadrul proiectului **„Buzău City Air – Sisteme Inteligente de Management al Calității Aerului"**.
- **16 autobuze electrice și 20 microbuze electrice** achiziționate împreună cu comunele Mărăcineni, Țintești, Vadu Pașii și Vernești pentru extinderea transportului metropolitan verde.
- **8 stații de reîncărcare pentru vehicule electrice**, amplasate în 5 locații: Aleea Trandafirilor, Bd. 1 Decembrie 1918, Bd. Unirii, Șoseaua Brăilei și Șoseaua Spătarului.

DEȘEURI

- **Sistem Smart IoT** pentru colectarea proactivă a deșeurilor municipale;
- **Proiecte de recuperare a energiei din deșeuri** prin gazificare și

disociere moleculară;

- **Proiect pilot** inovator pentru **utilizarea apelor uzate**, pentru prima dată în România, de la stația de epurare a Municipiului Buzău, pentru crearea de zone de biodiversitate prin alimentarea cu apă a lacurilor secate din partea de sud-est a județului Buzău, utilizând canalul gravitațional „Iazul Morilor";
- **Noi soluții** bazate pe natură pentru **gestionarea apei pluviale** și dezvoltarea unei infrastructuri separate pentru colectarea apelor uzate – proiect pilot;
- **Stație de compostare urbană.**
- **Centru de colectare voluntară** a deșeurilor care nu sunt preluate prin sistemul actual (deșeuri din construcții și demolări, mobilier, anvelope, electrocasnice etc.).

MEDIU, AGRICULTURĂ ȘI SPAȚII VERZI

- **Regenerarea urbană** a zonelor de locuințe colective prin acțiuni de revitalizare a spațiilor interstițiale;
- **Împădurirea** zonei adiacente Municipiului Buzău – 30 ha;
- **Piața produselor și serviciilor locale.**
- **Centrul Educațional pentru permacultură și hrană sănătoasă** (Parcul Marghiloman) – va oferi activități educaționale în domeniul permaculturii și alimentației sănătoase.

Mituri privind proiectul M100

Mulți oameni pot fi sceptici și pot considera că inițiative precum M100 sunt doar „povești frumoase" sau chiar dăunătoare.

Vă prezentăm câteva mituri privind proiectul M100, dar și clarificări, pentru formarea unei opinii informate.

MIT	REALITATE
1. „Se aruncă banii pe prostii verzi."	De fapt, includerea în M100 înseamnă proiecte concrete: transport modern, renovarea blocurilor, locuri de muncă noi prin acces la fonduri europene de sute de milioane de euro — bani care altfel nu ar veni în oraș.
2. „Nu contează, e doar propagandă ecologistă."	Nu e propagandă, e sănătate publică. Buzăul are poluare ridicată și trafic aglomerat. M100 înseamnă aer mai curat, deci mai puține boli respiratorii și cardiovasculare.
3. „Mai bine făceau drumuri decât prostii verzi."	M100 nu înlocuiește infrastructura de bază, ci o completează. Putem avea și drumuri mai bune, și transport electric modern. În plus, prin M100 atragem investitori în industrie verde, ceea ce aduce locuri de muncă pentru tineri. Un oraș verde e mai atractiv pentru investitori decât unul poluat și învechit.
4. E o pierdere de timp, nimic nu se schimbă."	Dimpotrivă, M100 pune Buzăul pe harta Europei. Orașele selectate sunt văzute ca lideri în inovare. În loc să fim „ultimii" care adoptă tehnologii noi, avem șansa să fim printre primii și să beneficiem de avantajele tranziției verzi.
5. „M100 înseamnă că nu vom mai putea consuma carne."	NU se interzice consumul de carne, folosirea autovehiculelor cu motor diesel sau cumpărarea de îmbrăcăminte și încălțăminte. Astfel de restricții nu apar în niciun document al proiectului.

PRIMĂRIA
MUNICIPIULUI
BUZĂU

Buzău
M100

Buzău M100
O ȘANSĂ DE NERATAT, nu un risc!

M100
Mirror Mission
Cities Hub Romania
Platforma națională
pentru orașe inteligente
și neutre climatic.

PRIMĂRIA MUNICIPIULUI BUZĂU

M100
Mirror Mission Cities Hub Romania

Buzău M100

Scanează pentru a vedea Contractul de oraș climatic

Ce câștigăm cu M100 la Buzău

Eficiență energetică
Consum redus, energie locală (prosumatori)

Aer mai curat
și cartiere mai răcoroase prin zonele verzi

Străzi mai sigure
cu iluminat inteligent și trafic mai calm

Transport mai rapid & curat:
electric, velo, pietonal

Locuri de muncă
și proiecte finanțabile

Deșeuri & economie circulară
colectare separată, reutilizare, reciclare

O VIAȚĂ MAI BUNĂ!

M100 Buzău
Brașov
Bistrița
București
Reșița
Alba Iulia
Iași
Constanța
Timișoara
Oradea

Orașele M100 vor beneficia de sprijin intensiv pentru a reduce emisiile de carbon până în 2035 și a se transforma în orașe verzi.

Vă așteptăm sugestiile pentru îmbunătățirea proiectelor la adresa de e-mail buzaum100@gmail.com sau pe parcursul întâlnirilor din cartiere.

Primăria Municipiului Buzău

Piața Daciei, nr. 1

Borderou modalitate de distribuire

Modalitatea de distribuire a materialelor se va face în municipiul Buzău, dupa cum urmează:

Număr total broşuri şi mod de prezentare: 10 010(20 pachete x 500 exemplare; 10 exemplare separat)

	Cartier	**Număr de pachete/exemplare**
1	CRÂNG	1 pachet/500 exemplare
2	NICOLAE BĂLCESCU	1 pachet/500 exemplare
3	DEMOCRAŢIEI	1 pachet/500 exemplare
4	CONSTITUŢIEI	1 pachet/500 exemplare
5	TRANSILVANIEI	1 pachet/500 exemplare
6	SIMILEASCA	1 pachet/500 exemplare
7	EPISCOPIEI	1 pachet/500 exemplare
8	UNIRII	2 pachete/1000 exemplare
9	INDEPENDENŢEI	1 pachet/500 exemplare
10	GĂRII	1 pachet/500 exemplare
11	POŞTĂ	1 pachet/500 exemplare
12	MIHAI VITEAZUL	1 pachet/500 exemplare
13	ZONA CENTRALĂ	1 pachet/500 exemplare
14	BROŞTENI	1 pachet/500 exemplare + 10 exemplare
15	ALEXANDRU MARGHILOMAN	1 pachet/500 exemplare
16	DOROBANŢI	1 pachet/500 exemplare

17	HORTICOLEI	1 pachet/500 exemplare
18	ORIZONT	1 pachet/500 exemplare
19	NICOLAE TITULESCU	1 pachet/500 exemplare

Consilier,
Anca Fotin

Data,
24.09.2025

MUNICIPALITY OF BUZĂU: THE PATH TOWARD CLIMATE NEUTRALITY AND SUSTAINABLE DEVELOPMENT

THE MUNICIPALITY OF BUZĂU IS TAKING AN ACTIVE ROLE IN THE TRANSITION TOWARD BECOMING A CLIMATE-NEUTRAL CITY, WITH THE GOAL OF REDUCING EMISSIONS AND ADOPTING SUSTAINABLE SOLUTIONS. THIS ACTION PLAN OUTLINES THE STRATEGY THROUGH WHICH WE AIM TO ACHIEVE CLIMATE NEUTRALITY AND OBTAIN THE "MISSION LABEL", BY LEVERAGING INNOVATION AND IMPLEMENTING TRANSFORMATIVE MEASURES ACROSS ALL KEY SECTORS.

TO BRING THIS VISION TO LIFE, WE ARE MOBILIZING BOTH LOCAL INSTITUTIONS AND THE COMMUNITY, FOSTERING A STRONG PARTNERSHIP BETWEEN THE ADMINISTRATION, THE BUSINESS SECTOR, AND CITIZENS. THE LOCAL NET ZERO CITY COALITION WILL ACT AS A CATALYST FOR CHANGE, ENABLING THE ACTIVE INVOLVEMENT OF ALL RELEVANT STAKEHOLDERS AND ENSURING A COLLABORATIVE IMPLEMENTATION OF CLIMATE MEASURES.

WE UNDERSTAND THAT THIS TRANSITION REQUIRES A COORDINATED AND INTEGRATED APPROACH AT BOTH THE LOCAL AND NATIONAL LEVELS. THEREFORE, WE ARE FOCUSED ON BUILDING INTERSECTORAL PARTNERSHIPS, BRINGING TOGETHER PUBLIC ADMINISTRATION, THE PRIVATE SECTOR, CIVIL SOCIETY, AND ACADEMIA TO TRANSFORM BUZĂU INTO A MODEL OF A SUSTAINABLE AND INNOVATIVE CITY.

BY INVESTING IN GREEN INFRASTRUCTURE, SMART SOLUTIONS, AND ENVIRONMENTAL EDUCATION, WE AIM TO ESTABLISH BUZĂU AS A CENTER OF EXCELLENCE FOR LOW-CARBON INITIATIVES. THIS STRATEGIC DIRECTION REINFORCES OUR POSITION AS A LEADING CITY IN ROMANIA'S GREEN TRANSITION.

AS PART OF MISSION 100, ALONGSIDE OTHER SELECTED PILOT CITIES, BUZĂU EMBRACES THE RESPONSIBILITY TO INSPIRE AND SUPPORT OTHER COMMUNITIES IN ADOPTING SUSTAINABLE PRACTICES. WITH A CLEAR VISION AND STRONG COMMITMENT, WE AIM TO BUILD A GREENER, HEALTHIER, AND MORE PROSPEROUS FUTURE FOR ALL OUR RESIDENTS.