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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

2035

CLIMATE CITY CONTRACT

BISTRIȚA 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 (Agricultural, Forestry, and Land Use)
- CO2 (Carbon Dioxide)
- CNAP (Climate Neutrality Action Plan)
- DHS (District Heating System)
- EMB (Emissions Monitoring Baseline)
- EU (European Union)
- GCA (Green City Accord)
- GHG (Greenhouse gas)
- GIS (Geographic Information System)
- ha (Hectare)
- IPPU (Industrial Process and Product Use)
- IUDS (Integrated Urban Development Strategy)
- KWh (Kilowatt-Hour)
- LED (Light-Emitting Diode)
- MWh (Megawatt-Hour)
- NGO (Non-governmental Organization)
- NRRP (National Recovery and Resilience Plan)
- nZEB (nearly Zero Emission Building)
- RDI (Research-Development-Innovation)
- RES (Renewable energy source)
- SEAP (Sustainable Energy Action Plan)
- SECAP (Sustainable Energy and Climate Action Plan)
- SUMP (Sustainable Urban Mobility Plan)
- Sqm (Square meters)
- UHI (Urban Heat Island)
- ZCC (Zero Carbon Cities)

I. COMMITMENTS

FORMAL AMBITION

Bistrița Municipality initiated, 15 years ago, the first steps to enable its development as a climate-resilient city. We refer to its accession to the Covenant of Mayors in 2009, followed by the signing of the Covenant of Mayors for Energy and Climate in 2019.

As part of these initiatives, Bistrița has outlined a mitigating climate change – oriented plan since 2011, and starting with 2019, the plan update also took into account adaptation aspects.

For the mitigation field, the most significant sectors at city level are the municipal buildings, residential buildings, public lighting and transport, these concentrating a large part of the CO2 emissions recorded at municipality level, and being also the sectors for which emissions have been periodically quantified.

Thus, in 2021 we adopted the Long-Term Renovation Strategy for Bistrita Public Buildings Stock, 2021-2050; the document was developed based on information collected within the "Integrated National Plan for Energy and Climate Change 2021-2030" project, respectively the "National Long-Term Renovation Strategy for supporting the national park of residential and non-residential buildings, both public and private, and its gradual transformation into a real estate park with a high level of energy efficiency and decarbonization by 2050".

In 2022, we completed the implementation of the "Zero Carbon Cities" (ZCC) Project, held within the URBACT III Program, with the aim of better understanding how to propose development objectives based on scientific data considering the local context, and to support us in the development of impact measures, included in an integrated action plan to achieve climate neutrality by 2050, in accordance with the Paris Agreement and the European Union objective.

The selection within the EU Mirror Mission and this Climate Neutrality Action Plan (CNAP) represents an excellent opportunity to deepen the planning efforts initiated to reduce GHG emissions by 80%, to create a better, "greener" urban environment for future generations, while also providing an example of fruitful relations between public administration and community.

For Bistrița, the M100 Mission represents not merely a challenge, but a valuable opportunity to transform into a modern, sustainable European city. By investing in green energy, sustainable mobility, smart technologies, and active community engagement, Bistrița is committed to taking a leading role in the fight against climate change. The city aims to serve as an inspiring model for other urban centers across Romania and Europe. Bistrița's vision for the future is green, innovative, and firmly rooted in a lifestyle that respects and harmonizes with the natural environment.

With the Climate Neutrality Action Plan, Bistrita Municipality aims to reduce its GHG emissions by 80,33% (177.688,71 tons of CO2 eq.) by 2035 compared to the baseline year 2021 (221.194,77 tons of CO2 eq.).

The plan outlines a set of customized actions aligned with its overarching objective, including:

- Upgrading energy performance in all key areas—residential, businesses, public facilities, and city infrastructure—through modernization and innovative approaches.
- Expanding the share of renewable energy through photovoltaic park, and local generation in the local supply to decrease dependence on fossil fuels.
- Advancing sustainable transport options by strengthening public transit, promoting walking and cycling, and reducing the use of private vehicles.
- Implementing smart city systems and digital tools to track, analyse, and optimize energy use and emission levels.
- Investing in green infrastructure and climate-resilient solutions that both adapt to climate change impacts and contribute to emission reduction goals.

The financing will come from a mix of domestic resources, European Union funding, and private sector contributions. These funds will be allocated to the priority sectors and actions required to meet the established climate and sustainability targets. The breakdown is as follows: 18% from the North-West Regional Programme, 4% from NRRP, 4% from the local budget and loans, 2% from the Environmental Fund 2% private co-financing and 70% from other European and national funds.

Between 2023 and 2035, we plan to secure approximately €912 million in funding to support the measures needed for Bistrita to reach climate neutrality.

The implementation of the Climate Neutrality Action Plan will derive several co- benefits, such as:

- Economic growth and job creation through the massive investments in renewable energy sources, energy efficiency, and green infrastructure which eventually will stimulate the local economies, boost industries and generate new employment opportunities.
- Improved public health with much cleaner air from the reduced fossil fuel use, and the promotion of a more active mobility (walking, cycling).

GUIDING PRINCIPLES

The CNAP 2035 development for Bistrița Municipality was undertaken using the methodology proposed by M100, namely the NET ZERO CITIES support documents.

In this context, a structure of the document was outlined based on the recommendations in the aforementioned guide and resources, which would capture all the necessary and specific key aspects to an action plan in the transition to climate neutrality.

An important data collection process has also been started to complete the reference emissions inventory with 3 additional areas – AFOLU, IPPU, WASTE, as well as to assess the risks and vulnerabilities at the city level. This process was based on several data sources, namely:

• Official data sources (e.g. Statistics National Institute (ro - INS Tempo Online), official websites of relevant institutions, etc.);

• Documents / studies / reports already developed at local, county and national levels (e.g. Integrated Urban Development Strategy (IUDS (ro- Strategia de Dezvoltare Urbană, Sustainable Urban Mobility Plan (SUMP (ro - Plan de Mobilitate Urbană Durabilă), annual reports on the state of the environment, etc.);

• At the same time, we took over the results of the extensive consultations of the relevant stakeholders carried out during 2022-2023, on the occasion of ”2030 Bistrita Climate Strategy and Plan” implementation, Bistrita Integrated Environmental Plan "Green City Accord"(GCA). These consultations were held in stages and targeted the following actions:

✓ Project meeting held physically and online, with the participation of several relevant institutions and the city hall representatives;

✓ Interdepartmental meetings within the city hall; approaching and involving as many city hall departments as possible in the different stages of the Plan development was and remains a challenge, as one of the key elements for creating a greater impact through projects is the interdepartmental collaboration. As a public administration, we have realized that, as colleagues from different departments understand the importance and complexity of climate change issues, namely greenhouse gas (GHG) reduction, their participation will become more substantial.

✓ Interviews conducted online, with representatives of relevant institutions (County Inspectorate for Urgent Situations Bistrița-Năsăud, Bistrița-Năsăud Environmental County Directorate, County Water Management System Bistrița-Năsăud), respectively with a representative from the Non-governmental Organization (NGO) sector (Mocănița Transilvaniei Association);

✓ Online questionnaires, addressed to citizens and economic operators, focused on the impact that climate change has on the city and their activity, whether we are talking about everyday life in the case of citizens or economic activities in the case of economic operators, as well as on the ways in which adaptation to this impact is attempted.

The results of the consultations have been processed and directly contribute both to understanding the current situation and to developing the vision, objectives and proposed actions to reduce GHG emissions.

In addition, the main principles guiding the design of the Climate Neutrality Action Plan were:

- **Alignment with European and National Policies** – Ensuring consistency with frameworks such as the European Green Deal, the National Integrated Plan for Energy and Climate Change

(PNIESC), the Covenant of Mayors for Climate and Energy, and other relevant local strategies and plans.

- **Holistic and cross-sectoral approach** – Addressing energy, buildings, transport, waste, land use, and industry in a coordinated and systematic manner.
- **Energy Efficiency First** – Prioritizing measures that reduce energy demand before developing new production capacities.
- **Local renewable energy generation** – Promoting decentralized, clean energy solutions across all sectors.
- **Circular economy and resource efficiency** – Integrating waste reduction, reuse, and recycling into all actions.
- **Digitalization and smart technologies** – Using data-driven solutions for monitoring, management, and informed decision-making.
- **Strong stakeholder collaboration** – Recognizing that climate neutrality can only be achieved through active cooperation between all stakeholders.

In terms of implementation and monitoring, the following key principles are taken into account, as the CNAP will be overseen by the Bistrita Municipality, ensuring governance and strong community involvement:

- **Accountability** – Clear responsibilities are assigned so that every actor delivers on climate commitments and measurable outcomes.
- **Partnerships** – Public bodies, businesses, academia, civil society, and local groups will work together, not just as recipients of change but as active contributors.
- **Transparency** – Information and progress will be openly shared with citizens and stakeholders.
- **Innovation** – New technologies, methods, and research will be encouraged to boost efficiency and accelerate climate goals.
- **Evaluation and Learning** – Progress will be tracked systematically through reliable data, with findings shared widely to refine actions and improve results over time.
- **Fairness** – Climate action will prioritize inclusivity, ensuring vulnerable groups are protected and that all residents benefit equally from the city's transition to carbon neutrality.
- **Continuous monitoring and adaptation** – Designing each objective and action to be easily tracked, reported, and updated when necessary.

SIGNATORIES

We, the undersigned, pledge to actively support Bistrita 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
Romanian Order of Architects - Transylvania branch	Process	Daniela Maier	President	handwritten	7 April 2025
Bistrița-Năsăud County Council	Infrastructure	Emil Radu Moldovan	President	handwritten	9 May 2025
The Prefect Institution of Bistrița-Năsăud County	Process	Teofil - Iulian Cioarba	Prefect	handwritten	25 April 2025
Bistrița-Năsăud County Water Management System	Infrastructure	Teodor Hăsmășan	Director	handwritten	8 May 2025
Bistrița-Năsăud Environmental County Directorate	Process	Sever Ioan Roman	Executive director	handwritten	9 April 2025
Bistrița-Năsăud County Public Health Directorate	Process	Anca Andrițoiu	Executive director	electronic	7 April 2025

Cluj - Napoca Technical University - Bistrița university extension	Academic and Research, Development and Innovation (RDI)	Virgil Ispas	Director	handwritten	9 May 2025
Babeș - Bolyai Cluj - Napoca University - Bistrița university extension	Academic and RDI	Andras Barta	Director	handwritten	9 May 2025
Institute of research - development for environmental protection technologies and equipment Bistrița	RDI	Vlad Grigore	Manager	handwritten	7 April 2025
Bistrița-Năsăud County School Inspectorate	Academic	Vasile Ştеopoaie	General Inspector	handwritten	8 April 2025
SC Transmixt SA Bistrița	Infrastructure	Melente Horoba	Manager	handwritten	8 April 2025
Rotary Club Bistrița-Nosa	Process	Sorin Ioan Chiuzan	President	handwritten	9 May 2025
Lions Club Bistrița	Process	Silviu Crețu	President	handwritten	12 May 2025
Harta Verde Romania Association	Process	Ciprian Samoilă	President	handwritten	10 April 2025
Cercetasii Bistriteni Foundation	Process	Sidor Costinaşi	President	electronic	9 May 2025

Tineri pentru Comunitate Bistrița Association	Process	Cristina Maria Hangea	President	handwritten	28 April 2025
Bistrița Youth local Council	Process	Paul Băldean	Mayor	handwritten	9 May 2025
Regional/ADR NV	Funding/Financing	Csilla Hegeduș	Interim General Director	electronic	9 May 2025
ENERGY CITIES Association	Funding/Financing	Claire Roumet	Director	handwritten	6 May 2025

II. ACTION PLAN

INTRODUCTION

Bistrița is the capital of Bistrița-Năsăud County, being the only city ranked as municipality in the county. Bistrița has a total population of 94.631 inhabitants, representing 28,98% of the total of Bistrița Năsăud County population (326.580 inhabitants).

The fact that Bistrița municipality concentrates over half of the economic activity at the county level confirms its position as the main county economic center.

Bistrița Municipality features characteristics specific to a city developed around a fortified medieval Saxon settlement, preserved as a central historical core, subsequently expanded, especially in the socialist and contemporary periods, through the development, especially of industrial and residential areas.

The economic activity intensification through new companies` development, and also by attracting new investors, translates into an increase in the number of employees, indicating additional travel needs within the city and also from the peri-urban area to the city.

Given the anticipated development of other industrial areas in the city, it is necessary to ensure a level of service for the local transport infrastructure covering the travel needs of employees to and from these areas.

In the case of Bistrița municipality, the urban expansion in the last 10 years has been linear, oriented in the southwest - northeast direction, along the national road DN17 towards Viișoara, respectively Livezile. The urban expansion is however slow, especially compared to other municipalities at national level, this being mainly marked by individual housing areas in the localities immediately neighbouring the municipality.

The development was focused rather at city level, aiming at the insertion of individual and/or collective housing that contributed to the existing tissue completion, as well as to the municipal neighbourhoods' densification.

In this urban context and as it turns out from the 2030 IUDS, respectively the city's other strategic documents - SUMP, GCA Plan, City Climate Strategy and Plan (2030), which are the basis for the new General Urban Plan` development, most of the city's development measures target two areas with the highest GHG emissions: BUILDINGS AND TRANSPORT.

The CNAP 2035 challenges us to assess other areas with significant GHG emissions: AFOLU/AGRICULTURE, FORESTRY AND LAND USE, WASTE, IPPU - INDUSTRIAL PROCESS AND PRODUCT USE, respectively to identify and propose "soft" measures meant to substantially contribute in an indirect way to reducing the city's carbon footprint.

The CNAP 2035 Plan provides the necessary framework for expressing the municipality's ambition to become climate neutral by 2035 and for identifying the financial resources for its implementation.

WORK PROCESS

The CNAP 2035 was drafted taking into account the climate strategic documents and European policies in the tackled field, reflected in the supporting documents provided by the M100 national leaders and explained in detail within the thematic webinars, 1:1 meetings and local events organized at the end of 2024 and the first part of 2025.

There was an interdepartmental collaboration within the city hall, and also a consultation of stakeholders who responded positively to the invitation to contribute to action Plan development and implementation.

The CNAP 2035 vision and main objectives were established on those developed within the 2030 IUDS development and the Climate Strategy and Plan 2030, during the elaboration of which there were organized extensive public consultations of local actors; these were followed by the consultations organized in January and April 2025 within the B-CONNECT project: "Bio-Centric Communities: Navigating Nature, Embracing Ecosystems, Championing Technology," implemented in the period 2024-2028, which introduces an innovative approach of biophilic tactical urbanism, combining community interventions with advanced technology and nature-based solutions. These infrastructure solutions, with a real impact on the environment and quality of life, position Bistrița as a pioneer in green urban development and resilience.

- The Municipality Sustainable Development Department 2030 led the process of drafting the CNAP 2035, within it operating the Environment and Climate Change structure where were developed and are monitored as well the implementation status of the City Climate Strategy and Plan 2030, the Sustainable Energy and Climate Action Plan (SECAP), Green City Accord (GCA) Plan and Sustainable Energy Action Plan (SEAP) 2020;
- The baseline emissions inventory, the climate neutrality target, and the set of assessment/monitoring indicators were calculated and developed based on the Climate Strategy and Plan 2030/SECAP;
- The measures set in the actions` portfolio are selected from City Development Strategy 2030 and the Climate Strategy and Plan 2030, and there are also new proposals, which ambitiously complement the ongoing specific actions dynamics, with a view to achieving climate neutrality in 2035.

The investment plan, an integral part of the CNAP 2035, presents how the proposed projects portfolio will be financially supported, to reduce GHG emissions in Bistrita by 80% by 2035.

Timeline for CNAP Workplan *(December 2024 – December 2025)*

Month	Phase & Key Activities	Outputs
Dec 2024 – Jan 2025	**Preparation & Scoping** - Project scoping and governance setup - Identify key strategies/plans - Evaluate existing municipality projects - Align with EU CCC methodology	Scope defined, work structure established, alignment with EU framework
Feb – Mar 2025	**Baseline & Knowledge Building** - Review policies, commitments, legal frameworks - Select methodologies - Set vision and objectives	Vision statement, methodological framework
Apr – May 2025	**Baseline & Data Collection** - Baseline assessment - Collect energy and emissions data - Identify major emission sources	GHG inventory and baseline report
Jun – Jul 2025	**Strategy Development** - Draft strategies and measures - Evaluate indicators, co-benefits and financial implications	Draft climate strategy with prioritized measures
Aug – Sep 2025	**Action Planning** - Develop roadmap (actions, milestones, responsibilities, budget)	Detailed action plan
Oct 2025	**Monitoring & Evaluation Plan** - Define monitoring, evaluation, and update process	Monitoring & Evaluation framework
Nov – Dec 2025	**Review & Continuous Improvement** - Internal cross-departmental review - External review (citizens, academia, NGOs, EU partners) - Final adjustments and adoption	Final CNAP adopted with feedback incorporated

Figure 1 Bistrita Municipality timeline for CNAP Workplan

The CNAP will be developed between December 2024 and December 2025 in five phases.

- **Preparation & Scoping (Dec–Jan):** Define scope, governance, and align with EU Climate City Contract methodology.
- **Baseline & Knowledge Building (Feb–May):** Review policies, set vision and objectives, conduct baseline assessment, collect energy and emissions data, and identify major emission sources.
- **Strategy Development (Jun–Jul):** Draft strategies and measures and evaluate key indicators, co-benefits and financial implications.
- **Action Planning (Aug–Oct):** Develop a detailed roadmap with actions, responsibilities, milestones, budget, and establish the monitoring and evaluation framework.
- **Review & Finalization (Nov–Dec):** Conduct internal and external reviews, integrate feedback, and adopt the final CNAP.

By the end of 2025, the city will have a **comprehensive, actionable, and monitored plan** for achieving climate neutrality.

Municipal departments roles in the Climate Neutrality Action Plan

Department	Role in CNAP	Key Contribution
Urban Planning	Integrate climate goals into zoning and land use; promote compact, mixed-use areas.	Lower transport emissions; climate-conscious growth.
Public Works /Infrastructure	Build and maintain resilient infrastructure (roads, drainage, lighting).	Flood prevention; reduced energy demand.
Transportation/Mobility	Develop low-carbon transit (EV buses, cycling, pedestrian zones).	Reduced GHG emissions from mobility.
Environmental Services	Lead GHG inventories; expand urban forests; manage renewable energy.	Carbon sequestration; emission tracking.
Social Assistance and Emergency Situations	Address heatwaves, pollution, and vulnerable groups; establish cooling centers.	Health protection; social resilience.
Sustainable Development	Ensure CNAP managament and implementation Attract external funding (grants) for the energy-efficiency retrofit of housing; promote affordable renewables. Support green jobs and sustainable initiatives.	Lower household emissions; equitable access. Economic resilience; green workforce growth.
Finance & Budgeting	Allocate climate funds; secure external financing (bonds/loans).	Enable financial resources for the CNAP implementation and sustainability.
Education, youth & Culture	Run awareness campaigns; promote sustainable lifestyles.	Citizen engagement; behavioral change.

Figure 2 Bistrita municipal departments roles in the CNAP

The CNAP 2035 requires strong cross-departmental collaboration within the municipality. Urban planning, public works, and transport drive sustainable infrastructure and mobility, while environmental services lead emissions tracking and renewable energy initiatives. Public works and infrastructure ensure that climate measures also support resilience and equity. Sustainable development and finance provide the resources and frameworks for green growth and sustainability. Finally, environmental education, youth and culture engage citizens and foster behavioural change. Together, these departments align efforts to reduce emissions, enhance resilience and guide the city toward climate neutrality.

Note: In this document, decimals are indicated with a comma (,) and thousands are separated with a period (.).

GREENHOUSE GAS EMISSIONS BASELINE INVENTORY

FINAL ENERGY USE BY SOURCE SECTORS

➔ **Indicate the base year:** 2021

➔ **Indicate the used unit:** MWh/year

	SCOPE 1	SCOPE 2	SCOPE 3	TOTAL
BUILDINGS		372.993,15	N/A	372.993,15
FUEL TYPE / ENERGY USED		Electrical energy from the grid 62.104,45 Natural gas from the grid 310.887,70	N/A	
TRANSPORT	376.411,50	N/A	N/A	376.411,50
FUEL TYPE / ENERGY USED	Diesel 210.152,00 Gasoline 166.259,50	N/A	N/A	
WASTE	37.820,00	N/A	2.976,12	40.796,12
FUEL TYPE / ENERGY USED	DIESEL	N/A	ELECTRICAL ENERGY consumed out of the city boundary, for the waste collected in the regional landfill	
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)		82.487,00	N/A	82.487,00
FUEL TYPE / ENERGY USED		Electrical energy from the grid 45.829,00 Natural gas from the grid 36.658,00	N/A	
AGRICULTURAL, FORESTRY, AND LAND USE (AFOLU)	3.530,00	1.667,00	N/A	5.197,00

FUEL TYPE / ENERGY USED	DIESEL	Electrical energy from the grid	N/A	

We have adopted the Emissions Monitoring Baseline (EMB) made in 2021, as presented in Bistrita 2030 Climate Strategy and Plan, pages 132–136 (https://www.primariabistrita.ro/wp-content/uploads/2023/06/Strategia-de-atenuare-si-adaptare-la-schimbarile-climatice-pentru-municipiul-Bistrita.pdf). The EMB 2021 was developed in accordance with the technical guidelines of the "Covenant of Mayors for Climate and Energy."

For information that was not available, estimates were used in order to calculate the full spectrum of energy consumption and the CO2 emissions. So, the baseline information **for 2021** is the following:

Total energy consumption for 2021: 877.884,77 MWh/year
Total CO2 emissions for 2021: 221.194,77 tons CO2/year

Buildings sector - estimates sourced from Bistrita 2030 Climate Strategy and Plan, EMB 2021, pages 132–136.

Information related to the energy requirements of public buildings and residential buildings is available in the Bistrita 2030 Climate Strategy and Plan document. CO2 emissions in tons/year were calculated by multiplying the conversion factor with the energy type expressed in MWh/year. The electrical energy needed to power the buildings comes directly from the energy grid, and the natural gas requirements for heating comes directly from the natural gas grid:

- 372.993, 15 MWh/year energy required
  - Electrical energy: 62.104,45 MWh/year
    - 2.233,45 MWh/year for municipal buildings (managed by the city);
    - 56.960,00 MWh/year for residential buildings;
    - 2.911,00 MWh/year for public lighting.
  - Natural gas: 310.888,7 MWh/year
    - 16.580,75 MWh/year for municipal buildings (managed by the city);
    - 294.308,00 MWh/year for residential buildings.
- 86.212,90 tons total CO2 emissions (38,98 % of total CO2 emissions)

Transport sector - estimates sourced from Bistrita 2030 Climate Strategy and Plan, EMB *2021,* pages 132–136.

The transport energy requirements and CO2 emissions aggregate data of the municipal fleet, public transport as well as private and commercial transport - data related to this sector was taken from Bistrita 2030 Climate Strategy and Plan document:

- 376.411,50 MWh/year energy required
  - Diesel: 210.152,00 MWh/year

- 2.271,00 MWh/year for municipal fleet (managed by the city);
- 7.455,00 MWh/year for public transport;
- 200.426,00MWh/year for private and commercial transport.

○ Gasoline: 166.259,5 MWh/year
- 9,50 MWh/year for municipal fleet (managed by the city);
- 166.250,00 for private and commercial transport.

● 97.509,20 total tons CO2 emissions (44,08 % of total CO2 emissions)

Since in 2021, we did not include WASTE, AFOLU and IPPU in the Emissions Monitoring Baseline, we proceed to the following estimate from similar adopted Romanian CCC documents.

Industrial Process and Product Use - estimated at 11,16 % of total CO2 emissions. The percentage was determined after the consultation of local strategic documents and information available from the National Institute of Statistics and in the same way, the percent for electric energy was established at 70 % and for natural gas at 30 %. As related to the economic sector Bistrita has the following distribution (Bistrita 2030 Sustainable Development Strategy):

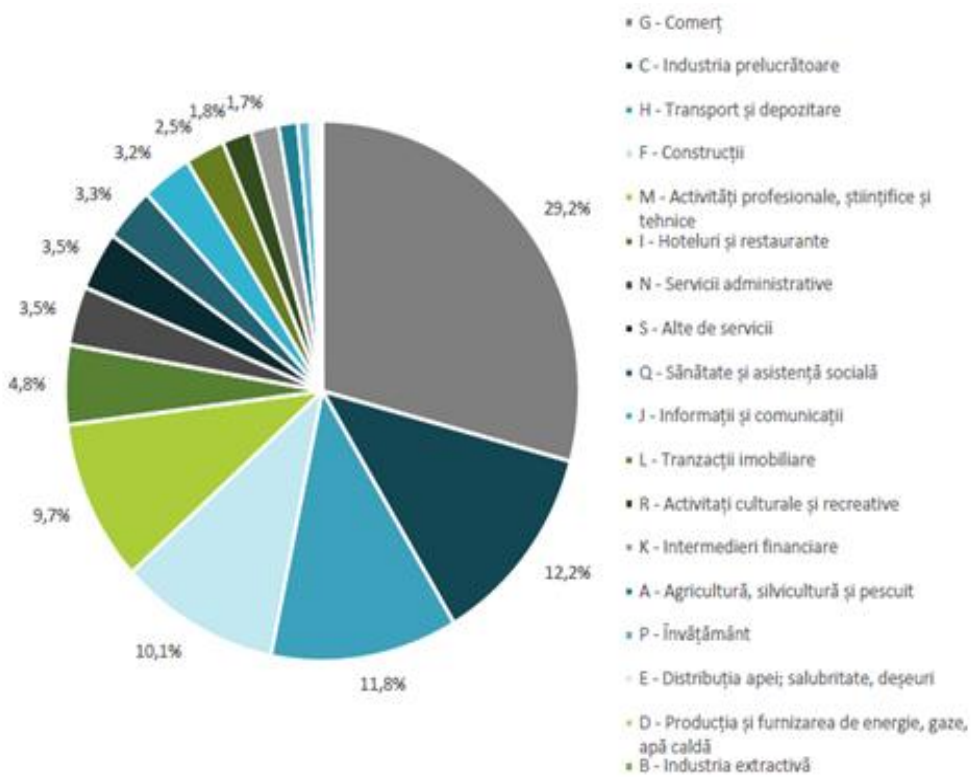

Figure 3 Bistrita economic sectors distribution

Agriculture, Forestry and Land Use - estimated at 0,71% of total CO2 emissions. For this sector we consider that the energy consumption and CO2 emissions can be estimated at 0,71% from the total city's emissions, according to available data coming mainly from the National Institute of Statistics but also from other technical and financial reports/paper works. This percent is divided as: 60% for diesel and 40% for energy. The Agriculture sector is less present in the city of Bistrita and in this case, there were taken into consideration maintenance costs for public parks and green areas.

- The value of 3.530,00 MWh/2021 associated with the AFOLU sector was subtracted from the value of 417.761,50 MWh/2021 (EMB 2021) related to the TRANSPORT sector, considering that it was initially accounted for in the reference year 2021 for private and commercial transport.

Waste. The information for energy consumption and emissions coming for the waste sector were partially available from the municipal waste operator and form annual statistical reports. Beside this, when calculation has been done for the CNAP 2035, we chose to estimate that these are 5% from the total city's emissions. This amount was determined by taking into account available scientific documents (as ScienceDirect.com). The assumption was that the 5% percentage will be set also for 2035.

- The value of 37.820,00 MWh/2021 associated with the WASTE sector was subtracted from the value of 417.761,50 MWh/2021 (EMB 2021) related to the TRANSPORT sector, considering that it was initially accounted for in the reference year 2021 for private and commercial transport. Additionally, it was assumed that, of the total energy required for municipal waste management in 2021, 90% was consumed from diesel, and the remaining 10% came from electricity.

EMISSION FACTOR APPLIED

➔ **Indicate the primary energy type and greenhouse gas (GHG) emission factor in accordance with the methodology used:**

➔ **Indicate the used method, e.g., GPC, IPCC, CRF, national etc.:** IPCC 2006, JRC 2021

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 2021	0,377	N/A	N/A	N/A	N/A	N/A
*NATURAL GAS 2021	0,202	N/A	N/A	N/A	N/A	N/A
*DIESEL 2021	0,267	N/A	N/A	N/A	N/A	N/A
*GASOLINE 2021	0,249	N/A	N/A	N/A	N/A	N/A
GPL		N/A	N/A	N/A	N/A	N/A
BIOFUEL		N/A	N/A	N/A	N/A	N/A
**RENEWABLE ENERGY	0	N/A	N/A	N/A	N/A	N/A
***ELECTRICAL ENERGY 2035	0,0404	N/A	N/A	N/A	N/A	N/A

* CO2 estimates in 2021 (MWh/year to tons CO2/year) for grid supplied energy are set at 0,377 according to: Joint Research Centre Data Catalogue - GHG Emission Factors for Electricity Consumption - European Commission;

* CO2 estimates in 2021 (MWh/year to tons Co2/year) for natural gas, gasoline, diesel are set according to IPCC 2006;
** Emission factors related to energy generated from renewable sources are equal to 0.
*** The conversion factor of 40,4 kg CO_2/MWh was calculated based on the assumed 2035 energy mix for Romania as outlined in the national Energy Strategy. These percentages represent indicative projections rather than confirmed values, since the actual energy demand and structure will depend on future developments in electrification and policy implementation. The factor was derived by applying direct emission factors to each energy source according to its assumed share: coal (0%), renewables and hydro (55%, considered carbon-free), nuclear (25%), and natural gas (20%, with 202 g CO_2/kWh). The resulting weighted average emission factor is 0,0404 kg CO_2/kWh (40,4 kg CO_2/MWh).
**** For the other greenhouse gases information was not available. Future actions for the database will be subject of the CNAP 2035 (in partnership with the Bistrița-Năsăud Environmental County Directorate, universities) with specific actions/investment for creating a database for other greenhouse gases. CO2 was the only greenhouse gas estimated in Bistrita 2030 Climate Strategy and Plan, pages 132–136, the most recent strategic document approved by the city council which includes the EMB 2021 developed in accordance with the technical guidelines of the "Covenant of Mayors for Climate and Energy".

GHG EMISSIONS BY SOURCE SECTORS

- **Indicate the base year:** 2021
- **Indicate the unit:** tons CO2/year

	SCOPE 1	SCOPE 2	SCOPE 3*	TOTAL
BUILDINGS 38,98%		Electrical 23.413,38 Natural gas 62.799,52	N/A	86.212,90
TRANSPORT 44,08%	Diesel 56.110,58 Gasoline 41.398,62	N/A	N/A	97.509,20
WASTE	Diesel 10.098,00	N/A	Electrical energy 1.122,00	11.220,00
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)		Electrical energy 17.277,4 Natural gas 7.404,6	N/A	24.682,00
AGRICULTURAL, FORESTRY AND LAND USE (AFOLU)	Diesel (60%) 942,40	Electrical energy 628,27	N/A	1.570,67
TOTAL	**108.549,6**	**111.523,17**	**1.122,00**	**221.194,77**

Notes:

- The base year for GHGH emission data and energy consumption quantities are from 2021. The data were taken from the Bistrita 2030 Climate Strategy and Plan/EMB 2021.
- Emissions are reported in tonnes CO2 equivalent per year.

- Scope 1 emissions include:
  Transport sector
  97.509,20 total tons CO2 emissions (44,08% of total CO2 emissions)
  ○ Diesel: 56.110,58 tons CO2
    - 606,357 tons CO2 for municipal fleet (managed by the city);
    - 1.990,48 tons CO2 for public transport;
    - 53.513,74 tons CO2 for private and commercial transport.
  ○ Gasoline: 41.398,61 tons CO2 emissions
    - 2,36 tons CO2 for municipal fleet (managed by the city);
    - 41.396,25 tons CO2 for private and commercial transport.
  Agriculture, Forestry and Land Use - Diesel: 942,40 tons CO2
  Waste - Diesel: 10.098,00 tons CO2

- Scope 2 emissions include:
  Buildings sector
  86.212,90 tons total CO2 emissions (38,98% of total CO2 emissions)
  ○ Electrical energy from the grid: 23.413,38 tons CO2
    - 842,01 tons CO2 for municipal buildings (managed by the city);
    - 21.473,92 tons CO2 for residential buildings;
    - 1.097,45 tons CO2 for public lighting.
  ○ Natural gas from the grid: 62.799,52 tons CO2
    - 3.349,30 tons CO2 for municipal buildings (managed by the city);
    - 59.450,22 tons CO2 for residential buildings.
  IPPU sector
  24.682,00 tons total CO2 emissions (11,16% of total CO2 emissions)
  ○ Electrical energy from the grid: 17.277,4 tons CO2
  ○ Natural gas from the grid: 7.404,6 tons CO2
  AFOLU sector:
  ○ **Electrical** energy from the grid: 628,27 tons CO2

  ● When quantified, Scope 3 emissions include:
  Waste sector:
  ○ Electrical energy consumed out of the city boundary, for the waste collected in the regional landfill: 1.122,00 tons CO2

PLANNED ACTIONS BY SOURCE SECTORS

The following table categorises emission reductions from each planned action, based on the main categorisation and the scope they affect.

BASE YEAR: 2035	SCOPE 1	SCOPE 2	SCOPE 3
BUILDINGS	**55.041,96**	**25.041,34**	NA
Photovoltaic Park		2.650,24	
Increasing energy efficiency in public lighting infrastructure in Bistriţa municipality, Stage 1		143,01	
Increasing energy efficiency in public lighting infrastructure in Bistriţa municipality, stage 2.1”		4,12	
Increasing energy efficiency in public lighting infrastructure in Bistrita municipality, stage 2.2”		13,37	
Replacing inefficient lighting fixtures with LED devices (fixtures) with municipality resources		27,49	
Integrated renovation of dense multi apartment residential areas and their transition to climate neutral district (150 apartment buildings)	21.811,6	5.418,87	
Energy Renovation of Public Buildings (more than 20 public buildings)	1.067,80	265,29	
Green House program - increase from 1082 to 2500 (+1418) prosumers until 2030		4.511,91	
Urban regeneration of degraded public spaces - Andrei Muresanu area	7.160,00	1.364,00	
Urban regeneration of degraded public spaces - Independentei Nord area	3.954,72	753,28	
Urban regeneration of degraded public spaces in the micro hydro plant area	2.232,72	425,28	
Urban regeneration of the area on the perimeter "King Mihai I" Municipal Park, "Jean Pădureanu" Stadium and the right bank of Bistriţa River	7.785,12	1.482,88	

Urban Regeneration of the Area Bounded by Gării Street, Decebal Boulevard, Mihai Eminescu Street, and Republicii Boulevard – Including a park redevelopment and expansion, and the construction of a multi-storey car Park	2641,80	503,20	
Urban regeneration of the area surrounding the former thermal energy Plant of Bistrita city	4.120,20	784,80	
Establishing local urban policies to achieve climate targets	4.268,00	6.693,60	
TRANSPORT	64.622,57	1.580,82	NA
The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road	45.772,27	934,13	
Green public transport line using electric, hybrid or low-pollution vehicles	2.251,88	118,52	
Reconfiguration of the public transport axis on the route Gării street – Decebal boulevard – Andrei Mureşanu street – Năsăudului street	1.097,25	57,75	
Green corridor for urban mobility in the historical center of Bistrita municipality	22,80	1,20	
Sustainable mobility corridor along Bistrița River (Blue Line)	421,08	22,15	
Renewal of the public transport fleet in Bistrița Municipality and Livezile component locality - Procurement of 20 electric buses and 24 charging stations	7.410,00	390,00	
Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase I - Purchase and installation of 4 electric batteries recharging stations			
Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase II - Purchase and installation of 14 electric batteries recharging stations			
Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase III - Electric Batteries Charging Stations at 44 private apartment block areas and 14 public buildings as kindergartens, schools and cultural buildings.			
Extension of the network of private electric charging stations, by enforcing urban planning regulations: at least 50 new charging stations. Benefits for the residents purchasing electric vehicles (local taxes, subsidies (both national and local); parking discount and dedicated lots etc.) – at least 1000 beneficiaries by 2030".			
Traffic management system extent in Bistrita Municipality	530,40	27,92	
Traffic management system extent in Bistrita Municipality, phase 2	553,89	29,15	
Development of four road passages on DN17 at the entrances to Bistrița city	4.860,00		
Limited traffic zone	1.703,00		
WASTE			

	8.382,34	NA	742,66
Establishment of two voluntary collection centers in Bistrița municipality	8.382,34		742,66
Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level			
Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level - Phase 2			
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)	6.270,91	12.541,81	2.090,30
Community partnership for climate neutrality European projects + IPPU/b-CONNECT and IPPU	6.270,91	12.541,81	2.090,30
AGRICULTURAL, FORESTRY AND LAND USE (AFOLU)	824,40	549,60	NA
Extension of "Green Bistrita" Program - Rehabilitation and/or extension of existing parks. Tree planting: 10,000 new trees in public areas (streets, squares, courtyards of public institutions, parks etc.)	824,40	549,60	
Valea Castailor Blue Corridor			
Unirea area Park			
Bistrița riverbanks will be fitted, from the Unirea locality to Berăriei bridge			
Green roofs and facades for public and private buildings			

EMISSIONS GAP

	BASELINE EMISSIONS (PERCENTAGE)		**RESIDUAL EMISSIONS / OFFSETTING		BASELINE EMISSIONS REDUCTION TARGET[2]		EMISSIONS REDUCTIONS IN EXISTING STRATEGIES		EMISSIONS GAP (TO BE ADDRESSED BY THE ACTION PLAN)	
	(absolute)	(%)	(absolute)	(%)	(absolute)	(%)	(absolute)	(%)	(absolute)	(%)
BUILDINGS	86.212,90	38.98	6.129,60	14,09	80.083,30	45,07			80.083,30	45,07
TRANSPORT	97.509,20	44,08	31.305,81	71,96	66.203,39	37,26			66.203,39	37,26

WASTE	11.220,00	5,07	2.095,00	4,82	9.125,00	5,14			9.125,00	5,14
INDUSTRIAL PROCESS AND PRODUCT USE (IPPU)	24.682,00	11,16	3.778,89	8,69	20.903,02	11,76			20.903,02	11,76
AGRICULTURE, FORESTRY AND LAND USE (AFOLU)	1.570,67	0.71	196,67	0,45	1.374,00	0,77			1.374,00	0,77
TOTAL	**221.194,77**	**100,00**	**43.506,06**	**19,67**	**177.688,71**	**80,33**			**177.688,71**	**80,33**

Figure 4 Bistrita Municipality emissions gap

CURRENT POLICIES AND STRATEGIES

Bistrița's transition to climate neutrality is guided by integrated local, regional, and national strategies addressing emissions reduction, sustainable urban development, mobility, energy efficiency, and digital transformation.

Local Level:

- Climate Change Mitigation and Adaptation Strategy (2023–2030): Targets 55% GHG reduction and implements short-, medium-, and long-term adaptation measures.
- Integrated Urban Development Strategy (2022–2030): Promotes low-carbon development, eco-innovation, and improved competitiveness of SMEs.
- Sustainable Urban Mobility Plan (2022–2030): Encourages low-emission transport, safe streets, and efficient public transit.
- Long-Term Renovation Strategy (2021–2050): Retrofitting municipal buildings to reduce CO_2 emissions by 58% by 2050.
- Digitalization Strategy: Enables smart city services for sustainable urban management.
- Key Policies: Pedestrian-friendly city, green urban spaces, and green transport prioritizing public and electric mobility.

Local strategies are comprehensive, integrating energy, mobility, urban greening, and digitalization. Their success depends on effective implementation, monitoring, and citizen engagement.

Regional Level:

- North-West Regional Development Plan (2021–2027): Supports municipalities with sustainable development, ecological protection, and climate resilience.

National Level:

- Romania Neutral in 2050: Guides national net-zero emissions targets.
- National Climate Change Adaptation Strategy (2024–2030): Provides a framework for climate-resilient urban development.

Bistrița has a strong multi-level policy framework aligned with European and national climate goals. Key opportunities include improving coordination, monitoring, financing, and citizen participation to accelerate the city's climate-neutral transition.

RELEVANT POLICIES, STRATEGIES, INITIATIVES, REGULATIONS

TYPE	LEVEL	TITLE	DESCRIPTION	RELEVANCE	NEED FOR ACTION
Strategy and Action Plan	local	**2023-2030 Climate Change Mitigation and Adaptation Strategy and Action Plan**	This is an update of SECAP 2019–2030; the documents updating it are elaborated according to the methodology of the Covenant of Mayors on Climate and Energy, including a more detailed Climate Change Adaptation section;	We have set the goal of reducing GHG emissions by 55%, in line with the Green Deal.	These documents present specific measures and actions for the short, medium, and long term, addressing energy and climate challenges, aimed at ensuring a secure, sustainable, competitive, and affordable energy supply for citizens. Consequently, they contribute to reducing energy dependence and protecting vulnerable consumers.
Strategy	local	**2022-2030 Integrated Urban Development Strategy for Bistrita Municipality**	The main strategic document currently in force at the level of Bistrița Municipality, which defines the urban context and identifies the key local issues and challenges. The document proposes the development vision and strategy objectives, as well as potential projects, their implementation and monitoring, integrated with the	Regarding the main objective of the strategy, it is represented by ensuring a balanced, coherent, and harmonious development of Bistrița Municipality, focusing on reducing carbon emissions, improving the competitiveness of small and medium-sized enterprises,	It is necessary to amplify eco-innovation and public service applications in relation to economic and social activities, infrastructure, accessibility, mobility, and environmental quality, as well as ensuring fair living and working conditions for all citizens and investors in the municipality by

			definition of the partnership framework.	enhancing access to, use of, and the quality of ICT, and promoting investments in the development of products and services in R&D, as well as technology transfer.	2035.
Action Plan	local	**2022-2030 Sustainable Urban Mobility Plan for Bistrita Municipality**	The main objective of the Sustainable Urban Mobility Plan (SUMP) is to reduce the environmental impact of transportation. Therefore, the projects considered and classified in the action scenarios contribute to the reduction of pollutant emissions, as well as promoting alternative means of transport and sustainable mobility.	Mobility and transport are essential factors for the environment, the economy, and an improved quality of life, being addressed in multiple strategic documents, particularly from the perspective of carbon emission reduction objectives.	The proposed actions aim to connect communities in the form of residential safe streets, designed as public spaces in residential areas and also starting from inclusive transport services. The whole concept is of course based on an attractive public transport system: in time, efficient and with zero emissions alongside a road traffic network with a fair configuration of the space allocated to different categories of traffic participants.
Strategy	local	**2021-2050 Long-Term Renovation**	The plan evaluates 127 buildings owned by the municipality,	The Strategy/Plan is a	The CNAP 2035 includes measures

		Strategy for the Public Building Stock of Bistrița Municipality	with a total usable area of 124,551 m^2, proposed for phased renovation. The projected energy savings amount to 15,787 MWh/year, with carbon dioxide emissions expected to be reduced by 58.06% by 2050 compared to the year 2018.	document that centralizes all information related to public buildings. Comparative analyses based on specific consumption indicators can provide useful insights for making informed decisions regarding the energy redevelopment of buildings.	for the energy redevelopment of the built environment, aiming towards high-energy-performance buildings and nZEB (nearly Zero Energy Buildings) standards for 2030, 2040, and 2050, along with the monitoring of results after the implementation of these measures.
Strategy	local	**The Integrated Strategy for Digitalization and IT Transformation of Bistrița City Hall**	The beneficiaries of the system will primarily be the public servants of Bistrița City Hall, but also all the citizens of the city, as they will be able to benefit from online services that will allow remote interaction with the City Hall regarding all types of documents/papers necessary for communication with any department/service/ directorate/office of the City Hall.	A major challenge currently faced by city halls is related to managing the huge volume of documents, which in most cases are still in traditional (paper) format. In the context of digitalization of all processes aimed at the iterative development of smart cities across all four levels currently considered—Digital City, "Smart" City, Intelligent City, Cognitive City (Brained City)—it	The CNAP 2035 provides digital solutions with a key role in the sustainable urban transformation of the city, designed to facilitate the city's transformation into a model of biocentric connectivity, promoting sustainability, ecological mobility, and active citizen participation.

				is necessary, even crucial, the archiving and document management system of public administration to be fully digitized.	
Policy	local	**Pedestrian-friendly city and urban regeneration**	Expanding pedestrian-only areas, as well as dedicated public transport lanes, cycling lanes, charging stations, smart lighting and traffic management.	The Policy is relevant for reaching climate neutrality by 2035 through the reduction of CO2 emissions generated by motorised vehicles. The policy is translated into action through the implementation of specific sustainable transport projects in the city and the surrounding communities of Bistrița municipality.	The expansion of specific actions towards the city's outskirts, in the surrounding communities, as well as in peri-urban areas, becomes an important part of the CNAP 2035.
Policy	local	**Bistrita, green city!**	Development of green public areas, planting 10.000 new trees and creating blue-green corridors along the water courses and green corridors in the city	The policy relates to the GCA Integrated Action Plan and B-connect project: initiatives aimed at transforming the city of Bistrita into a	The measures aim to create a resilient and connected community that harnesses the potential of natural resources and innovative technologies to

				model of sustainable urban development, focused on the integration of nature-based solutions, advanced digital technologies and community initiatives. The main goal is to improve the inhabitants` quality of life by regenerating urban spaces, reducing pollution, promoting green mobility and increasing ecological awareness.	address contemporary environmental challenges.
Policy	local	**Green Transport**	The policy aims to discourage personal car traffic, to prioritize and develop public transport, pedestrian areas and bicycle tracks, to the detriment of car lanes, so that all users of public spaces have the same safety in traffic. The Municipality is continuously replacing its older fleet with an electric	This can include the estimated emission reduction, energy savings, or a description of other performance indicators specific to the measure. Their implementation will lead to sustainable and environmentally friendly urban mobility, to a cleaner and more	The Green Transport Policy will be continued as a major contributor to the net zero objective. Further approaches to encourage the use of public transport, active travel and incentivizing the shift to electric cars will be explored within the CNAP 2035, including urban planning regulations that

			one.	accessible air and an integrated managed urban mobility.	encourage the development of private charging stations.
Strategy/plan	regional	**North-West Regional Development Plan 2021-2027**	Sustainable development and resilience, in full alignment with the environmental and climate objectives assumed at the European level, represent a cross-cutting aspect that defines the strategy and interventions of the North-West Regional Program.	The funded actions will focus on ecological/environmental sustainability through design, integrating environmental considerations from the outset.	The measures proposed in the CNAP 2035 align with the objectives of identifying and choosing implementation options that contribute to environmental regeneration and climate neutrality, as well as the sustainable management of resources and the restoration and protection of ecosystems.
Strategy	national	**The Romanian long-term strategy of Romania for reducing greenhouse gas emissions – Romania Neutral in 2050**	It aims to reduce the carbon footprint of the countries and achieve the net-zero emissions target within the agreed timelines, without compromising the safe and continuous operation of the electricity system.	The decarbonization dimension is defined by policies, actions, and measures at national, regional (or provincial), and local levels.	The measures proposed in the CNAP 2035 align with the objectives of the strategy, especially regarding the transition to a zero-emission urban environment.
Strategy	national	**The National Strategy for Climate Change Adaptation for the period 2024-**	It strengthens Romania's capacity to respond to the challenges posed by climate change,	The strategy provides a coherent and sustainable framework for	The measures proposed in the CNAP 2035 align with the objectives of the strategy,

		2030, with a perspective towards 2050	while also aligning with the international commitments made through the Paris Agreement and European legislation.	society and the national economy to dynamically adapt to climate challenges, ensuring sustainable development and the protection of citizens.	especially regarding the transition to an urban environment resilient to climate change.

ACTION PORTOFOLIO

INDIVIDUAL ACTIONS

ACTION TITLE	**1. Renewable Energy Source Installations for Residential and Public Buildings**
TYPE OF ACTION	energy systems / technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	schools, block association, citizen, municipality
FIELD OF ACTION	Buildings
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings, scope 1 and scope 2
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	The municipality extends the energy efficiency program in 15 public buildings, 100 blocks. Through the GREEN HOUSE Program, we estimate an increase to 2500 (1082 in 2024) domestic prosumers and 300 (143 in 2024) small prosumers. Energy efficiency works and green energy production will contribute to reducing CO2 emissions.
OUTCOME	At least 7% of the electricity and hot water supply comes from local renewable energy sources.
RESPONSIBLE ENTITY / BODY / PERSON	Bistrita Municipality, Energy manager
INVOLVED STAKEHOLDERS	Bistrita Municipality, Energy Manager, Energy private company
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	4.511,91 tons CO2 per year from Building
% OF TOTAL CO2 REDUCTION	2.54%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	7.373,60 MWh electrical energy from solar
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2025-2035

ACTION TITLE	**2. Local Green Power Generation**
TYPE OF ACTION	energy systems and technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Municipality, Public institutions
FIELD OF ACTION	Energy systems
SYSTEMIC LEVER	Technology/Infrastructure
EMISSION DOMAIN(S)	Buildings, Scope 2
COVERED INTERVENTIONS	Establishment of a renewable energy production unit
BRIEF DESCRIPTION	Photovoltaic Park - **consumption of the city hall and educational institutions ' public buildings**. The purpose of the photovoltaic park project is the production of electricity by capitalizing on the renewable source represented by solar energy. Solar energy is a viable source for generating electricity, its use helping to reduce the generation of pollutant emissions into the environment. The project will be implemented on a plot of land located outside Bistriţa municipality, component locality of Sărata, with a total area of 47.593 square meters (sqm.)
OUTCOME	Newly installed capacity for energy production from renewable sources MWAC 3,90 GHG annual decrease (estimated GHG annual decrease) tons CO2 equivalent/year 2.650,24 Average electricity production from renewable sources MWh/year 4.331,16 Total electricity production from renewable sources for the reference period MWh/20 years 86.623,20 Power plant capacity factor % 12,68 Project value: 5.061.067,90 Euros
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality. Energy Manager
INVOLVED STAKEHOLDERS	Bistrița Municipality, Bistrița-Năsăud Environmental County Directorate, Public Entities, Energy Service company

GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	2.650,24 tons CO2 equivalent/year
% OF TOTAL CO2 REDUCTION	1,49%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	4.331,16 MWh/year
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	01.04.2026

ACTION TITLE	**3. Modernisation of public lighting system**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Buildings (both public – used for providing public services and private – residential ones)
FIELD OF ACTION	Energy systems
SYSTEMIC LEVER	Technology / Infrastructure
EMISSION DOMAIN(S)	Buildings, Scope 2
COVERED INTERVENTIONS	Energy efficiency increase of public lighting in Bistrita - extends of public lighting networks. Integrated intelligent public lighting management system. Equipping approx. 95% of the public (street, parks, food markets and other public facilities) lighting network with Light-Emitting Diode (LED) lamps, remote management and dimming systems.

BRIEF DESCRIPTION	

1. Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, Stage 1

Financing contract value: 6.001.700,58 lei including VAT, of which, non-reimbursable financing from the Environment Administration Fund: 5.000.000,00 lei including VAT.
Implementation of a modern lighting system with high luminous and energy efficiency, with a long lifespan of light sources (minimum 100.000 hours), with low maintenance and operating costs and a reasonable investment.
Implementation of a remote management system, LED lighting fixtures installation, Total poles number: 1.286 pieces, Total number of lighting fixtures equipped with the remote management system: 1.384 pieces, Streets on which the project is implemented: 59 streets
By modernizing the lighting system, the following consumption will be reduced:
Decrease in annual primary energy consumption in public lighting by 539.686.50 (Kilowatt hour (KWh)/year) from 888.029,00 to 348.342,50
Estimated annual decrease in greenhouse gases by 143,01 (tons CO2 equivalent) from 235,32 to 92,31

2. Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, stage 2.1"

Financing contract value: 4.500.614,18 lei, including VAT, of which the eligible value is 3.999.931,57 lei, including VAT.
Extent of the lighting system is carried out on 7 streets and its modernization is implemented on 9 streets which will lead to the next reduced consumption:
Decrease in annual primary energy consumption in public lighting by 15.544,65 (MWh/year) from 56.606,00 to 41.061,35
Estimated annual decrease in greenhouse gases by 4,12 (tons CO2 equivalent) from 15,00 to 10,88

3. Increasing energy efficiency in public lighting infrastructure in Bistrita municipality, stage 2.2"

For this area, which includes 30 streets, a new public lighting system (PLS) will be created, complementing the existing one, which will be modernized by installing new poles equipped with lighting devices based on LED technology. The lighting devices needed to achieve public street lighting according to standards, taking into account the extensions, are 382 pieces, and the need for new poles equipped with photovoltaic panels and batteries is 206 pieces.
Total investment value (including VAT): 6.826.429,21 LEI, of which: - 5.000.000,00 LEI from the budget allocated by the program - 1.826.429,21 LEI ineligible expenses, of which construction-assembly (C+M): 5.836.842,55 LEI

Project indicators:

Capacities (in physical and value units)
No. lighting devices (fixtures) installed by the project: 382 pcs;
No. existing lighting devices (fixtures): 157 pcs;
Additional number of devices installed on existing poles: 19 pcs;
No. of light points controlled by remote management: 382 pcs;

No. of new poles equipped with photovoltaic panels installed within the project: 206 pcs; No. of poles kept in the project: 176 pcs;
No. of clamping arms: 382 pcs;
Additional project indicators
Number of lighting fixtures installed through the project 157/ 382
Number of light points controlled by remote management 0/ 382
Number of poles installed through the project 0 /206
Performance indicator - Final energy consumption in public lighting/KWh
Performance/Achievement Indicator (Output) Indicator value at the beginning of the project implementation
Indicator value at the end of the project implementation (output) 1
Decrease in electricity consumption: minimum 55,24%;
Decrease in CO2 emissions by: minimum 55,24%;
Additional electricity savings: minimum 55,24%

Decrease in annual primary energy consumption in public lighting by 50.482,68 (KWh/year) from 91.393,38 to 40.910,70

Estimated annual decrease in greenhouse gases by 13,37 (tons CO2 equivalent) from 24,21 to 10,84

Duration of implementation: up to 12 months, in accordance with the indicative implementation schedule of the investment

Solution brief description:

Within the proposed investment, 382 lighting fixtures (devices) based on LED technology will be installed and the network related to the public lighting system will be extended by a number of 206 poles equipped with photovoltaic systems, framing the classification of the roads/streets/areas related to the project in the lighting classes and implementing a remote management system that will monitor, control and transmit data that allows obtaining detailed information on the lighting network in order to optimize energy consumption, costs and its operation and grouping luminous flux regulation functions at the level of the entire investment objective.

The proposed solution mainly involves the modernization and efficiency of the public street - road and/or street - pedestrian lighting system, by replacing and completing the existing lighting fixtures on the existing poles (related to the electricity distribution system/networks) as well as on the new poles implemented through the project, which have a high electricity consumption, with lighting fixtures (devices) based on LED technology, as well as the installation of an intelligent management system through remote management (which will allow dimming/adjustment by varying the luminous flux of one/some light sources) at the level of the public lighting system targeted by this investment.

4. Replacing inefficient lighting fixtures with LED devices (fixtures)

1000 pieces; Lamps between 40-100 W

	Savings of 25 kW/h * 4.150 hours/year = 103.750 KWh/year Results in an estimated annual decrease in greenhouse gases of 27,49 (tons CO2 equivalent)
OUTCOME	Energy-efficient and flexible public lighting system
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality, Public Lighting Service Operator, Energy Manager
INVOLVED STAKEHOLDERS	Bistrița Municipality
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	Decrease in annual energy consumption of 709.463,83 KWh/year (709,46 MWh/year) Estimated annual decrease in greenhouse gases of 187,99 (tons CO2 equivalent/year)
% OF TOTAL CO2 REDUCTION	0,11%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2025 - 2030

ACTION TITLE	**4. Energy renovation of public buildings**
TYPE OF ACTION	Built environment, technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Multi apartment residential area, public buildings
FIELD OF ACTION	Buildings
SYSTEMIC LEVER	Technology / Infrastructure
EMISSION DOMAIN(S)	Buildings, Scope 1 and scope 2
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	**1. Integrated renovation of dense multi apartments residential areas and their transition to climate neutral district** Financing contract value: 817.424.070,76 lei including VAT Improving the energy efficiency of apartment buildings in Bistrita - Energy efficiency measures: opaque roofing, energy-efficient carpentry changes for the glazed part, thermal insulation of the basement and top floor, photovoltaic panels for collective consumption and other related interventions: construction, architecture for at least 150 blocks for 2025-2035. It also involves integrated intervention for the public areas around the buildings with several renovated apartments: including interventions to reduce car consumption, promote walking and cycling, sports, separate collection and recycling of waste, increasing green spaces, interventions to reduce urban heat island (UHI), redevelopment of abandoned and underutilized public and private spaces, implementation of Smart City solutions The thermal retrofitting of these blocks will generate a reduction in energy consumption of approximately 132.256,93 MWh/year, which will lead to a reduction in greenhouse gas emissions by 27.230,47 tons CO2 equivalent/year.


2. Energy Refurbishment of Public Buildings

Improving the energy efficiency buildings, in which are operating the municipality headquarters and the educational units, with a high energy consumption, therefore energy efficiency measures are needed

Thermal refurbishment of more than 20 public buildings, especially kindergartens, schools and high schools, but also administrative ones, especially by making use of the European Union (EU) funding opportunities.

These public buildings thermal refurbishment projects will generate energy consumption reductions of approximately 6.372,97 MWh/year, which will lead to a reduction in greenhouse gas emissions by 1.333,09 tons CO2 equivalent/year.

Project value: 166.894.298,82 LEI;


3. Construction of housing for young people from vulnerable groups/communities.

The aim of this investment is to increase access to quality housing for young people in difficulty. The new housing units will comply with the target of reaching the threshold of at least 20% primary energy consumption, compared to the nearly-zero energy buildings (nZEB) construction requirements stipulated in the national regulations, reflected in the energy performance certificates.

	Construction of nZEB plus housing for young people: 6 housing units` building for young people from disadvantaged categories. Project value: 2.580.044,66 LEI;
OUTCOME	Energy saving of at least 60% in the public building sector
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality, Energy Manager, Public entities headquartered in targeted public buildings, Associations of house owners and citizens in targeted private buildings
INVOLVED STAKEHOLDERS	Bistrița Municipality, Bistrița-Năsăud Environmental County Directorate
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	**This results in an estimated annual decrease in greenhouse gases of 28.563,56 tons CO2 equivalent/year.**
% OF TOTAL CO2 REDUCTION	16,08%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	**It results in an annual energy consumption decrease of 138.629,90 Megawatt-Hour (MWh)/year**
TIMELINE (START AND END)	2026-2035

ACTION TITLE	**5.1. Urban regeneration projects**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	District
FIELD OF ACTION	Buildings
SYSTEMIC LEVER	Technology / Infrastructure Governance & Policy
EMISSION DOMAIN(S)	Buildings
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	**Urban regeneration projects:** regeneration of the micro hydro plant area, regeneration of degraded public spaces in the collective housing neighborhoods. Urban spaces suffer from degradation and require integrated interventions to increase their attractiveness, to ensure an increased quality of life in the urban environment. There will be regenerated and arranged the green spaces and the pedestrian, bicyclist and shared space areas in the community benefit **1. Urban regeneration of degraded public spaces - Andrei Muresanu area** Total value: 3.500.000 Euros 1. Restoration of grassy areas and planting of tree and shrub species; 2. Development of ecological pedestrian alleys and bicycle paths; 3. Development of areas dedicated to pets; 4. Development of an ecological lighting system for the spaces covered by the project; 5. Connection of the lands subject to the investment to the necessary public utilities, if applicable; 6. Installation of surveillance systems, in order to ensure a safe climate; 7. Creating facilities for walking, running, recreation (spending free time) on the fitted-out lands; 8. Providing "smart" and also environmentally friendly urban furniture (benches, garbage bins for selective collection, bicycle racks, urban leisure furniture); 9. Redevelopment of temporary parking spaces and their equipping with charging stations for electric vehicles; 10. Boosting areas with various works of urban art providing them specificity.

11. Ambient and Security Lighting

The area of green space rehabilitated/modernized/created from the total area subject to intervention within the project is 31.430 sqm, representing 71% of the area subject to urban regeneration interventions (44.000 sqm).

2. Urban regeneration of degraded public spaces - Independentei Nord area

Total value: 6.700.000 Euros

1. Integrated rehabilitation of public spaces inside collective housing district, Independentei Nord area, on a rehabilitated area of 54.490 sqm.
2. Regeneration of a green space area of 31.780 sqm and providing the public spaces security, by ensuring appropriate lighting of public spaces inside the collective housing district in Independentei Nord area.

Functions highlighted by the project:

- "shared space" areas by redeveloping/reconfiguring the related urban streets/alleys, a concept turning them into more accessible and friendly spaces. A number of existing above-ground car parks will be relocated and organized into an open car park type construction (110 parking spaces) with a low height regime, semi-basement, with parking lots and vegetation in planters on the terrace roof, thus reducing the presence of the construction. The car/pedestrian "shared space" will have a tread height at the same level, with the same type of asphalt or paving, by eliminating the level differences between the sidewalk and the roadway. Cycling will be encouraged both through the concept of "shared space" streets, and by creating and supplementing dedicated cycling lanes (coloured asphalt), bicycle parking spaces and garages (bicycle parking garage 200 x 250 x 220 cm.)

- pedestrian areas (sidewalks), which will include measures for people with disabilities, such as tactile tiles for guiding and orienting the blind people;
- bicycle paths and semi-open garages, with green roofs and/or facades and photovoltaic panels;
- green leisure and recreational areas adapted for different types of users – children, adolescents, the elderly, people with disabilities;
- small, covered gathering/sheltering areas;
- recreational areas for various non-destructive sports – fitness, jogging, games, cycling;
- creative, inclusive and ecological children's play areas, located between the residential blocks, which will be grouped with the fitness areas for adults;
- low-height car parking, semi-basement with parking spaces on the terrace roof, provided instead of an above-ground parking lot.

	 **3. Urban regeneration of degraded public spaces in the micro hydro plant area- value 3.600.000 Euros** 1. Restoration of grassy areas and planting of tree and shrub species; 2. Development of ecological pedestrian alleys and bicycle paths; 3. Development of areas dedicated to pets; 4. Development of an ecological lighting system for the spaces covered by the project; 5. Connection of the lands subject to the investment to the necessary public utilities, if applicable; 6. Installation of surveillance systems, in order to ensure a safe climate; 7. Creating facilities for walking, running, recreation (spending free time) on the fitted-out lands; 8. Providing "smart" and also environmentally friendly urban furniture (benches, garbage bins for selective collection, bicycle racks, urban leisure furniture); The work affected area is 20.866 square meters, and at the end of the project implementation, green space will represent over 50% of it. The direct beneficiaries who will have access to the improved green infrastructure are 44.479 inhabitants.
OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality
INVOLVED STAKEHOLDERS	Bistrița Municipality

GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	**This results in an estimated annual decrease in greenhouse gases of 15.890,00 tons CO2 equivalent/year.**
% OF TOTAL CO2 REDUCTION	8,94%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2026-2035

ACTION TITLE	**5.2. Urban regeneration projects**
TYPE OF ACTION	Built environment
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	
FIELD OF ACTION	Buildings
SYSTEMIC LEVER	

EMISSION DOMAIN(S)	Buildings
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	**1. "Urban regeneration of the area on the perimeter "King Mihai I" Municipal Park, "Jean Pădureanu" Stadium and the right bank of Bistrița River"** The project refers to an area of 134.478 sqm, located within the built-up area of Bistrița municipality, more specifically the central area of Bistrița Municipality, which includes the terrains of "King Mihai I" Municipal Park, assets belonging to the public domain and, "Jean Pădureanu" Stadium and those on the right bank of Bistrița River that may be subject to urban development and regeneration of the area, including the development of accesses to Bistrița River and a promenade area on the riverbank.  **2. Urban Regeneration of the Area Bounded by Gării Street, Decebal Boulevard, Mihai Eminescu Street, and Republicii Boulevard – Including a park redevelopment and expansion, and the construction of a multi-storey car Park** The proposed project covers a land area of 21.381 square meters, located within the inner city limits of Bistrița Municipality, in its central zone. It targets the properties situated within the perimeter defined by Gării Street, Decebal Boulevard, Mihai Eminescu Street, and Republicii Boulevard. The initiative aims to support urban development and regeneration through the redevelopment and expansion of the existing park, along with the construction of a multi-storey parking facility. **3. Urban regeneration of the area surrounding the former thermal energy Plant of Bistrita city** The project targets a land area of 35.604 square meters, which remains part of the public domain of Bistrița Municipality, with the purpose of implementing a strategic urban development and regeneration objective. The buildings and land associated with the former thermal energy production plant of the city have been officially registered in the Inventory of Public Assets belonging to the Municipality of Bistrița.

	The urban regeneration initiative aims to revitalize urban areas facing challenges, based on the following principles: -Improving living conditions in residential neighbourhoods; -Landscaping and beautifying public spaces – squares, parks, urban furniture; -Redeveloping urban infrastructure – water, gas, and electricity networks, roads, and public transport systems.
OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality
INVOLVED STAKEHOLDERS	Bistrița Municipality
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	**This results in an estimated annual decrease in greenhouse gases of 17.318,00 tons CO2 equivalent/year.**
% OF TOTAL CO2 REDUCTION	9,75%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	

ACTION TITLE	**6. The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road**
TYPE OF ACTION	Mobility&Transport
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	All citizens within Bistrita area
FIELD OF ACTION	Transport
SYSTEMIC LEVER	
EMISSION DOMAIN(S)	Transport
COVERED INTERVENTIONS	

BRIEF DESCRIPTION	The Dej–Bistrița express road corridor begins in Urișor, just north of the town of Dej. From there, the route runs south of the CF400 railway and north of the Someș River until it reaches the Beclean area, where at km 17+200 it crosses the Someș river. It then continues eastward, remaining south of the railway as far as the junction with county road DJ 172. South of Beclean, the expressway intersects with the county roads DJ 172F, DJ 172A, and DJ 172. From this point, the route turns northeast, crossing national road DN17 and the CF400 railway near km 25+000, before heading east. Further along, the alignment crosses the Someșul Mare River south of Șintereag. In Șintereag area, the expressway also intersects the railway and Șieu River, then continues north of the Șieu through a hilly landscape. The Dej–Bistrița expressway bypasses Bistrița to the south and ends northeast of the city, where it will connect via an interchange to the future Bistrița–Vatra Dornei expressway. From the Jelna area to this connection point, the route passes through hilly terrain. The planned length of the expressway is approximately 77,18 km, with two interchanges located as follows: - **Interchange at km 25+500**, connecting the national road DN17, east of Beclean - **Interchange at km 52+350**, connecting the national roads DN17 and DN15A, in Sărata area Out of the total 77 km of expressway, Bistrița bypass accounts for approximately 32 km , running from the entry point within Bistrița Municipality near the component locality of Sigmir, to the exit towards the Livezile Municipality. The expressway will have a platform width of 22 meters, with two lanes in each direction. Average daily traffic is projected to range from about 25.000 vehicles per day in 2035 to around 32.000 vehicles per day by 2050. The estimated cost of the section comprising Bistrița bypass amounts to approximately 440.000.000 EUR.
OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	**National Company for Road Infrastructure Administration SA**

INVOLVED STAKEHOLDERS	**National Company for Road Infrastructure Administration SA** **Ministry of Transport and Infrastructure** **Bistrița Municipality**
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	46.706,40 tons CO2 equivalent
% OF TOTAL CO2 REDUCTION	26,29%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2027 – 2032

ACTION TITLE	**7. Extent of green public transport infrastructure, bikes paths and walkable areas**
TYPE OF ACTION	Technical intervention
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	All citizens within the Bistrita area

FIELD OF ACTION	Transport
SYSTEMIC LEVER	Technology / Infrastructure
EMISSION DOMAIN(S)	Transport
COVERED INTERVENTIONS	Creation of Green Corridors of urban mobility: in the historical center of Bistrita - Green Line, related to Bistrița River (Blue Line) and related to the detour variant of the city. The creation of green mobility corridors involves the development of clean urban infrastructure (transport infrastructure, cycling, rolling stock, alternative fuels), the development of mobility lanes and the creation of specific infrastructures for alternative fuels.

BRIEF DESCRIPTION

Blue Line project intends to create an urban sustainable mobility corridor of over 19 km interconnecting the functional areas of the left shore of Bistrita river with the 17 National road and the functional areas of the right shore, by creating a new public transport line, extending the pedestrian and bicycle infrastructure, relocating/modernising the bicycle bridge over Bistrita river relating residential areas with functional areas and creating walking areas along the river, etc.

1. **Green public transport line using electric, hybrid or low-pollution vehicles**

The influence area is characterized by the existence of local public institutions, schools, companies, shops, all concentrated in the central area of the city, all of which generate traffic, so this area is extremely congested, which requires traffic decongestion through the solutions proposed by this project.

There is no public transport route in the Historic Center area, this area being loaded with small vehicles, resulting in an unsightly appearance, but above all a high concentration of polluting emissions with a negative impact on people's quality of life.

The proposed solution is the creation and development of a new urban public transport route of approximately 10,30 km, operated with ecological means of transport, which would cross the city from west to east, through the historic city center. The same green corridor on the same route will be complemented by bicycle paths – 21,50 km and pedestrian paths – 39.500 sq m.

This route will provide citizens transport by bus from the outskirts of the city to the center. For this purpose, 10 electric buses will be purchased.

Purchase and installation of 2 charging points for electric buses.

Construction of a depot for local public passenger transport with electric buses, including a command center.

Construction and modernization of 44 public passenger transport stations.

The route will provide citizens the transport from the outskirts of the city to the center, in a fast, clean and free way, thus encouraging them to give up their private cars.

To complete this project, a policy of progressive parking fees will be added and also a policy of gradual elimination of motorized traffic in the historic center.

The implementation of this project aims to reduce greenhouse gases as follows:

- Estimated value for the last year of the financing contract sustainability period (scenario "without project") - 35.036,20 (tons CO2 equivalent /year)

- Estimated value for the last year of the sustainability period of the financing contract (scenario "with project") - 32.665,80 (tons CO2 equivalent /year)

- Annual estimated decrease: 2.370,40 (tons CO2 equivalent /year)

2. Reconfiguration of the public transport axis on the route Gării street – Decebal boulevard – Andrei Mureşanu street – Năsăudului street

The public transport reconfiguration axis involves interventions similar to Green Line: lanes dedicated to local public passenger transport (2,34 km), bicycle lanes (4,59 km) and modernization of pedestrian routes (4,43 km), public transport stations (10), ensuring real-time information for passengers and introducing a "green light" traffic management system.

By implementing this project, the reduction of greenhouse gases is aimed at as follows:

- Estimated value for the last year of the financing contract sustainability period (scenario "without project") - 4.658 (tons CO2 equivalent/year)

- Estimated value for the last year of the financing contract sustainability period (scenario "with project") - 3.503 (tons CO2 equivalent/year)

- Estimated annual decrease: 1.155,00 (tons CO2 equivalent/year)

3. Green corridor for urban mobility in the historical center of Bistrita municipality - 17,500,000 euros

The area affected by this project is located in the urban area, in the historical center of Bistrita municipality, and has a surface area of approximately 47.541 sqm.

Creation of pedestrian zone in the Central Square, Modernization of Liviu Rebreanu pedestrian zone; 6 pedestrian crossings; Green corridor in Piata Morii; Bicycle paths; Pedestrian zones and shared-space on the central area streets; Buried electrical networks.

	The implementation of this project aims to reduce greenhouse gas emissions by 24,00 (tons CO2 equivalent/year) from 242,00 to 218,00. **4. Sustainable mobility corridor along Bistrița River (Blue Line) – 41.000.000 euros stage 1- and 30.000.000-euros stage 2** 1. Creation of two new public transport lines serviced by a dedicated/priority lane, which will connect the following functional areas on the mobility corridor route: Sarata component locality, South Bistrita Industrial Park, new Zavoaie development area up to the bridge over Bistrita River in relation to DJ173C, respectively the bridge over Bistrita River related to DJ173, new Valea Ghinzii development area, Wonderland Complex and Unirea component locality; 2. Creation of a green mobility corridor for cyclists and pedestrians, in Bistrita River area delimited by County Road 173C bridge and County Road 173 bridge, which will connect the Municipal Park, across the Bistrita River and Codrisor Street, to Taberei Street by building a new bicycle/pedestrian bridge over Bistrita River and bicycle paths and pedestrian alleys 3. Redevelopment of the pedestrian bridge over Bistrita River connecting Petru Maior Street with Zavoaie Street, as well as the extent of the pedestrian infrastructure on the new mobility corridor; 4. Extent of the cycling infrastructure along the entire mobility corridor created and its connection to the network created in the 2014-2020 financial exercise; 5. Redevelopment of the bridge over Bistrita River (Asfintitului Street-Aerodromului Unirea Street), for the dedicated/priority lane public transport accessibility, pedestrian and cycling infrastructure, as well as creation of a new bridge in Zavoaie area for the optimal connection of the new public transport line to the electric busses' depot created through the Regional Operational Programme 2014-2020 (Green Line); 6. Set up the infrastructure to locate the SMART public transport stations on the route; 7. Ensure the public lighting related to pedestrian and cycling infrastructure; 8. Extent of the traffic management system in Bistrita municipality in the project area. Project seeking CO2 emissions decrease as the newly created mobility routes relies on a peri urban locality and consists of the acquisition of buses for public transport and other forms of ecological urban mobility, replacing thus the classic fuel transport. The project aims to promote sustainable multimodal urban mobility as part of the transition to a zero-carbon economy through increased use of public transport and other forms of green urban mobility. By implementing this project, it is intended to reduce the greenhouse gas emissions estimate by 443,23 (tons CO2 equivalent/year) from 9.180,71 to 8.737,48.
OUTCOME	Higher modal share of non-motorised mobility and decreasing private car use, Reduced traffic congestion/jams on major streets

RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality
INVOLVED STAKEHOLDERS	Bistrița Municipality
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	This results in an estimated annual decrease in greenhouse gases of 3992,63 (tons CO2 equivalent/year)
% OF TOTAL CO2 REDUCTION	2,25%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2025-2035

ACTION TITLE	**8. Promotion of large-scale use of Electric Vehicles**
TYPE OF ACTION	Technical intervention

SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Municipality, citizens
FIELD OF ACTION	Transport
SYSTEMIC LEVER	Technology / Infrastructure
EMISSION DOMAIN(S)	Transport
COVERED INTERVENTIONS	100% green public transportation fleet: the purchase of 20 electric public transport buses; Smart public transport stations: the modernization of 90 stations equipped with green roofs, info displays etc. Public transport dedicated lanes: at least 5 km of new dedicated lanes for buses along congested streets. Extend by at least 20 stations of the network of public electric charging Extent of the private electric charging stations network, by enforcing urban planning regulations: at least 50 new charging stations. Benefits for the residents purchasing electric vehicles (local taxes, subsidies (both national and local); parking discount and dedicated lots etc.) – at least 1.000 beneficiaries by 2030.
BRIEF DESCRIPTION	1. **"Renewal of the public transport fleet in Bistrița Municipality and Livezile component locality"** **Procurement of 20 electric buses and 24 charging stations** **Financing Contract No. 135212/28.11.2022** **Total Contract Value: 57.525.687,66 RON (VAT included)** Ensuring an efficient public passenger transport service will lead to the reduction or replacement of private transport (with personal vehicles) and, consequently, to a decrease in CO2 equivalent emissions caused by transportation, directly contributing to the improvement of environmental quality. Thus, through the project for the acquisition of environmentally friendly vehicles intended for urban passenger transport, the aim is to develop sustainable local mobility by using high-quality and energy-efficient public transport. 2. **Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase I** Financing contract no.: 2/GES/08.06.2022. Financing contract value: 862.489,31 lei including VAT of which, non-refundable financing from Environment Fund Administration: 760.000,00 lei including VAT

Purchase and installation of 4 electric batteries recharging stations for electric vehicles, in 4 locations.

3. **Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase II**

Financing Contract: No. 360/GES/20.12.2023
Total Contract Value: 2.741.519,01 RON, of which the eligible amount is 2,301,420.02 RON
Purchase and installation of 14 electric batteries recharging stations for electric vehicles.

4. **Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase III**

Electric Batteries Charging Stations at 44 private apartment blocks areas and 14 public buildings as kindergartens, schools and cultural buildings.

The electric vehicle charging stations will consist of two charging points, powered by the same delivery point from the public distribution network. One charging point will allow multi-standard charging in direct current (DC) with a power of ≥ 50 kW, and the other charging point will allow alternating current (AC) charging with a power of ≥ 22 kW for electric vehicles. The charging station will allow simultaneous charging at the declared power levels.

The charging stations will comply with the IEC 61851 standard (Conductive Charging System for Electric Vehicles) and will be equipped with Type 2 connectors for vehicles, according to the description in Standard EN62196-2, for alternating current (AC) charging, and Combo 2 system connectors, according to the description in Standard EN62196-3, for direct current (DC) charging.

OUTCOME	Higher modal share of public transport and decreasing private car use
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality
INVOLVED STAKEHOLDERS	Bistrița Municipality
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	The implementation of these projects is estimated to result in a reduction of greenhouse gases by 7.800,00 equivalent tons of CO2 per year.
% OF TOTAL CO2 REDUCTION	4,39%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2025-2035

ACTION TITLE	**9. Extent of traffic management system**
TYPE OF ACTION	Mobility & Transport
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Municipality
FIELD OF ACTION	Transport
SYSTEMIC LEVER	Technology / Infrastructure
EMISSION DOMAIN(S)	Transport
COVERED INTERVENTIONS	

BRIEF DESCRIPTION	**Urban renewal of public spaces in both central area and neighbourhoods to promote walking, cycling, sports, play, interactions between citizens, recreational and cultural activities – by transforming regular streets into residential low-speed ones.** **1. Traffic management system extent in Bistrita Municipality** Financing contract no. 303/03.01.2023. Financing contract value: 6.297.363,98 lei including VAT **2. Traffic management system extent in Bistrita Municipality, phase 2** Financing contract no. 2245/09.01.2023. Financing contract value: 5.858.013,00 lei including VAT The necessity of these projects is substantiated by their positive impact on enhancing pedestrian traffic safety and alleviating congestion and traffic bottlenecks, particularly for children in the vicinity of educational institutions. Furthermore, the projects aim to mitigate traffic congestion and its associated consequences, improve the attractiveness and efficiency of public transportation, enhance safety for all road users—especially pedestrians and cyclists—reduce pollutant and greenhouse gas emissions, and increase the overall fluidity of road traffic. Achieved benefits: -Improved travel comfort and safety, for pedestrians, private vehicle users, and urban public transport passengers; - Reduction in traffic accidents, particularly those involving pedestrians, through the implementation of enforcement, safety, and security measures; - Increased traffic flow speed, enabled by the traffic management system's ability to prioritize public transport vehicles at signalized intersections; - Decreased travel times across all modes of transport, as a direct result of system implementation; - Higher modal share of public transport, driven by improved attractiveness, accessibility, and operational efficiency; - Enhanced comfort and safety of public transport travel, contributing to increased user satisfaction; - Increased modal share for cycling and walking, supported by dedicated infrastructure and integrated mobility measures; - Reduced number of private vehicle trips, owing to the enhanced appeal of alternative modes of transport (public transport, cycling, walking), with positive impacts on greenhouse gas emission reductions; - Lower fuel consumption in road transport operations; - Reduction in environmental and noise pollution, with city-wide benefits; - Faster response times in the detection and management of incidents affecting road safety.
OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality

INVOLVED STAKEHOLDERS	Bistrița Municipality
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	**This results in an estimated annual decrease in greenhouse gases of 1.141,36 tons CO2 equivalent/year.**
% OF TOTAL CO2 REDUCTION	0,64%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2026-2035

ACTION TITLE	**10.** Development of four underpass road passages on DN17 at the entrances to Bistrița city
TYPE OF ACTION	Mobility & Transport
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Municipality
FIELD OF ACTION	Transport

SYSTEMIC LEVER	Technology / Infrastructure
EMISSION DOMAIN(S)	Transport
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	The general objective of the projects is to improve the mobility of people, goods, and services in order to stimulate sustainable economic development — by ensuring smoother traffic flow and reducing congestion in the transit areas. Through the implementation of these projects, the following goals will be achieved: • Increased accessibility of the population to workplaces; • Improved mobility of people and goods – by reducing travel time as a result of higher travel speeds and, consequently, decreasing the time required for the transport of goods and passengers; • Reduced transport costs – completing these projects will allow drivers to save time and energy, as well as reduce expenses related to fuel consumption and vehicle maintenance; • Enhanced road safety – through the improvement and fluidization of traffic flow; • Facilitation of inter-regional cooperation, attraction of domestic and foreign investments, increased competitiveness of companies and labor mobility, leading to faster development of the region and, ultimately, of Romania as a whole. The four projects are: **1.** Development of an underpass road passage Intersection on DN17 at the Junction with DN17C (Lucian Blaga Street)", located in the north-eastern part of Bistrița Municipality, Bistrița-Năsăud County, on the national road DN17, at its intersection with the national road DN17C (Lucian Blaga Street). On Lucian Blaga Street, there is a level railway crossing approximately 500 meters from the studied intersection, which causes traffic congestion and additional delays both along the street and within the DN17–DN17C (Lucian Blaga Street) intersection. **2.** Development of an underpass road passage Intersection on DN17 at the Access Road to the Kaufland Area, located in the southern part of Bistrița Municipality, Bistrița-Năsăud County, on the national road DN17, at its intersection with the access road leading to the Kaufland commercial area. **3.** Development of an underpass road passage Intersection on DN17 at the Access Road to the Altex Area, located in the southern part of Bistrița Municipality, Bistrița-

	Năsăud County, on the national road DN17, at its intersection with the access road leading to the Altex commercial area. **4.** Development of an underpass road passage Intersection on DN17 at the Junction with the Bistrița Bypass, located in the southern part of Bistrița Municipality, Bistrița-Năsăud County, on the national road DN17, at its intersection with the Bistrița Bypass. The estimated cost for the development of the four underpass road passages intersections on DN17, at the entrances to Bistrița Municipality, amounts to approximately EUR 40.000.000,00.  
OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality Ministry of Transport National Company for Road Infrastructure Administration SA
INVOLVED STAKEHOLDERS	Bistrița Municipality Ministry of Transport National Company for Road Infrastructure Administration SA
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	These projects are expected to result in an annual GHG reduction of approximately 4,860.00 tons of CO_2 equivalent per year.

% OF TOTAL CO2 REDUCTION	2,74%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2025 – 2027

ACTION TITLE	**11. Integrated Waste Management**
TYPE OF ACTION	Bistrița Circular City
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	Municipality
FIELD OF ACTION	Waste
SYSTEMIC LEVER	
EMISSION DOMAIN(S)	Waste
COVERED INTERVENTIONS	

BRIEF DESCRIPTION	Waste management - Increase of selective waste collection by replacement of the current waste collection system by transforming the current aboveground collection points with an underground hydraulically operated system. This can be the solution to the problem of randomly discarded waste and the disturbing image of current collection systems. Decontamination of ex Bistrita District Heating Site - The project aims to improve air quality and decontaminate and green the contaminated site, including restoring natural ecosystems and ensuring the quality of environmental factors, in order to protect human health. Development of urban water and wastewater infrastructure in functional urban areas aims to increase the population's access to improved public water supply networks and wastewater treatment solutions. Water and wastewater infrastructure is one of the primary requirements for adequate assurance of quality of life. At present, 93,99% of the inhabitants of Bistrita Municipality are connected to the drinking water network and 86,55% to the waste water network. Circular City involves the construction of at least 190 digitized eco-islands for the selective collection of household waste and packaging, which can be monitored by the city hall remotely, the construction of at least 2 centers for the collection of bulky and hazardous waste. Financing contract value: 9.116.914,44 lei including VAT Total project value: 11.127.001,27 lei **1. Establishment of two voluntary collection centers in Bistriţa municipality** The project aims to establish two separate waste collection centers through voluntary collection in Bistriţa Municipality, near the waste transfer station, respectively near the Industrial Park, which will ensure the separate collection of household waste that cannot be collected in the "door-to-door" system, respectively recyclable waste and biowaste that cannot be collected in individual bins, as well as special waste streams of electrical and electronic equipment, used batteries, garden waste, construction and demolition waste. The project addresses the entire population of Bistriţa municipality. **2. Development, redevelopment and completion of the integrated municipal waste management system at Bistriţa municipality level** Through the project, the Bistrita Municipality intends to redevelop 100 waste collection platforms in the apartment buildings areas, by changing the collection system and using new technologies. Thus, specific activities/actions will be supported to create and equip digitised ecological islands (container collection), for separately collected waste streams as paper and cardboard waste, plastic and metal waste, glass waste, biodegradable waste, residual waste. According to the Financing Guide, for Bistriţa municipality there were requested 10 type 3 islands, 55 type 2 islands and 35 type 1 islands, meant to ensure the collection of waste from the block areas in 5 fractions and ensure a higher degree of recovery. Financing contract no. C3I1B0122000012/18.05.2023 Financing contract value: 11.913.307,18 lei including VAT Total project value: 15.068.618,43 lei Non - eligible value: 3.155.311,25 lei

	3. Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level - Phase 2 The project supports specific activities/actions in order to create and equip digitised ecological islands (container collection), for separately collected waste streams as paper and cardboard waste, plastic and metal waste, glass waste, biodegradable waste, residual waste. For this, the block areas in Bistrița municipality will be equipped with 90 digitised ecological underground islands type 3, meant to ensure the collection of waste from the block areas in 5 fractions and ensure a higher degree of recovery. Financing contract no. C3I1B0223000032/07.06.2024 Financing contract value: 26.343.922,50 lei including VAT Total project value - 48.685.094,56 lei Non - eligible value - 22.341.172,06 lei
OUTCOME	Reuse and recycling of at least 65**%** of waste collected at municipal level by 2035
RESPONSIBLE ENTITY / BODY / PERSON	Bistrița Municipality
INVOLVED STAKEHOLDERS	Bistrița Municipality, Bistrita's Waste Operator, Local NGOs, citizens
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	**This results in an estimated annual decrease in greenhouse gases of 9.125,00 tons CO2 equivalent/year.**
% OF TOTAL CO2 REDUCTION	5,14%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	

TIMELINE (START AND END)	2026-2035

ACTION TITLE	**12. ”Green Bistrita” & Green corridors**
TYPE OF ACTION	Green Infrastructure & nature-based solutions
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	
FIELD OF ACTION	Industrial Process and Product Use
SYSTEMIC LEVER	
EMISSION DOMAIN(S)	Agricultural, forestry and land use
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	**1. Extension of “Green Bistrita” Program** Rehabilitation and/or extension of existing parks: Tree planting: 10.000 new trees in public areas (streets, squares, courtyards of public institutions, parks etc.). **2. Green-blue corridors** The actions related to the Green-Blue corridors involve the development of 2 corridors, namely: Valea Castailor Green-Blue Corridor involves 2,5 km of walkable areas and the Bistrita River Green-Blue Corridor.

2.1. Bistrița River and its banks represent elements with significant potential for enhancing the public space system of the municipality. In this regard, it is essential to undertake works for the renaturation of watercourses, development of green spaces adjacent to these watercourses, integration of promenade pathways and cycling routes in coordination with the cycling infrastructure of the surrounding areas, and establishment of recreational, social, and leisure zones. The development of leisure activities and the enhancement of free time experiences can also be achieved through the arrangement of Bistrița River course to accommodate water sports. Bistrița River banks will be considered over a length of 5 km and an area of approximately 30 hectares of green spaces.

2.2. Valea Castailor Blue Corridor

The site is located along Tărpiu–Valea Căstăilor stream starting from Bistrița River to the north, with a length of 2,5 km. Planned interventions:

- Development of an ecological corridor along Tărpiu stream over a distance of approximately 2,5 km through its ecological restoration and rearrangement;
- Development of green spaces fitted with honeycomb-type mesh. The green spaces are located in the central and northern parts of the studied area and will be entirely walkable.
- Construction of a footbridge over Tărpiu stream outside the floodable area;
- Construction of 20 wooden wildlife crossings;
- Rehabilitation of the existing footbridge, located near Drumul Cetății street by including connection works with embankments;
- Construction of 2 wooden viewpoints terraces, each with an area of 25 sqm (10 x 2.5 m), located outside the floodable area and the protection zone of the stream watercourse, located in the southern part and in the central part;
- Rehabilitation of 4 existing bottom thresholds;
- Cleaning of the minor/major riverbed – 27.277 sqm. The presence of vegetation in the riverbed leads to a significant increase in the roughness of the water flow channel, and as a result, in the case of high flows, the water level will be much higher than under normal conditions;
- Cleaning of spontaneously grown vegetation across the entire in case area by removing it – 7.500 sqm scattered throughout this area;
- Stabilization of stream water banks – 24.550 sqm. using honeycomb-type meshes;
- Gas pipes will be masked with hedge-type vegetation;
- Wooden plant trellises will be installed to mask gas and water pipes. These will be made of wood, and climbing vegetation (wisteria sinensis or climbing rose);
- Wooden plant trellises will also be installed to mask the existing jetties in the studied area and climbing vegetation (wisteria sinensis or climbing rose) will be planted on the trellises;
- Wooden pergolas will be constructed to mask the overhead pipe crossings found in the studied area;
- Benches and trash bins will be will be placed throughout the studied area, especially in newly created areas of interest;
- LED streetlights equipped with solar panels for better energy efficiency will be installed;
- Bicycle racks with a capacity of at least 7 bicycles/rack will be installed;
- Trees with a minimum height of 3 m and a minimum age of 4 years and shrubs (min. height 40 cm, minimum age 3 years) will be planted, as well as grass/clover on an area of 21.781,68 sqm;
- Bistrița riverbanks will be fitted, from Unirea locality to Berăriei bridge.

Project value: 3.430.539,87 Euros;

3. Unirea area Park

	The area of 16.000 sqm., located between Unirea and Valea Ghinzii, will be developed as a recreational park, with playgrounds, sports fields, terraces, and a beach. The estimated value is 5 million Euros and the beneficiaries are 5.000 residents. **4. Green roofs and facades for public and private buildings** Green roofs and facades for public buildings: at least 5 by 2035.
OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	
INVOLVED STAKEHOLDERS	
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	This results in an estimated annual decrease in greenhouse gases of 1.374,00 tons CO2 equivalent/year.
% OF TOTAL CO2 REDUCTION	0,77%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	

ACTION TITLE	**13. Community partnership for climate neutrality European projects**
TYPE OF ACTION	
SCALE AND TARGET GROUP (ADDRESSED ENTITIES)	
FIELD OF ACTION	Soft interventions
SYSTEMIC LEVER	
EMISSION DOMAIN(S)	
COVERED INTERVENTIONS	
BRIEF DESCRIPTION	**1. COPE - Coherent Place-based Climate Action - URBACT IV** **Global challenges to climate neutrality and Bistrița's climate adaptation pathways require smart and sustainable urban development solutions aligned with the local development vision** A green and just transition in cities is key to achieving carbon neutrality in Europe by 2050. The COPE network (Coherent Place-based Climate Action) aims to unlock the ecological potential of citizen-led initiatives through a localized approach that recognizes citizens and local action groups as fundamental stakeholders in accelerating the green transition. By actively engaging communities that have traditionally been excluded from climate action, COPE expands the scope and impact of municipal policies. COPE partners as an authority reach out to their neighbourhoods and engage with very different stories and narratives. Relation building between municipality and citizens is a very complex and locally dependent exercise. When public servants in a project like COPE take these steps, they are not seen as individuals but as part of the municipality and all the history and current actions the municipality as such is part of and responsible for. And some citizens might have a relationship with the municipality already that is working against the intention and purpose of COPE. So, the COPE partners have a big task in both working with their colleagues to engage them in the new way of working and meeting the citizens on the street with a new narrative. Finally, the COPE partners themselves have very different experience in engaging with citizens and are themselves part of the local history and norm setting, which is the actual starting point for the change. In the process of policy making, we need to create people's acceptance of inconvenience or cost and link this to their understanding of the importance and share the experience of

ownership. We as human beings care more about the decisions and things we have contributed to or created ourselves. We call this the participatory effect. It can be fuelled not only through information, but also through conversations, involvement, and co-ownership. We also use the term social tipping point when talking about this societal level, where change is becoming a norm that people start to follow.

The local challenge Bistrita aims to address is citizens' reluctance to change, particularly in the field of local mobility, especially during ongoing infrastructure works in the city. Currently, three major mobility infrastructure projects are being implemented: the Green Line, the Cyclist Pathways Development – Phase 1, and the Reconfiguration of Public Transport Corridors. A specific area that will be addressed during the project's implementation is student mobility and how they travel to and from school. Throughout the project, we will also have the opportunity to implement some practical proposals, which will later become part of the Local Integrated Action Plan, a strategic document resulting from the project's implementation.

Project contract value: 65.594,65 Euros

Timeline: 2023-2025

Output: Integrated Local Action Plan (IAP) on local mobility and the transition to green mobility

2. LIFE LOOP – Local Ownership Of Power - LIFE

We support cities and citizens in creating their energy community.

Behind LIFE LOOP lies an incredibly skilled and committed multi-national team of over 30 people, coming from 8 countries and combining knowledge from different strands: energy cooperatives and cities, with expertise in the topic both on EU and local levels. This diversity helps foster powerful city-citizen connections and turn collective ideas into lasting impacts. LIFE LOOP is coordinated by Energy Cities which is backed by the management group composed of RESCoop.eu, ZEZ and Electra Energy cooperative. Local and national on-the-ground action is driven by 6 cities and 5 energy cooperatives.

In Bistrita, community energy will kick-off through LIFE LOOP as:

• Citizens will be encouraged to invest in the installation of photovoltaic panels on 50 blocks of flats (private and social) – this will cover the electricity needs of the common areas of the multi-dwelling buildings;

• Community solar thermal and PV panels to be installed on 15 public buildings and educational units. This will meet the electricity and thermal energy needs for heating and hot water;

• Community investment in the installation of solar thermal and PV on 100 houses;

The project aims to support actions that encourage collaboration between local and regional authorities and energy communities, and/or actions that develop integrated services to facilitate the emergence and growth of community energy projects

Energy communities can support both citizens and local authorities in investing in renewable energy sources and energy efficiency. Citizen participation in renewable energy projects can also foster local social acceptance. Community-owned projects enable citizens to finance investments in sustainable energy that generate local economic benefits, promote social cohesion, and support other priorities such as improving residential energy efficiency or reducing energy poverty.

In Bistrita, 3 capacity building local workshops were planned, but we felt that it is not enough to reach the full expected target of citizens. The workshops were targeted to capacity building and developing the community energy roadmap with municipality professionals and citizens, and reached its aim. But as the main objective of the project is to create a local energy community that is active and develops projects, we need to increase engagement of the regular citizens, inhabitants in the blocks of flats and individual houses. In this matter, we want to engage with citizens in a more targeted way, meaning discuss face-to-face with:

- The owners of apartments in the blocks of flats already retrofitted that did not had solar PV-s installed as part of the project to explore opportunities for community funded solar

- The representatives of the companies, on the location of the PV park, to explore additional opportunities such as community LED lighting projects.

- Owners of individual houses that have PVs installed, to see if they consider creating a street network, where they would donate or sell their surplus power to install and use a charging station for electric cars.

- Private blocks of flats administrators to consider installation of paying charging stations for electric cars, using the PVs installed in the retrofitting process

Bistrita municipality also organized workshops on a new heating pump supplied by solar PV's, to ensure the heating for blocks of flats instead of the conventional use of natural gas, that could be funded / supported by local citizens. A range of stakeholders will be involved in the proposed engagement activities including a representative of the new local energy community. Also, a very important aspect that needs to be shared with the citizens is that the legislation is changing, and in a couple of years they will have the possibility to beneficiate in their own apartments from the energy produced by the PV's installed on their block, and not just in the common spaces, as it is foreseen right now. At the same time, we will have a LIFE LOOP corner in every municipal event, approaching all citizens, from no matter what background, to promote the concept of energy efficiency in the framework of a local energy community. Out of this intense dissemination campaign, the impact we expect to have on the population is their active involvement in the decision- making process of their living facilities – either individual or collective, and to take actions into their own hands.

Total project contract value: 83.065,00 Euros

Timeline: 2022-2025
Outputs: Dissemination at local level of the concept of local energy community and creation of a physical and digital one-stop-shop


3. **FEEL - "Frugal cities through Energy Efficiency and Low-tech communities" - Interreg Europe**

European public authorities have to meet increasing demands, but with less money. Thinking bigger, the problem is also about the overuse of resources, and the commitment of EU Member States to reduce carbon emissions. More is not always better, and we need to create the infrastructures and systems that allow people to live good lives, within the planet's environmental limits.

The most daring cities see this energy constraint as a tremendous opportunity to reinvent themselves by relying on another vision of the city of tomorrow. The FRUGAL CITY finds ways to organise neighbourhoods, urban technical systems, buildings and these interactions will be based on two cross-cutting approaches. SUFFICIENCY. Low tech is at the heart of frugal innovation: it's about meeting needs in ultra-simple ways. A sufficient technology will meet needs using the least sophisticated and least expensive solutions possible, without altering the quality of the end result. The Eco-design of urban services, infrastructures and buildings is at the heart of this approach. COOPERATION - Acting individually will not be enough. One way forward is to increase the collective benefit, through cooperation between elected officials, entrepreneurs and citizens.

FEEL will develop sufficiency and cooperation approaches in 8 European cities and regions. Project-partners will apply the principles of frugality in schemes to renovate older housing, enhance biodiversity, improve services & engage their communities. They will cooperate over these two challenges:
(1) Developing the frugal approach: ultra-simple solutions, sufficiency and community engagement
(2) Transitioning to the frugal city business model, public acceptance and adoption

Each project-partner will already be moving down this path, but in different ways. Through FEEL they will improve their planning through inter-regional learning and knowledge sharing across Europe.

In Bistrița, the municipality will update its local policy on the "Regeneration of the Historic Centre" by introducing frugality and sufficiency principles, encouraging collaboration between citizens, local authorities, and stakeholders. A local working group will be formed to guide and support these efforts.

Total project contract value: 148.666,00 Euro

Timeline: 2023-2027
Output: Review of the local public policy for the regeneration of the historic center of Bistrita municipality

4. **B-CONNECT - Bio - Centric Communities navigating nature, embracing ecosystems, championing technology - European Urban Initiative**

B-CONNECT pioneers a biophilic-centred tactical urbanism approach to improve air quality and address challenges such as limited green mobility behaviours, underdeveloped green infrastructure (GI), and a dense urban fabric. The project aims to achieve this through a range of place-based activities, including small-scale tactical urbanism and community-driven interventions that bring impactful changes to the urban landscape.

The activities are supported by a real-time monitoring and response digital platform that combines hard data with community-driven insights, empowering residents and encouraging more eco-conscious behaviours through a city-level token system. To address challenges like biodiversity loss and enhance green infrastructure management, actions such as the implementation of hydroponic towers alongside pollinator-friendly and drought-tolerant nature-based solutions are planned. These interventions will enhance the city's green landscape, provide cleaner air, and revitalise urban spaces.

A central pillar of the project is the connection between people and places, which will be achieved through a real-time monitoring platform. This digital platform will integrate accurate data on environmental quality, urban climate, pollution, and traffic, alongside residents' perceptions of their environment. The goal is to foster a sense of community and civic responsibility, enabling real-time decision-making through LED displays. These displays will regulate traffic, reduce speed, and provide information about air quality and traffic capacity. To promote green mobility, the project also includes the development of smart neighbourhood mobility hubs and autonomous vehicles for local deliveries.

Another important aspect is the connection between people and nature, which will be achieved through the management of green infrastructure resources and the regeneration of the urban landscape. Adaptive management strategies will be implemented for urban landscape regeneration, utilizing innovative mobile hydroponic towers. These solutions are designed to combat pollution and restore degraded land, creating multifunctional public spaces focused on nature-based solutions. The project will address biodiversity loss and integrate innovative practices for urban regeneration. Methods such as xeriscaping (drought-tolerant landscaping) and the regeneration of riparian areas will be explored to enhance green spaces and create ecological blue-green corridors.

The connection between people is essential for urban resilience and citizen engagement. B-CONNECT will focus on involving citizens in the urban transformation process, creating frameworks for the long-term sustainability of new solutions. The capacity for collaboration and engagement among local actors will be supported through digital platforms and a reward system for environmentally friendly behaviors. These measures will promote ecological behaviors and active participation in eco-friendly activities. Mobile creative hubs, called Eco-Guilds, will modernize the concept of historical guilds and ensure the involvement of young people in emerging technologies, providing them with new skills and knowledge.

A significant impact of the project will be the improvement of air quality. B-CONNECT aims to reduce the concentration of fine particulate matter and other pollutants through the use of biophilic and nature-based solutions. This will contribute to halving the concentration of air pollutants, thereby enhancing the quality of life for residents. Additionally, the project targets increasing the use of digital services by engaging citizens in the use of new and updated digital platforms for public services and environmental management. A significant rise in the number of users of these services is expected, which will contribute to greater community awareness and accountability.

Another major objective of the project is the reduction of greenhouse gas emissions. This will be achieved by promoting green mobility and efficient traffic management. B-CONNECT aims to lower the city's carbon footprint through measures encouraging public transportation, walking, and cycling, thus contributing to the reduction of carbon dioxide emissions. The project will also

generate a positive impact on the local landscape and green spaces. Nature-based solutions will help regenerate degraded land and transform it into productive and multifunctional ecological spaces. The project will promote resilient landscape design with reduced maintenance that supports biodiversity and reduces surface temperatures, providing benefits to the community through a stronger connection with nature.

Another expected outcome of the project is the influence on the ecological behavior of citizens. B-CONNECT aims to increase the number of walking, cycling, and public transport trips, thereby facilitating urban mobility and reducing traffic. The project will help raise awareness of environmental issues and promote communities that are conscious of the importance of environmental protection. By using real-time data, citizens will be able to make informed decisions and adopt more environmentally friendly behaviors.

The project will have a profound impact on the socio-economic fabric of the city. The young people involved in the Eco-Guilds will have the opportunity to acquire valuable knowledge and actively engage in pro-environmental behaviors. The reward system will promote ecological practices and encourage local communities and businesses to adopt sustainable behaviors. Strategically placed hydroponic towers will enhance the attractiveness and comfort of key areas, creating a vibrant and welcoming urban environment for local communities and businesses.

B-CONNECT is designed to be sustainable and scalable, with direct involvement from municipal authorities and the local community. The solutions developed will be integrated into local sustainable development strategies, urban mobility plans, and carbon neutrality actions. Collaboration with local and regional stakeholders will facilitate the expansion of the project and the implementation of similar solutions in other urban communities.

B-CONNECT represents a significant step toward a greener and more connected city, with a positive impact on both the quality of life and the surrounding environment. This innovative and integrated approach supports urban transformation through community engagement, advanced technology, and sustainable, nature-based solutions.

Total project contract value: 5.333.846,00 Euros

Timeline: 2024-2028
Output: Turn Bistrita into a model of urban sustainability, around 4 main pillars: urban resilience, real-time monitoring and response systems, alternative solutions for smart mobility and nature-based solutions.

OUTCOME	
RESPONSIBLE ENTITY / BODY / PERSON	
INVOLVED STAKEHOLDERS	
GHG EMISSIONS REDUCTION ESTIMATE (TOTAL) PER EMISSION SOURCE SECTOR	This results in an estimated annual decrease in greenhouse gases of 20.903,02 tons CO2 equivalent/year.
% OF TOTAL CO2 REDUCTION	11,76%
GENERATED RENEWABLE ENERGY (IF APPLICABLE)	
REMOVED / SUBSTITUTED ENERGY, VOLUME OR FUEL TYPE	
TIMELINE (START AND END)	2024-2028

PORTOFOLIO OF ACTIONS

FIELD OF ACTION	**ENERGY SYSTEMS**
LIST OF COVERED ACTIONS:	Photovoltaic Park
	Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, Stage 1
	Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, stage 2.1”
	Increasing energy efficiency in public lighting infrastructure in Bistrita municipality, stage 2.2”
	Replacing inefficient lighting fixtures with LED devices (fixtures) with municipality resources
FIELD OF ACTION	**MOBILITY AND TRANSPORT**
LIST OF COVERED ACTIONS:	The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road
	Green public transport line using electric, hybrid or low-pollution vehicles
	Reconfiguration of the public transport axis on the route Gării street – Decebal boulevard – Andrei Mureşanu street – Năsăudului street
	Green corridor for urban mobility in the historical center of Bistrita municipality
	Sustainable mobility corridor along Bistrița River (Blue Line)
	Renewal of the public transport fleet in Bistrița Municipality and Livezile component locality - Procurement of 20 electric buses and 24 charging stations
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase I - Purchase and installation of 4 electric batteries recharging stations
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase II - Purchase and installation of 14 electric batteries recharging stations
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase III - Electric Batteries Charging Stations at 44 private apartment block areas and 14 public buildings as kindergartens, schools and cultural buildings.
	Extension of the network of private electric charging stations, by enforcing urban planning regulations: at least 50 new charging stations. Benefits for the residents purchasing electric vehicles (local taxes, subsidies (both national and local); parking discount and dedicated lots etc.) – at least 1.000 beneficiaries by 2030".
	Development of four underpass road passages at the entrances to Bistrita city

	Traffic management system extent in Bistrita Municipality
	Traffic management system extent in Bistrita Municipality, phase 2
	Limited traffic zone
FIELD OF ACTION	**WASTE AND CIRCULAR ECONOMY**
LIST OF COVERED ACTIONS:	Establishment of two voluntary collection centers in Bistrița municipality
	Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level
	Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level - Phase 2
FIELD OF ACTION	**GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS**
LIST OF COVERED ACTIONS:	Extension of ”Green Bistrita” Program - Rehabilitation and/or extension of existing parks. Tree planting: 10,000 new trees in public areas (streets, squares, courtyards of public institutions, parks etc.)
	Valea Castailor Blue Corridor
	Unirea area Park
	Bistrița riverbanks will be fitted, from the Unirea locality to Berăriei bridge
	Green roofs and facades for public and private buildings
FIELD OF ACTION	**BUILT ENVIRONMENT**
LIST OF COVERED ACTIONS:	Integrated renovation of dense multi apartment residential areas and their transition to climate neutral district (150 apartment buildings)
	Energy Renovation of Public Buildings (more than 20 public buildings)
	Construction of housing for young people from vulnerable groups/communities - nZEB building
	Green House program - increase from 1.082 to 2.500 (+1.418) prosumers until 2030
	Urban regeneration of degraded public spaces - Andrei Muresanu area
	Urban regeneration of degraded public spaces - Independentei Nord area
	Urban regeneration of degraded public spaces in the micro hydro plant area
	Urban regeneration of the area on the perimeter "King Mihai I" Municipal Park, "Jean Pădureanu" Stadium and the right bank of Bistrița River

	Urban Regeneration of the Area Bounded by Gării Street, Decebal Boulevard, Mihai Eminescu Street, and Republicii Boulevard – Including a park redevelopment and expansion, and the construction of a multi-storey car Park
	Urban regeneration of the area surrounding the former thermal energy Plant of Bistrita city
	Establishing local urban policies to achieve climate targets
FIELD OF ACTION	**SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)**
LIST OF COVERED ACTIONS:	Community partnership for climate neutrality European projects + IPPU

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	Photovoltaic park-RES Installation of renewable energy equipment: Solar panels/photovoltaic systems, heat pumps for all public buildings for 150 apartment block buildings, and for 1.500 individual homes	Increasing the amount of renewable energy used for heating/cooling in homes/buildings and for hot water	Reduce CO2 emissions with 2.650,24 tons over by 2021	Lower utility/electricity bills; Building occupants become prosumers and can generate income from producing green energy. Improved air quality Increased safety of public spaces. Savings for local budget Improved quality of life for citizens Reduction of greenhouse gas emissions
		Around 80% of the public lighting network equipped with LED lamps, remote management, and dimming systems	Energy efficient public lighting system	Reduce CO2 emissions with 187,99 tons over by 2021	

Mobility & transport	Technology/ Infrastructure	Increasing t**he number of public electric vehicle charging stations** by 150 Efficient infrastructure for bicycles	Public spaces are more bike, scooter, and electric car-friendly. Removing vehicles and their direct emissions from the city, by creating the city bypass belt Traffic flow improvement through the development of four underpass road passages intersections on DN17 at the entrances to Bistrița Municipality	Reduce CO2 emissions with 66.203,39 tons over by 2021	Promoting alternative transportation and supporting the circular economy. Reduced traffic congestions Reduced costs for personal car transportation.
	Governance & Policy	Urban planning regulations regarding the integration of a predetermined number of electric charging stations in areas with real estate development.	Efficient network of electric charging stations covering the administrative area of the city.		Reduced air Pollution Improving health and well-being.
	Finance & Funding	Reduced local taxes/subsidies for those purchasing electric vehicles; benefits in parking areas; At least 30 electric buses in public transportation.	Constant increase in the number of electric buses dedicated to public transportation.		Improvement of quality of life

	Social Innovation	Promoting smart mobility	Changing behaviour and adopting green transportation and mobility solutions.		Improving health and well-being. Reduced air pollution Reduced traffic congestions. Encouraging active citizen involvement, the development of sustainable transportation habits, and environmental responsibility. Modern solutions for urban transportation issues Improving logistical efficiency.
	Learning & Capabilities	Promoting a comprehensive understanding of environmental issues and fostering active participation in the development of effective solutions	Citizens can provide feedback on local environmental conditions		A better-informed and more environmentally responsible community
Waste & circular economy	Technology/ Infrastructure	Installation of 190 digitised eco-islands for selective collection;			Improved quality of life

		Building at least 2 collection centers for voluminous waste		Reduce CO2 emissions with 9.125 tons over by 2021	
	Social Innovation	Cultivating a volunteer attitude towards selective waste collection.	Better-informed citizens about the various possibilities for reusing and recycling different types of waste. Creating new job opportunities.		Reduce GHG emissions Increase the percentage of recycled materials and recycling municipal waste
	Learning & Capabilities	Increasing the level of information and awareness regarding recycling by waste types, as well as the benefits of recycling.	Increasing the rate of reuse and recycling of municipal waste.		Opportunities for innovative development of the local circular economy.
	Governance & Policy	Continuous regulations to penalize individuals/entities that do not engage in selective waste collection.	Increasing the number of citizens with a much more responsible attitude towards selective waste collection.		Increasing the rate of selective collection of municipal waste.
Green infrastructure & nature based solutions	Technology/ Infrastructure	Rehabilitation and/or extension of existing parks, development of new parks, planting at least 10.000 new trees.	Increasing the number of green spaces in residential neighborhoods.		A more resilient and greener city. Improve quality of life Encourage more trips by foot

		Continue and expand the development of blue - green corridors	Blue-Green Corridor along Bistrita river, with at least **7 km** of bike and pedestrian paths	Reduce CO_2 emissions with 1.374 tons over by 2021	Cleaner air Make commuting by bike and green micro-mobility options more attractive Reduce air pollution
		Introducing NBS: green roofs and facades for public and private buildings, mobile hydroponic towers, green pockets, nature-based solutions friendly to pollinators and drought-resistant.			
Built environment	Technology/ Infrastructure	Continuing the program for the refurbishment of residential blocks and public buildings;		Reduce CO_2 emissions with at least 77.245,07 tons over by 2021	Reduce local budget energy costs Savings and reduced energy costs GHG reduction
	Governance & Policy	Green House program	Most new buildings built to nZEB standards, and housing units with improved energy performance		
	Finance & Funding	Discounts for building owners who improve the energy performance of their properties.			

SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	Technology/ Infrastructure	At least 6 smart mobility hubs in residential neighbourhoods, including: **-Smart modules powered by solar energy**, with green roofs, ensuring energy efficiency and sustainability. **-Secure bike parking systems** with token-based locking mechanisms. **-Innovative repair workshops** for bike maintenance. **-Safe and modern infrastructure**, with state-of-the-art lighting and surveillance. **Sustainable Data Center for Urban Climate and Pollution Monitoring**, which includes: ◊ Fixed **sensors** – 15 locations, and mobile sensors – 100 units for monitoring air quality and urban microclimate. ◊ **Smart traffic meters** – 25 locations, to	Transformation of 22 plots of land into green pockets, adjacent to multi-family residential neighborhoods; Developing **3** Creative Mobile **Hubs**: **Urban Resilience HUB** – dedicated to greening initiatives and equipped with tools for gardening and hydroponics. **Digital-IT & Robotics HUB** – Equipped with programmable robots and urban sensors to support ecological monitoring; **Art, Design & Place-Making HUB** – Art and design hub for cultural activities and green urban regeneration.	Reduce CO2 emissions with at least 20.903,02 tons over by 2021	Revitalizing local identity and supporting local talents through workshops and innovative activities.

		optimize urban traffic flow; ◊ **Interactive LED panels** – 15 units, to inform citizens about air quality and traffic conditions.			
	Learning &Capabilities	Developing a Toolkit of solutions that will detail the types of arrangements and plant species used.			
	Social innovation	A digital platform that provides real-time access to climate and air quality data. A token-based reward system. Development and implementation of **autonomous delivery vehicles**.			

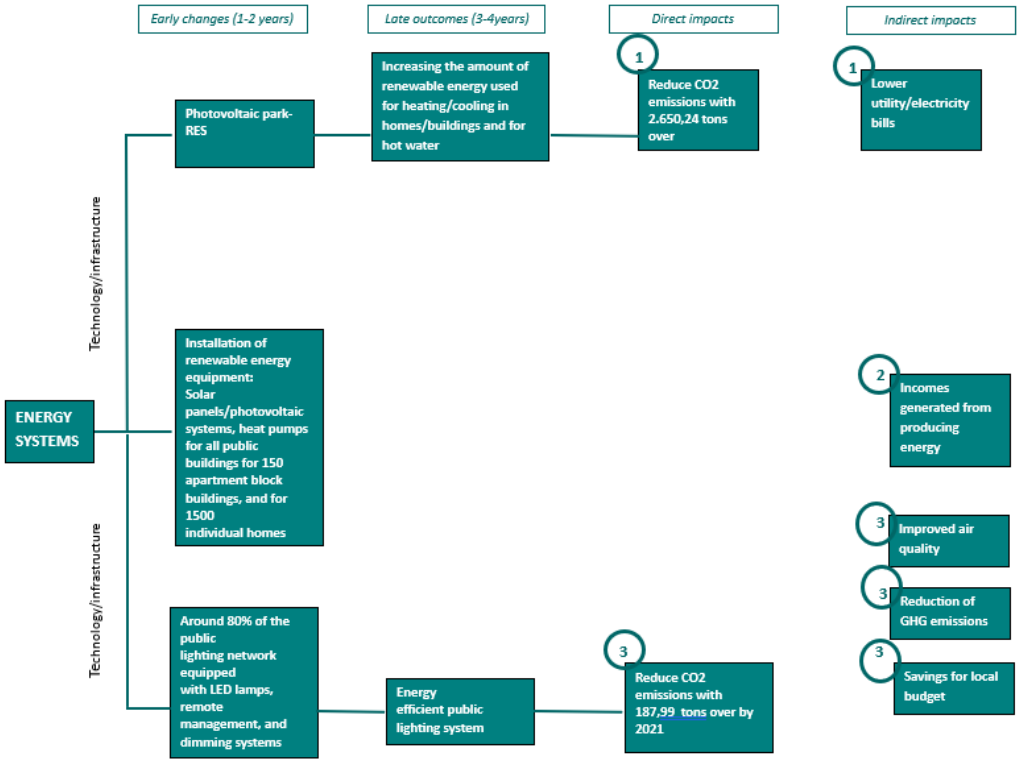

Figure 5 Bistrita impact pathways on Energy systems

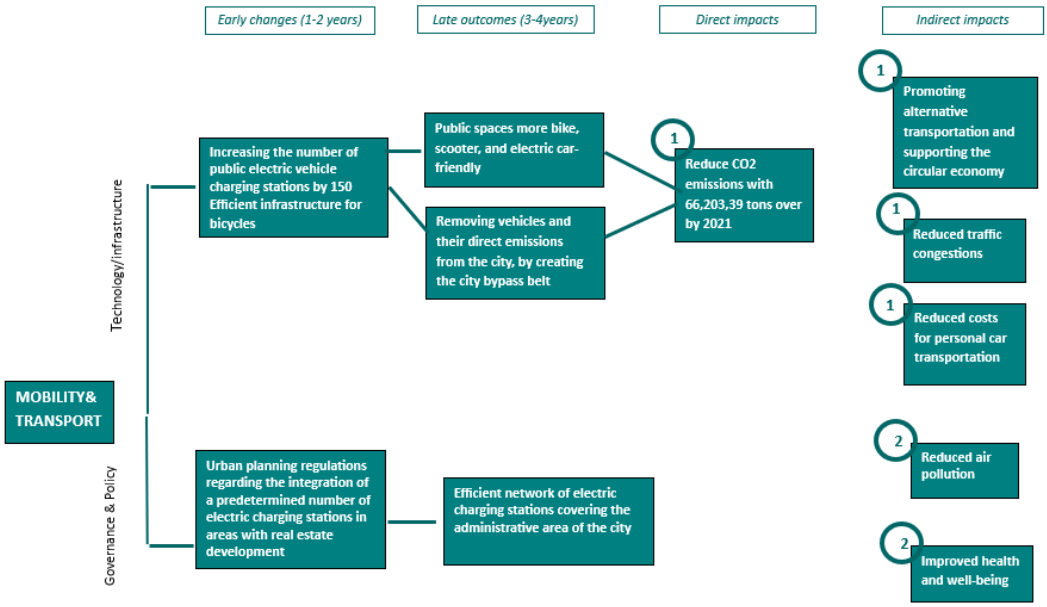

Figure 6 Bistrita impact pathways on Mobility&Transport – section 1

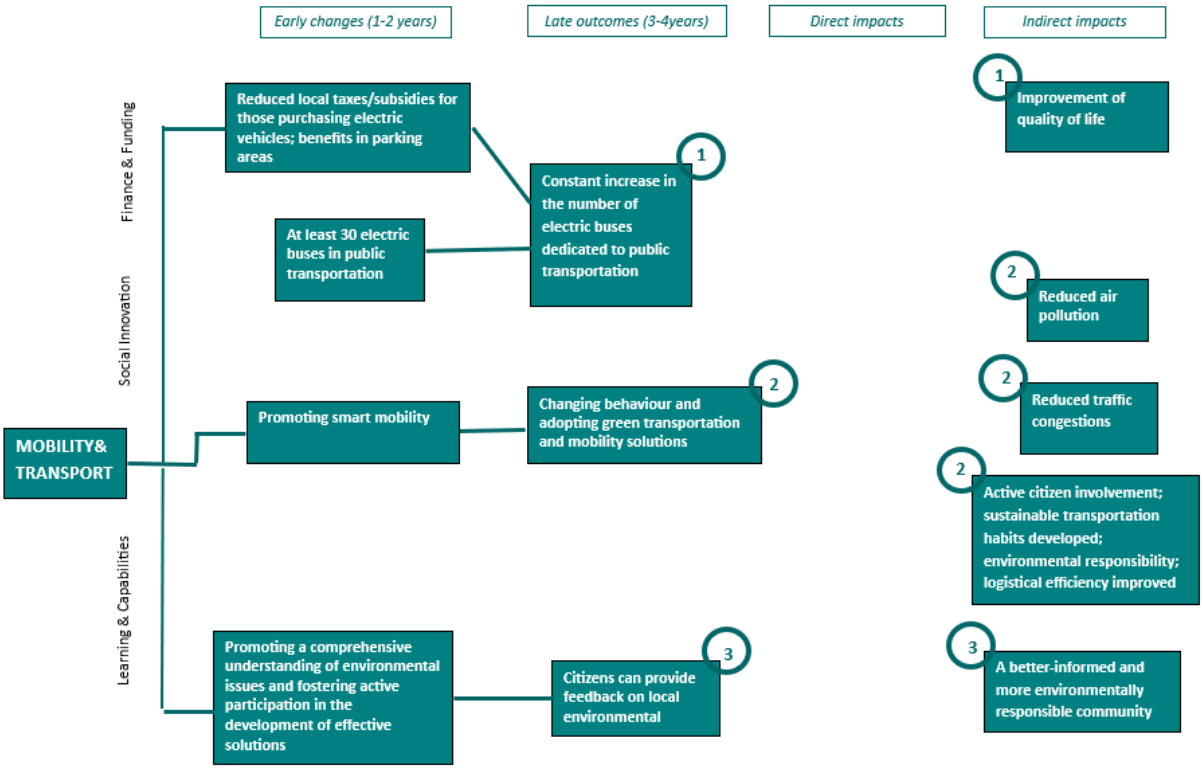

Figure 7 Bistrita impact pathways on Mobility&Transport - section 2

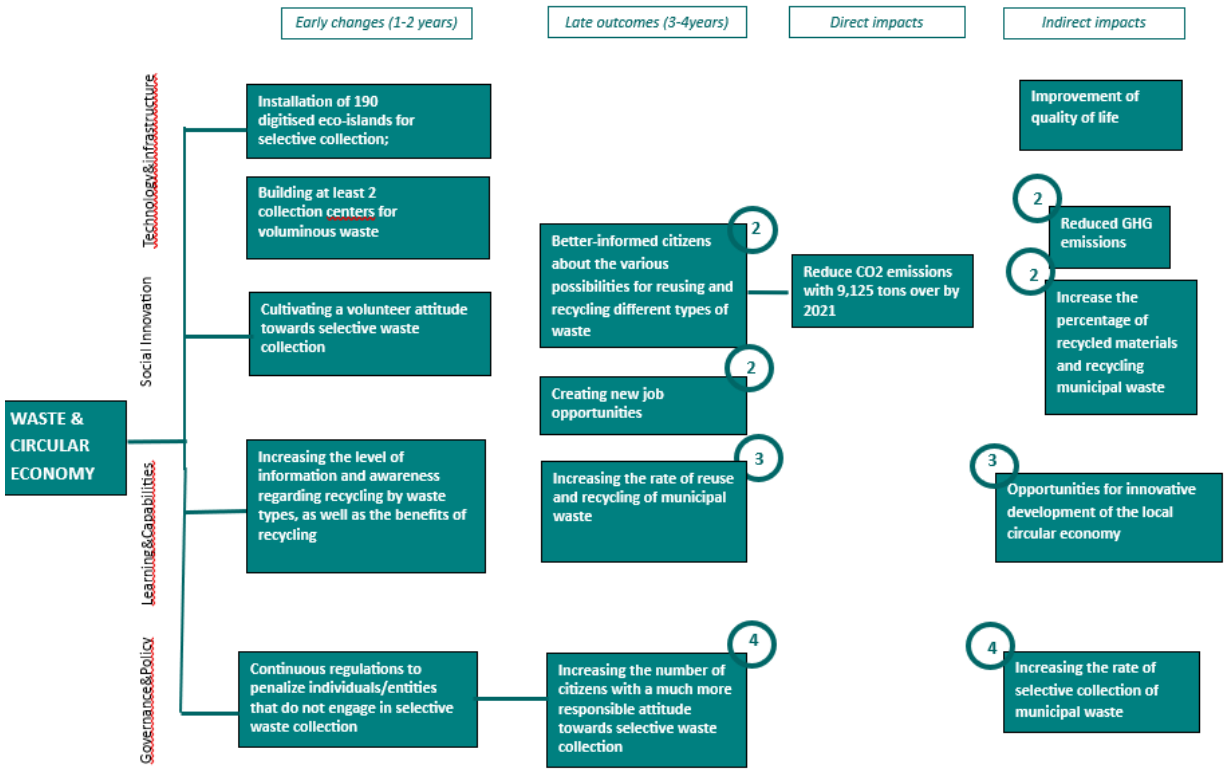

Figure 8 Bistrita impact pathways on Waste&Circular economy

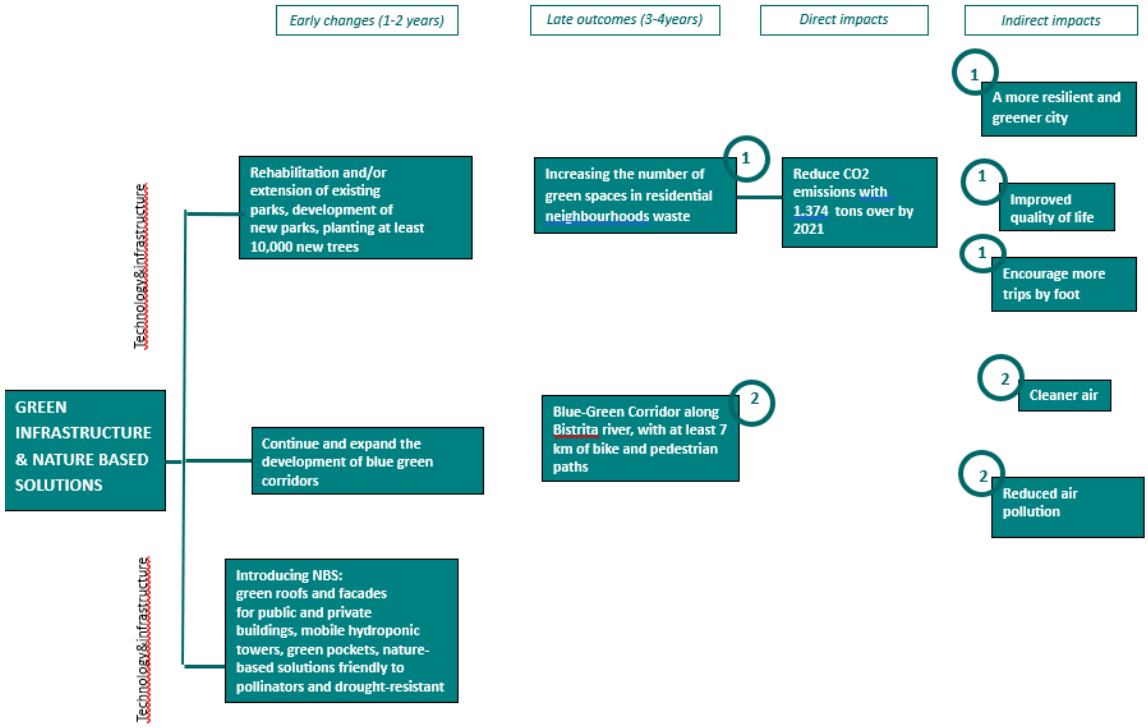

Figure 9 Bistrita impact pathways on Green infrastructre&Nature-based solutions

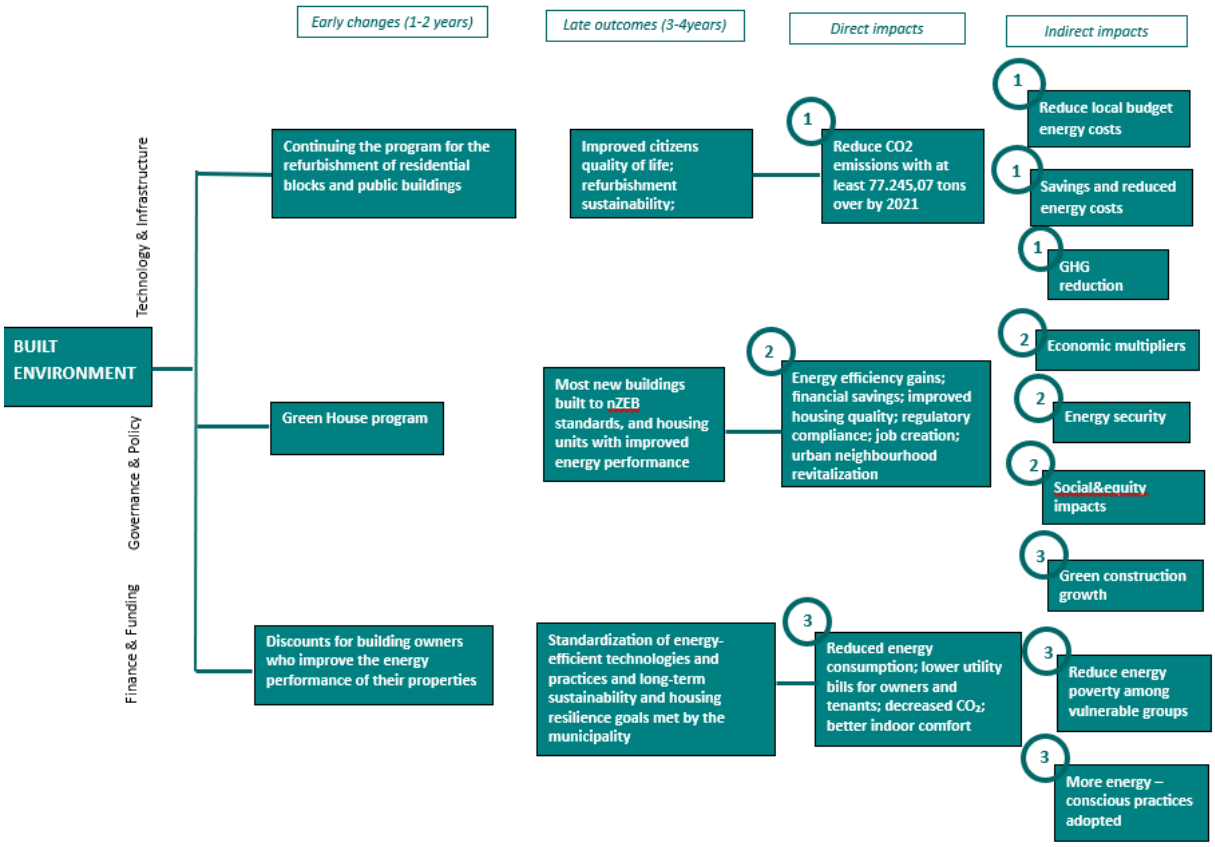

Figure 10 Bistrita Impact pathways on Built environment

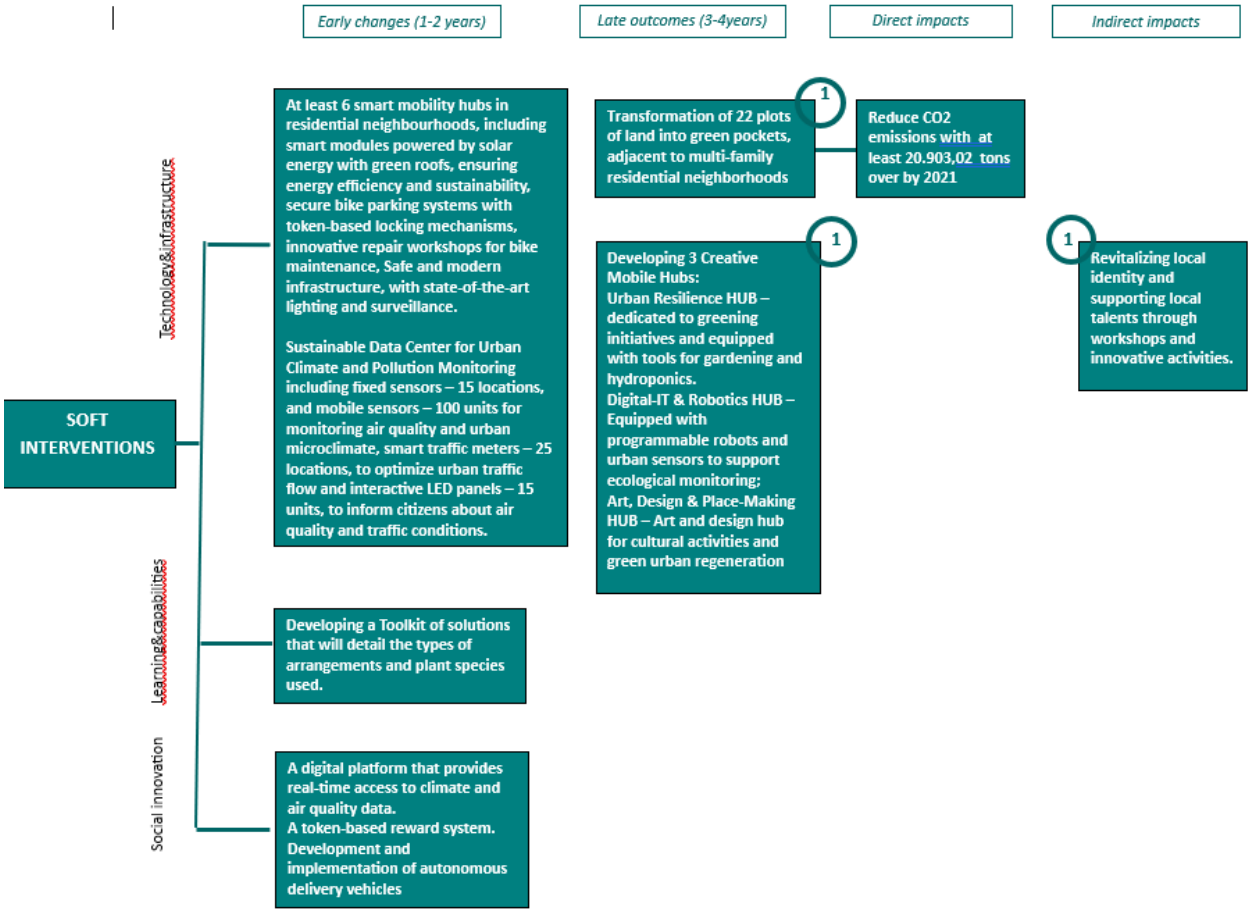

Figure 11 Bistrita Impact pathways on soft interventions

STRATEGY FOR RESIDUAL EMISSIONS

Total emissions that are not accounted for in this plan: 43.506,06/year (19,67%).

The CNAP 2035 outlines all major interventions the Municipality will implement to reach climate neutrality by 2035. It integrates key projects from local strategies and aims to achieve a CO_2 emissions reduction of 80,91%. This target already factors in offsetting measures, which include substantial carbon sink initiatives such as the expansion and rehabilitation of parks and green areas, planting 10.000 trees, and increasing energy efficiency in both public and residential buildings.

To address residual emissions, the Municipality will prioritize local offset projects, with a strong emphasis on nature-based solutions. These solutions provide additional benefits beyond emissions reduction—such as regulating urban temperatures, preventing flooding, and enhancing public health—making them vital for both climate adaptation and improved quality of life. Key actions include increasing green infrastructure, developing new urban habitats, and planting climate-resilient trees with high carbon absorption capacity.

The strategy also targets the building sector, recognizing the need for further interventions such as improving energy efficiency in residential, private, and public buildings, promoting renewable energy sources (solar, wind, biomass), implementing heat pumps, thermal storage systems and carbon capture and storage technologies and establishing standards for energy-efficient new buildings.

In the transport sector, CNAP 2035 proposes city-wide implementation of measures such as expanding cycling and pedestrian infrastructure, introducing congestion charges and low emission zones, incentivizing alternative mobility options, particularly electric vehicles, promoting public transportation through improved infrastructure and awareness campaigns and creating mobility plans for various social groups, aiming to reduce dependency on private fossil-fuel vehicles. Additional infrastructure projects include the construction of a city ring road and new public transport systems, supported by policies that encourage more climate-friendly travel behavior.

In terms of waste management, CNAP 2035 includes actions related to upgrading the municipal waste system, increasing the availability and use of selective collection facilities, promoting citizen participation in recycling efforts, boosting construction waste recycling and use of recycled materials in the building sector and supporting circular economy practices and launching innovative solutions like composting stations and used oil recycling facilities.

For industrial processes and private sector engagement (IPPU), the CNAP 2035 encourages actions considering expanding energy efficiency in commercial and service sectors, investing in renewable energy production units, and adopting alternative vehicle fleets, integrating recycled materials into production and supporting public-private partnerships to drive local innovation and implementation.

In the AFOLU (Agriculture, Forestry, and Other Land Use) sector, the Municipality will spend the next decade identifying and implementing specific policies and projects aligned with GHG reduction goals and urban quality-of-life improvements.

Achieving climate neutrality is recognized as a complex challenge, especially when it comes to addressing the remaining emissions. A detailed, sector-specific, and area-based approach will be required.

Each urban domain—heating, energy, transport, construction, and green space—will be analysed in-depth, and both replicable and innovative solutions will be developed. These will be shaped in collaboration with experts and local stakeholders, ensuring the city creates the right conditions to successfully meet its 2035 climate neutrality targets.

INDICATORS FOR MONITORING, EVALUATION AND LEARNING

PORTOFOLIO OF INDICATORS

ACTION	OUTCOME / IMPACT ADDRESSED	INDICATOR TITLE	INDICATOR CODE	TARGET VALUES 2027	2030	2035
All actions in the CNAP 2035	Reduction of CO2 emissions from 2021 baseline	CO2 emissions reduction	BN-NZC-01	**15%**	**40%**	**80%**
The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road Green public transport infrastructure (Green Line), bikes paths and walkable areas Green corridor for urban mobility in the historical center of Bistrita municipality Sustainable mobility corridor along Bistrița River (Blue Line) Promotion of large-scale use	Percent of daily trips done by public transport and/or non-motorized means Trips made with alternative ways of travelling (public transport / electric vehicles / bikes)	Modal Share	BN-NZC-02	42%	48%	52%

of Electric Vehicles "Renewal of the public transport fleet in Bistrița Municipality and Livezile component locality" Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality Promotion of large-scale use of Electric Vehicles						
Green-blue corridors Green roofs and facades for public and private buildings	Hectares of green spaces	green spaces	BN-NZC-03	40 ha	100 ha	140 ha
All actions in the CNAP 2035	Percent of people fully satisfied to be living in the city Percentage of citizens happy/comfortable with the quality of	Quality of Life	BN-NZC-04	40%	50%	60%

	the life in Bistrita city					
Local renewable energy generation and integrating RES into private and public buildings	Value saved for each house owner/year	Household Savings	BN-NZC-05	80 Euro	100 Euro	110 Euro
Photovoltaic Park Energy efficiency public lighting Energy refurbishment of public buildings Integrated renovation of dense multi apartments residential areas and their transition to climate neutral district	Euro spent by Municipality for Energy and Fuel/Total municipal cost (energy/fuel)	Public Sector Savings/ Municipal Savings (Euro)	BN-NZC-06	1.400.000 Euro	1.100.000 Euro	800.000 Euro

INDICATOR METADATA

INDICATOR NAME	**CO2 Emissions**
INDICATOR UNIT	Tons of CO2 per Year
DEFINITION	Reduction in CO2 emissions
CALCULATION	Periodic reports, measurements, regular monitoring

DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	Buildings, Transport, Waste, IPPU, AFOLU
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	No
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	Improved air quality; improved general health
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	BN-NZC-01
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes
EXPECTED DATA SOURCE	Monitoring reports
EXPECTED AVAILABILITY	Baseline and periodic data
SUGGESTED COLLECTION INTERVAL	Bi-annually
DELIVERABLES DESCRIBING THE INDICATOR	Monitoring reports
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	Reference Framework for Sustainable Cities, ISO 37110:2022 Sustainable cities and communities, Romania Urban Policy Indicators

INDICATOR NAME	Modal Share of public and non-motorized travel
INDICATOR UNIT	Percent
DEFINITION	Trips made with alternative ways of travelling (public transport, electric vehicles, bikes
CALCULATION	Traffic surveys/study and CCTV (traffic) data
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	Transport
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	GHG emissions reduction; Improve the Air Quality and the quality of life in the city
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	BN-NZC-02
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes
EXPECTED DATA SOURCE	Traffic surveys/study and CCTV (traffic) data
EXPECTED AVAILABILITY	Baseline and periodic data
SUGGESTED COLLECTION INTERVAL	Every 5 years
DELIVERABLES DESCRIBING THE INDICATOR	Traffic surveys/study and CCTV data
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	Reference Framework for Sustainable Cities, ISO 37110:2022 Sustainable cities and communities, Romania Urban Policy Indicators

INDICATOR NAME	Surface of green spaces
INDICATOR UNIT	Hectares
DEFINITION	Increase the surface of green spaces into the city and increase the percentage of green square meters/capita
CALCULATION	Land / urban database and measurements
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	AFOLU
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	GHG emissions reduction; Improve the Air Quality and the quality of life into the city
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	BN-NZC-03
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes
EXPECTED DATA SOURCE	URBAN GIS , Municipal Green Space Register or other available open-source land use database
EXPECTED AVAILABILITY	Data available and updated annually
SUGGESTED COLLECTION INTERVAL	Annually
DELIVERABLES DESCRIBING THE INDICATOR	Detailed land use analysis
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	Reference Framework for Sustainable Cities, ISO 37110:2022 Sustainable cities and communities, Romania Urban Policy Indicators

INDICATOR NAME	Quality of life
INDICATOR UNIT	Percent
DEFINITION	Share of people fully satisfied to be living in Bistrita city
CALCULATION	Urban Surveys
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	Buildings, Transport, Waste, IPPU, AFOLU
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	GHG emissions reduction; Improve the air quality; Increase the energy efficiency for buildings and reduce the cost for utilities .
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	BN-NZC-04
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes
EXPECTED DATA SOURCE	Urban Surveys
EXPECTED AVAILABILITY	At least twice in 10 years
SUGGESTED COLLECTION INTERVAL	At least twice in 10 years
DELIVERABLES DESCRIBING THE INDICATOR	Urban survey for measurements of the people’s satisfaction regarding quality of life into the city
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	Eurobarometer, Romania Urban Policy Indicators

INDICATOR NAME	Household Savings
INDICATOR UNIT	Euro
DEFINITION	Average energy cost savings per household/owner
CALCULATION	Household Surveys
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	Buildings, Transport, Waste
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	GHG emissions reduction; Improve the air quality; Increase the energy efficiency for buildings and reduce the cost for utilities.
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	BN-NZC-05
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes
EXPECTED DATA SOURCE	Surveys performed by National Institute for Statistics(national level)
EXPECTED AVAILABILITY	At least twice in 10 years
SUGGESTED COLLECTION INTERVAL	At least twice in 10 years
DELIVERABLES DESCRIBING THE INDICATOR	Household Surveys
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	Romania Urban Policy Indicators communities, Romania Urban Policy Indicators

INDICATOR NAME	Modal Share of public and non-motorized travel
INDICATOR UNIT	Percent
DEFINITION	Trips made with alternative ways of travelling (public transport, electric vehicles , bikes
CALCULATION	Traffic surveys/study and CCTV (traffic) data
DOES THE INDICATOR MEASURE DIRECT IMPACTS (I.E. REDUCTION IN GREENHOUSE GAS EMISSIONS?)	Yes
IF YES, WHICH EMISSION SOURCE SECTORS DOES IT IMPACT?	Transport
DOES THE INDICATOR MEASURE INDIRECT IMPACTS (I.E. CO-BENEFITS)?	Yes
IF YES, WHICH CO-BENEFIT DOES IT MEASURE?	GHG emissions reduction; Improve the Air Quality and the quality of life into the city
CAN THE INDICATOR BE USED FOR MONITORING IMPACT PATHWAYS?	Yes
IF YES, WHICH NZC IMPACT PATHWAY IS IT RELEVANT FOR?	BN-NZC-06
IS THE INDICATOR CAPTURED BY THE EXISTING CDP/ SCIS/ COVENANT OF MAYORS PLATFORMS?	Yes
EXPECTED DATA SOURCE	Traffic surveys/study and CCTV (traffic) data
EXPECTED AVAILABILITY	Baseline and periodic data
SUGGESTED COLLECTION INTERVAL	Every 5 years
DELIVERABLES DESCRIBING THE INDICATOR	Traffic surveys/study and CCTV data
OTHER INDICATOR SYSTEMS USING THIS INDICATOR	Reference Framework for Sustainable Cities, ISO 37110:2022 Sustainable cities and communities, Romania Urban Policy Indicators

STAKEHOLDERS

Achieving net-zero emissions in Bistrita requires an unprecedented collective effort, coordinated by the City Hall. Success depends on mobilizing a wide range of partners at local, regional, and national levels, all of whom will benefit directly from the results and broader co-benefits of climate action.

- **Public institutions** – Local and regional administrations, utilities, service providers, and regulatory bodies are essential in managing resources, infrastructure, and social programs, while ensuring vulnerable groups are protected.
- **Private sector** – Businesses, though major emitters, hold the financial capacity, technologies, and influence needed to accelerate decarbonization and support sustainable growth.
- **Civil society** – NGOs can strengthen community resilience by leading advocacy, education, partnerships, and innovation, while helping track and support municipal climate actions.
- **Citizens** – Residents are central to the transition through lifestyle choices, investments in energy efficiency and renewable energy, and active participation in awareness campaigns and community initiatives.
- **Other enablers**:
    - *Funding bodies* provide capital, expertise, and incentives for low-carbon projects.
    - *Interjurisdictional associations* foster collaboration, joint initiatives, and policy advocacy across municipalities.
    - *Research and academia* contribute knowledge, innovation, and education tailored to climate challenges.
    - *Schools and universities* shape future generations by embedding climate education and sustainability values.

STAKEHOLDERS ANALYSIS

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
Bistrița-Năsăud County Council	PROCESSES	Public administration	The County Council is responsible for the implementation and oversight of the Air Quality Maintenance Plan, the Waste Management Plan, and the water and wastewater infrastructure across Bistrița-Năsăud County,	The transfer and dissemination of the expertise and knowledge acquired during the development of the CNAP 2035 to the institution's personnel, and their integration into urban planning, waste management, water	- Replication of best practices in climate neutrality developed under the CNAP 2035 at the county level; -Serving as a collaborator and invited stakeholder actively engaged in the activities

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
			including the municipality of Bistrița.	management, and air quality improvement processes.	undertaken within the CNAP 2035 framework.
SC Transmixt SA Bistrița- local public transport operator	INFRASTRUCTURES	Public service – transport	Local public transport operator, actively committed to ensuring the provision of high-quality, environmentally friendly, and accessible public transport services for citizens.	SUMP sets specific objectives and targets for mobility and public transport, including the expansion of the electric bus fleet, the development of dedicated bus lanes, and the installation of charging stations to meet the required electric energy demand.	-Active participant in the implementation of mobility and public transport projects; -Replication of best practices in climate neutrality developed under the CNAP 2035, at the county level, justified by the management of public transport routes extending beyond the municipal level.
Cluj - Napoca Technical University - Bistrița university extension	CAPACITIES	RDI ecosystem	The collaboration between the municipality and the local extension of the Technical University of Cluj-Napoca has been evolving for several years, encompassing an expanding array of fields, all of which are recognized for the university's excellence at both national and international levels.	The university keeps pace with international priorities by opening a new specialization in Bistrița, starting from the previous academic year: "Electrical Systems" within the Faculty of Electrical Engineering. This specialization is valuable in fields such as: industry and automation, industrial and residential	The university is the main collaborator in advanced RDI projects.

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
				electrical installations, renewable energy, automotive industry, IT and intelligent systems, and embedded programming.	
Babeș - Bolyai Cluj - Napoca University - Bistrița university extension	CAPACITIES	RDI ecosystem	The university has the oldest academic/university tradition in Romania, and is the largest university in the country.	The local extension of the Faculty of Geography collaborates with a wide range of experts specializing in climate change and climate neutrality research, as well as with sociologists from the Faculty of Sociology in Cluj-Napoca, focusing on anthropological analyses and behavioral transformations.	The university aims to actively engage with the local community by providing direct support to citizens and local economic agents.
Bistrița-Năsăud Environmental County Directorate	PROCESSES	Public institution	Regulations pertaining to environmental protection for legal entities and individuals; transposition of national legislation into local frameworks	Compliance with regulations and protection of environmental factors within the territory.	A dialogue partner and advisor in the fields of environment and climate, invited to events to understand the specifics of interventions related to climate neutrality in our city.

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
Bistrița-Năsăud County Public Health Directorate	PROCESSES	Public institution	Regulations pertaining to public health, applicable to legal entities and individuals; transposition of national legislation into local regulations.	Compliance with public health regulations within the territory.	A dialogue partner and advisor in the field of public health in relation to environmental factors, invited to events to understand the specifics of interventions related to climate neutrality in our city.
Bistrița-Năsăud County School Inspectorate	PROCESSES	Public institution	They represent the main link between the public administration and local educational institutions, being a key element in the climate neutrality process, as they have the capacity to influence the behavior of students as users of a significant stock of public buildings owned by the municipality, as well as the potential to accelerate the interventions that will be applied to these buildings. Children and young people from Bistrița are the main beneficiaries of the results	It is necessary to shift young people's behavior towards climate-neutral practices in order for them to actively engage in local initiatives such as sustainable modes of transport, selective waste collection, energy consumption reduction, promotion of nature-based solutions, and, more generally, to involve young people in the city's governance process through consultative participation in the development of public urban policy	A dialogue partner and support in engaging children and young people to understand and actively and creatively participate in the process of transitioning towards climate neutrality in our city.

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
			stemming from the implementation of the actions included in the Action Plan, and therefore they will be consulted periodically and encouraged to get involved in the city's transition towards climate neutrality		
Bistriţa-Năsăud County Water Management System	PROCESSES	Public institution	Regulations pertaining to water resource management, applicable to legal entities and individuals; transposition of national legislation into local regulations.	Compliance with water resource management regulations within the territory.	A dialogue partner and advisor in the field of local water resource management, invited to events to understand the specifics of interventions related to climate neutrality in our city.
North-West Regional Development Agency	FUNDING/FINANCING	The national network of Regional Development Agencies	The Agency was established as an NGO of public utility, acting in areas specific to regional development. One of the main priorities for the Regional Programme 2021 – 2027 is the investments in energy efficiency projects with a direct result of reduction of energy	The agency plays an important role in funding the measures proposed in the CNAP 2035.	A dialogue partner, invited to events to understand the specifics of interventions related to climate neutrality in our city, which must also be adopted by cities and localities in the North-West region, of which Bistriţa is a part.

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
			consumption and GHG emissions for future environmentally friendly local communities.		
ENERGY CITIES Association	FUNDING/FINANCING	Association of European cities aiming to promote sustainable energy policies.	Support and guidance through the technical library and the experts within the organization.	A great opportunity to test unheard-of urban practices and to implement them with other cities and organisations.	Replication of best practices from the CNAP 2035 at European and international levels.
CITIZENS/NGO's	CAPACITIES, PROCESSES, ALLIANCES, FUNDS	Civil society	Citizens are actively involved in social innovation processes and civic co-design, both needed and essential for the city's transition to climate neutrality.	Citizens are the primary beneficiaries of the CNAP 2035 implementation results, while civil society plays a key role as an interested actor in all stages of the plan's development.	It is crucial for citizens to adopt behaviors and practices aligned with the city's transition to climate neutrality, specifically sustainable lifestyles that are resilient to climate change.
INVESTMENTS AND EUROPEAN PROJECT MINISTRY	FUNDS	Public sector	National ministries play a crucial role in advancing Bistrita's climate neutrality goals by directing financial resources to the relevant sectors under their responsibility. Beyond funding, they are expected to provide strong political backing to the municipality's decarbonization	Recognizing their role in helping Romanian municipalities speed up the path to climate neutrality nationwide.	moderate
FINANCE MINISTRY	FUNDS	Public sector			Moderate
DEVELOPMENT, PUBLIC WORKS, AND ADMINISTRATION MINISTRY	FUNDS	Public sector			moderate
TRANSPORT MINISTRY	FUNDS	Public sector			moderate

STAKEHOLDER	SYSTEM	NETWORK	INFLUENCE	INTEREST	ENGAGEMENT
ENERGY MINISTRY	FUNDS	Public sector	initiatives, ensuring that local authorities have the support needed to implement transformative measures.		Moderate
ENVIRONMENT MINISTRY	FUNDS	Public sector			Moderate
RESEARCH, INNOVATION AND DIGITALISATION MINISTRY	FUNDS	Public sector			Moderate
COMMERCIAL BANKS	FUNDS	Banking institutions/ Public sector	Financing climate-neutral projects that exceed local budgets and backing private initiatives that cut emissions.		Moderate

The CNAP 2035 is underpinned by a **participatory governance model** that integrates input from the local community, key stakeholders, and external partners. This collaborative approach ensures that climate actions are inclusive, equitable, and aligned with both local priorities and broader policy frameworks.

Bistrița has developed a strong foundation of community and stakeholder collaboration through a series of local and European projects in areas such as energy efficiency, sustainable mobility and urban green infrastructure. These initiatives have fostered an environment of trust and cooperation between municipal authorities, civil society and academia.

In this context, Bistrita actively engages **citizens**, through structured public consultations, participatory events, environmental awareness campaigns, and digital feedback platforms and **local stakeholders**, including private companies, NGOs, and academic institutions, who contribute with technical knowledge, innovative solutions, and co-investment in pilot projects. This inclusive process strengthens collective ownership of climate objectives and enhances the social legitimacy of climate action.

Bistrița also benefits from strategic partnerships with **other public administrations** through national and EU city networks as Covenant of Mayors, **North - West Regional Development Agency** ensuring alignment with regional development goals and access to financing instruments and **international organisations**, supporting knowledge exchange and best practice replication.

The CNAP 2035 development involved participatory mechanisms as **stakeholder mapping and engagement planning,** and **thematic co-creation workshops** focusing on key sectors.

To ensure continued participation throughout implementation and monitoring, the city will adopt a **multi-stakeholder coordination body in the form of a Coalition** for Climate Neutrality**, digital monitoring dashboards**, ensuring transparency and enabling two-way communication, **ongoing capacity-building**

initiatives targeting municipal staff, community facilitators, and youth leaders and **participatory budgeting** for climate and resilience projects. These mechanisms will institutionalise community participation and embed accountability in the governance process.

In terms of organisational and **governance,** the key elements include ensuring the environment and climate change compartment functionality, within the Sustainable Development Department 2030, dedicated to climate within the local administration, which will integrate climate interdepartmental teams, structures designed to enhance inter-institutional cooperation, improve decision-making efficiency, and foster policy coherence. For the cross - departmental climate teams, we envisage the designation of o senior representative (director or chief inspector) within the following municipality`s departments:

- **Chief Architect Department/Urbanism Service** – integrates climate neutrality in zoning, construction permits, and land use.
- **Infrastructure and Services Department** – implements the sustainable mobility strategy (public transport, cycling, EV infrastructure), manages waste, public lighting, green spaces.
- **Technical Department** – oversees public infrastructure works, and energy efficiency in public buildings.
- **Sustainable Development Department** including the staff dealing with the **Environmental Protection and the Energy manager** – EU programmes searching, funds applying and projects implementation, local climate adaptation, air quality, nature-based solutions, biodiversity.
- **Social Assistance Department** – just transition, vulnerable communities.
- **Innovation & Technology Information** Department– data platforms, monitoring dashboards, citizen engagement apps.
- **Economic Department** – ensures budget allocation, loans/green bonds, local fees and taxes.
- **Legal, Human Resources and Public Procurement Department/Public Procurement Service**– green public procurement, contract design with climate clauses.

BARRIERS

Bistrița's transition to climate neutrality is challenged by **low public awareness and engagement, outdated infrastructure, limited finances, and weak institutional capacity**. In energy systems, citizen mistrust of district heating, low involvement in energy production, and poor communication hinder progress—addressed through **better stakeholder collaboration, transparent communication, and awareness campaigns**. In mobility, resistance to reducing car use and insufficient EV/bike/public transport infrastructure are barriers—solutions include **behavior-change programs and improved charging and cycling infrastructure**. Waste and the circular economy face poor understanding and weak incentives—mitigated by **rewarding waste reduction, "pay as you throw," and recycling innovation**. Green infrastructure is limited by high costs and lack of policies—countered by **local alliances and regulations on NBS**. The built environment suffers from inefficient old buildings and costly retrofits—solutions focus on **regulations, incentives, awareness of long-term savings, and promoting simple daily energy-saving habits**. Finally, cross-cutting barriers such as institutional capacity and financial gaps are addressed through **capacity building, policy alignment, external funding, and public engagement campaigns**.

KEY BARRIERS

EMISSION DOMAIN	IDENTIFIED BARRIER	DESCRIPTION	PROPOSED SOLUTION
ENERGY SYSTEMS	Outdated, less flexible mindset;	Low interest of citizens in the District Heating System (DHS) considering the detrimental experience with the functional district heating system in Bistrița until 2007;	Emphasizing the efforts of the municipality, in collaboration with local stakeholders, regarding the communication and promotion of energy efficiency and climate neutrality solutions;
	Gaps in communication and working with citizens and stakeholders.;	The low involvement of citizens in energy production;	Better functionality of structures and methods related to communication, transparency of public administration activities and initiatives, public consultation, and joint initiatives between the public sector, private sector, and citizens.
	Low number of public-private partnership projects at the local level.	Low level of awareness among consumers and insufficient training regarding climate neutrality solutions.	

MOBILITY & TRANSPORT	Behavioral inertia; resistance to car-use reduction; insufficient EV/bike/public transport infrastructure; lack of incentives.	Limited use of alternative modes of transportation to private cars: public transport, bicycles, electric vehicles; Unfavorable reactions to projects that limit the use of cars in favor of green mobility.	The adoption of specific methods and actions to significantly change citizens' behavior, a key condition for the success of climate neutrality projects; Improving the efficiency of the electric charging station network and the bicycle infrastructure.
WASTE & CIRCULAR ECONOMY	Behavioral change; poor understanding of circular economy; low incentives for waste reduction.	The concepts of 'climate neutrality' and circular economy are poorly understood; Inefficient waste selective collection infrastructure, as well as monitoring and data usage.	Implementation of policies that reward waste reduction behavior; Implementation of the 'pay as you throw' concept; Rewarding innovative solutions for recycling/reusing municipal waste; Increasing awareness about the effects of waste on individual and public health, the need to reduce the amount of waste, and the importance of increasing recycling rates.
GREEN INFRASTRUCTURE & NATURE BASED SOLUTIONS	Limited financial resources; Lack of local policies regarding NBS.	The costs of building new infrastructure exceed the capabilities of the local budget, as well as those of the private sector.	The development of a local alliance of local stakeholders to actively support climate neutrality; Local regulations regarding NBS.
BUILT ENVIRONMENT	Limited financial resources;	Bistriţa has a stock of buildings developed before the implementation of energy efficiency regulations, and	Local regulations and incentives to encourage energy-efficient solutions;

	Behaviour change.	they are energy inefficient, with high energy consumption and carbon emissions; High costs for redeveloping these old buildings, especially equipping them with smart technologies.	Increasing awareness of the benefits of energy-efficient buildings and long-term cost savings; Cultivating simple daily habits among citizens – turning off the lights and appliances when not in use and avoiding the use of inefficient heating and cooling systems.
CROSS - CUTTING	Limited institutional capacity; financial constraints; policy misalignment; public resistance; data gaps.	Reduced effectiveness of all CNAP measures; slower implementation.	Build institutional capacity; align policies; secure external funding; implement data monitoring systems; run public engagement campaigns.

RISKS

Bistrița's climate neutrality pathway by 2035 faces key risks related to limited staff capacity, political and financial instability, social equity challenges such as energy poverty, weak national regulations, fragile stakeholder engagement, delays in renewable energy deployment, high retrofit costs, low electric vehicle uptake, and citizens' reluctance to behavioral change. These risks could slow or reduce the effectiveness of CNAP measures. To overcome them, the municipality will focus on capacity building, detailed planning, subsidies and incentives, diversified funding (EU, PPPs, green bonds, citizen co-investments), and inclusive social policies that ensure "no one is left behind," while strengthening participatory engagement and local collaboration.

MAIN RISKS

FIELD OF ACTION	IDENTIFIED RISK	RISK DESCRIPTION	MITIGATION SOLUTION
ORGANISATIONAL	Limited staff	The municipality lacks the capacity to provide sufficient staff for the complex interventions required to implement and monitor the CNAP 2035	Providing staff training to enhance digital competencies, hiring external expertise, and encouraging volunteer involvement
POLITICAL & FINANCIAL	Political instability at the governmental level	Frequent leadership changes create an unpredictable context for local budget allocations and government investment priorities	The municipality assumes responsibility for developing projects under the CNAP 2035 by focusing on local regulations and tools
SOCIAL	Energy poverty in transport	In the transition process to climate neutrality, some households and groups of residents risk being affected by the implementation of "green" and "smart" projects	The municipality's vision is that "no one is left behind," with existing financial support mechanisms for low-income residents who cannot afford their heating bills; free or reduced school transport for students; free public transport on the "Green Line" for the next five years.
LEGISLATION	Insufficient national standardized regulations	Poor regulation and standardization at the national level, inefficient public procurement	Advance preparation of projects to facilitate the acquisition of all required approvals and legal

		legislation, with delays in projects implementation	authorizations
LOCAL STAKEHOLDERS' PARTNERSHIP	Affected partnership due to objective factors	Partnerships and stakeholder engagement may be influenced by objective factors specific to the type of local actor involved.	The municipality will expand the number of initiatives aimed at effectively engaging local stakeholders and citizens in decision-making processes and their implementation, facilitated through the climate collaboration established under the CNAP 2035. Participatory budgeting has been operational for four years, and ongoing initiatives include national and international design competitions—tools for gathering ideas, proposals, opinions, and support from the community.
ENERGY SYSTEMS	Delay in renewable energy deployment	Regulatory hurdles, supply chain issues, or lack of investment could slow down solar, wind, or district heating projects.	Detail planning
BUILT ENVIRONMENT	Slow retrofitting of existing building stock Rising prices within the construction industry	Financial constraints and a lack of skilled workforce may delay energy - efficiency retrofitting. Escalating costs from inflation and supply-demand imbalances in Romania`s construction sector may increase budgets for both nZEB buildings and energy efficiency renovations.	Provide subsidies, tax incentives, and working force training programs. Non - reimbursable funds will provide the main financing, with any interim budget gaps covered by the local budget.
MOBILITY & TRANSPORT	Low adaptation of electric vehicles (EVs)	High upfront and insufficient charging infrastructure may hinder uptake.	Expand charging networks, provision of subsidies.
SOCIAL INNOVATION	Citizens` reluctance to	Slow adoption of sustainable mobility, energy efficiency	Strengthen participatory engagement, co-design,

	behavioural change	and low-carbon lifestyles	targeted outreach, awareness campaigns and demonstration pilots.
	Financing gaps for climate investments	Insufficient funds may delay or scale down renewable energy, mobility and energy efficiency projects.	Diversify funding (EU funds, PPPs, citizen co-investments, green bonds); strengthen community-owned projects.
	Social equity & affordability issues	Vulnerable groups may reject climate measures due to cost burdens.	Enable just transition measures: subsidies, targeted incentives and energy poverty alleviation schemes.
	Institutional capacity limitations	Insufficient expertise or coordination within the municipality may slow down delivery.	Provide staff training, cross-departmental collaboration and sufficiency-based planning.

OPPORTUNITIES

Bistrita municipality seeks to accelerate its transition to climate neutrality by capitalizing on existing infrastructure projects, strengthening institutional and technical capacities through the M100 Mirror Mission Cities Hub, adopting EU Mission methodologies at the local level, diversifying resource flow via public - private financing and metropolitan clusters, building strong alliances with national, international, private, and NGO partners, and strategically accessing non - reimbursable national and European funds to support climate - related initiatives.

1. Strategic documents closely related to climate neutrality, regularly updated:

- Bistrita Municipality updated between 2022-2023 its IUDS and SUMP. The SECAP, which was finalized in 2019 was further updated by the development in 2023 of the 2030 Climate Change Mitigation and Adaptation Strategy and Plan, and complemented in the same year by the Integrated Environmental Plan, "The Green Cities Accord."
- Furthermore, the General Urban Plan is currently being updated, and this strategic document will encompass revised activities, policies, actions, and projects that specifically address the challenges of the transition to climate neutrality, as outlined in the CNAP 2035.

2. The emphasis placed on the exchange of experiences and best practices in the smart approach to addressing climate challenges:

- Learning from other European cities facing similar challenges – ongoing projects such as COPE, LOOP, FEEL and B-CONNECT, which encourage broad citizen participation in climate decision-making and provide innovative solutions for exploring and enhancing the benefits of climate actions.

3. Bistriţa municipality has a dedicated department for the preparation and implementation of grant-funded projects, which prepares funding applications to access the necessary funds for the implementation of the CNAP 2035.

Additional opportunities Bistrita municipality will leverage:

- **Digitalization & Smart Technologies**: Harness digital twins, data platforms IoT solutions, and AI to optimise energy, mobility and resource use.
- **Citizen engagement & Behavioural Change**: Foster community ownership of climate goals through participatory budgeting, awareness campaigns, and citizen science initiatives.
- **Local energy communities**: Promote prosumer models and community - owned renewable energy projects to boost local resilience and affordability.
- **Climate Resilience & Adaptation Synergies**: Integrate adaptation measures (e.g. flood protection, heat mitigation) with mitigation actions to safeguard progress.
- **Public Procurement for Sustainability**: Use green and circular procurement standards to stimulate markets for low-carbon products and services.
- **Innovation Ecosystems**: Support incubators and living labs focused on climate-neutral technologies and social innovation.
- **Regional and Cross-Border Cooperation**: Leverage partnerships with neighbouring cities and regions to scale up solutions and share best practices.

ASSISTANCE NEEDS

Bistrita CNAP 2035 outlines a set of assistance needs critical to supporting the transition to climate neutrality, considering support for behavioral change, technical and financial guidance for setting and aligning ambitious targets, capacity building through energy efficiency training and expertise for comprehensive planning and monitoring for GHG emissions. Moreover, the call for assistance in developing participatory budgeting reflects a strong commitment to inclusive governance.

To access and use this support for the transition to climate neutrality, some prioritisation and implementation pathways are defined:

1. Assistance to reduce the impact and scope of the barriers mentioned previously, particularly supporting the development of behaviors within the community necessary to accelerate the transition to climate neutrality;
2. Technical and financial assistance for the optimal adjustment of local objectives and ambitious targets for the transition to climate neutrality;
3. Any type of assistance for the local development of the "participatory budgeting" process, based on best practices from European cities with extensive experience, to enhance the sense of responsibility in this regard;
4. Technical assistance and organization of training sessions on energy efficiency;
5. Consultancy and technical assistance for the planning, implementation, and monitoring of energy-related interventions covering all emission sources and types of greenhouse gases, aimed at providing a comprehensive assessment and periodic updates on climate neutrality aspects, essential for the implementation of the CNAP 2035.

III. INVESTMENT PLAN

EXISTING FUNDING AND FINANCING

FUNDING ALLOCATION BY FIELD OF ACTION

FIELDS OF ACTION	SECTOR SUBSECTION	% CURRENT BUDGET ALLOCATION
TRANSPORTATION	The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road	48,25
	Extension of green public transport infrastructure, bikes paths and walkable areas	10,41
	Promotion of large-scale use of Electric Vehicles	2,46
	Traffic management	4,75
BUILT ENVIRONMENT	Energy efficient buildings	22,42
	Urban regeneration projects	5,37
ENERGY SYSTEMS	Photovoltaic Park	0,55
	Energy efficiency public lighting	0,40
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS	”Green Bistrita” & Green corridors	3,13
WASTE AND CIRCULAR ECONOMY	Bistrița Circular City	1,64
SOFT INTERVENTIONS	Community partnership for climate neutrality European projects	0,62

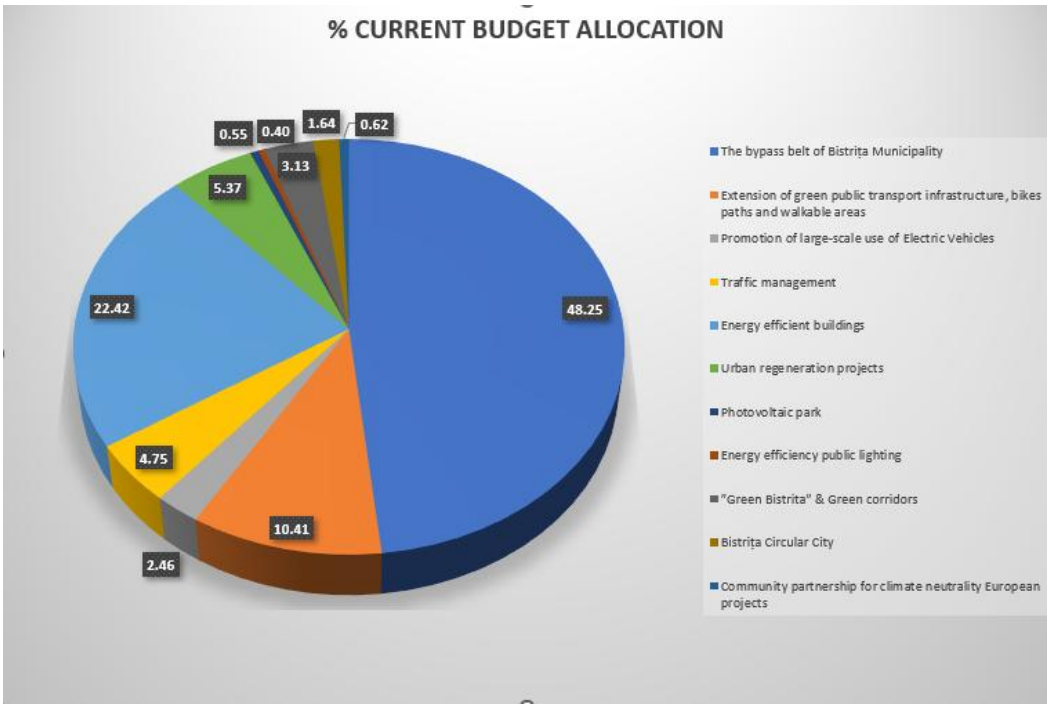

Figure 12 Bistrita current budget allocation

STRATEGIC FUNDING AND FINANCING

INCOME SOURCES FOR THE CITY

INCOME CATEGORY	CITY INCOME 2024 (RON)	CITY INCOME 2024 (EUR)	% OF CITY BUDGET
I. OPERATING SECTION INCOME - TOTAL	301.446.439	60.289.288	65,11%
1. CURRENT INCOME	294.359.939	58.871.988	63,58%
A. TAX REVENUES	275.033.396	55.006.679	59,41%
A.1. INCOME, PROFIT AND CAPITAL GAINS TAX	140.265.331	28.053.066	30,30%
A.2. PROPERTY TAXES AND FEES	37.265.511	7.453.102	8,05%
A.3. TAXES AND FEES ON GOODS AND SERVICES	97.501.957	19.500.391	21,06%
A.4. OTHER TAXES AND FEES	597	119	0,00%
B. NON-TAX INCOME	19.326.543	3.865.309	4,17%
B.1. PROPERTY INCOME	2.350.347	470.069	0,51%
B.2. SALES OF GOODS AND SERVICES	16.976.196	3.395.239	3,67%
2. SUBSIDIES	7.086.500	1.417.300	1,53%
II. DEVELOPMENT SECTION REVENUE - TOTAL	161.512.830	32.302.566	34,89%
1. CURRENT INCOME	6.631.277	1.326.255	1,43%
2. CAPITAL INCOME	4.626.127	925.225	1,00%
3. SUBSIDIES	110.833.869	22.166.774	23,94%
4. Amounts received from the EU/other donors on account of payments made and pre-financing	17.113.112	3.422.622	3,70%
5. Amounts received from the EU/other donors on account of payments made and pre-financing related to the 2014-2020 financial framework	22.308.445	4.461.689	4,82%
TOTAL INCOME	**462.959.269**	**92.591.854**	**100%**

BISTRITA PROJECTED REVENUES

(RON)

2024	2025	2026	2027	2028
462.959.269	**569.470.230**	**600.825.800**	**604.514.290**	**610.301.770**

Figure 13 Bistrita projected revenues by 2028

At the municipality level, a gradual increase is expected, which will lead to the support of all existing investment projects and even the start of new ones.

BISTRITA CAPITAL SOURCES

TYPE	SIZE RANGE	LEVEL	DESCRIPTION
Local budget + Loans	33.009.290,04	Public	Local budget and Private Banks
NRRP	36.062.657,06	Public	European and National Budget
RP	164.073.173,64	Public	European and National Budget
Private co-funding	17.147.481,42	Private	Citizens and companies` contribution
Other types of Funds	642.756.943,69	Public	European and National Budget
Environmental Fund	18.898.895,41	Public	Environmental taxes
TOTAL	**911.948.441,26**		

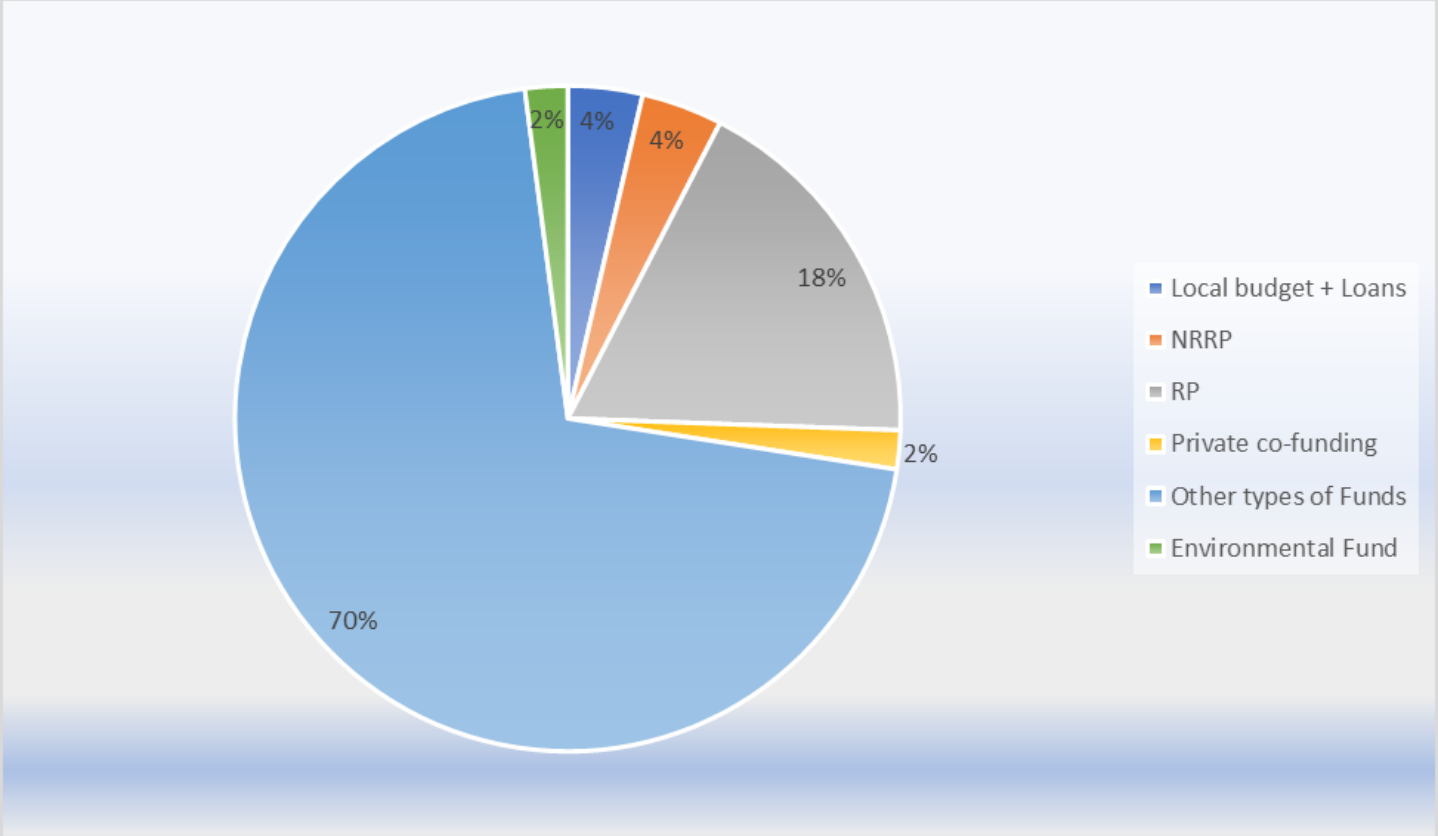

Figure 14 Bistrita Municipality capital sources

Total capital needs are estimated at €912 million, with other European and national funds expected to contribute 70%, followed by the North-West Regional Programme (18%), NRRP (4%), local budget and loans (4%), private-cofinancing (2%) and the Environmental Fund (2%).

COST SCENARIOS AND CAPITAL PLANNING

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	Photovoltaic Park	5.061.067,90	75.916,01	Modernisation Fund EU	0,55	1,49
	Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, Stage 1	1.200.340,12	12.003,40	Environment Fund	0,13	0,08
	Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, stage 2.1”	900.122,84	9.001,22	Environment Fund	0,10	0,00
	Increasing energy efficiency in public lighting infrastructure in Bistrita municipality, stage 2.2”	1.365.285,84	13.652,85	Environment Fund	0,15	0,01
	Replacing inefficient lighting fixtures with LED devices (fixtures) with municipality resources	200.000,00	2.000,00	Local Budget	0,02	0,02
MOBILITY AND TRANSPORT	The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road	440.000.000,00	10.000.000,00	National Budget	48,25	26,29
	Green public transport line using electric, hybrid or low-pollution vehicles	500.000,00	155.000,00	European Regional Development Fund	0,05	1,33
	Reconfiguration of the public transport axis on the route Gării street – Decebal boulevard – Andrei Mureşanu street – Năsăudului street	5.889.398,40	88.340,97	European Regional Development Fund	0,65	0,65
	Green corridor for urban mobility in the historical center of Bistrita municipality	17.500.000,00	175.000,00	European Regional Development Fund	1,92	0,01
	Sustainable mobility corridor along Bistrița River (Blue Line)	71.000.000,00	710.000,00	European Regional Development Fund	7,79	0,25

	Renewal of the public transport fleet in Bistrița Municipality and Livezile component locality - Procurement of 20 electric buses and 24 charging stations	11.505.137,53	345.154,12	NRRP	1,26	4,39
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase I - Purchase and installation of 4 electric batteries recharging stations	172.497,86	1.379,98	Environment Fund	0,02	
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase II - Purchase and installation of 14 electric batteries recharging stations	548.303,80	4.386,43	Environment Fund	0,06	
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase III - Electric Batteries Charging Stations at 44 private apartment block areas and 14 public buildings as kindergartens, schools and cultural buildings.	1.450.000,00	11.600,00	NRRP	0,16	
	Extension of the network of private electric charging stations, by enforcing urban planning regulations: at least 50 new charging stations. Benefits for the residents purchasing electric vehicles (local taxes, subsidies (both national and local); parking discount and dedicated lots etc.) – at least 1000 beneficiaries by 2030".	8.750.000,00	70.000,00	Environment Fund+ private	0,96	
	Traffic management system extent in Bistrita Municipality	1.259.472,80	12.594,72	NRRP	0,14	0,31
	Traffic management system extent in Bistrita Municipality, phase 2	1.171.602,60	11.716,02	NRRP	0,13	0,33
	Development of four underpass road passages on DN17 at the entrances to Bistrita city	40.000.000,00	453.000,00	European Regional Development Fund	4,39	2,74
	Limited traffic zone	925.000,00	13.875,00	Local budget	0,10	0,95
WASTE AND CIRCULAR ECONOMY	Establishment of two voluntary collection centers in Bistrița municipality	2.225.400,25	17.803,20	NRRP	0,24	5,14
	Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level	3.013.723,69	24.109,78	NRRP	0,33	

	Development, redevelopment and completion of the integrated municipal waste management system at Bistrița municipality level - Phase 2	9.737.018,91	77.896,15	NRRP	1,07	
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS	Extension of ”Green Bistrita” Program - Rehabilitation and/or extension of existing parks. Tree planting: 10,000 new trees in public areas (streets, squares, courtyards of public institutions, parks etc.)	3.000.000,00	24.000,00	Environment Fund	0,33	0,77
	Valea Castailor Blue Corridor	3.430.539,87	27.444,31	European Regional Development Fund	0,38	
	Unirea area Park	5.000.000,00	40.000,00	Norway grants	0,55	
	Bistrița riverbanks will be fitted, from the Unirea locality to Berăriei bridge	17.000.000,00	136.000,00	Norway grants	1,86	
	Green roofs and facades for public and private buildings	90.000,00	1.350,00	Private funds	0,01	
BUILT ENVIRONMENT	Integrated renovation of dense multi apartment residential areas and their transition to climate neutral district (150 apartment buildings)	163.484.814,15	1.307.878,51	European Regional Development Fund + Social Climate Fund	17,93	15,32
	Energy Renovation of Public Buildings (more than 20 public buildings)	33.378.859,76	267.030,87	NRRP	3,66	0,75
	Construction of housing for young people from vulnerable groups/communities - nZEB building	516.008,93	4.128,07	NRRP	0,06	0,00
	Green House program - increase from 1082 to 2500 (+1418) prosumers until 2030	7.090.000,00	56.720,00	Environment Fund	0,78	2,54
	Urban regeneration of degraded public spaces - Andrei Muresanu area	3.500.000,00	28.000,00	European Regional Development Fund	0,38	4,80
	Urban regeneration of degraded public spaces - Independentei Nord area	6.700.000,00	53.600,00	European Regional Development Fund	0,73	2,65
	Urban regeneration of degraded public spaces in the micro hydro plant area	3.600.000,00	28.800,00	European Regional Development Fund	0,39	1,50

	Urban regeneration of the area on the perimeter "King Mihai I" Municipal Park, "Jean Pădureanu" Stadium and the right bank of Bistriţa River	12.000.000,00	96.000,00	European Regional Development Fund	1,32	5,22
	Urban Regeneration of the Area Bounded by Gării Street, Decebal Boulevard, Mihai Eminescu Street, and Republicii Boulevard – Including a park redevelopment and expansion, and the construction of a multi-storey car Park	15.000.000,00	120.000,00	European Regional Development Fund	1,64	1,77
	Urban regeneration of the area surrounding the former thermal energy Plant of Bistrita city	7.000.000,00	56.000,00	European Regional Development Fund	0,77	2,76
	Establishing local urban policies to achieve climate targets	1.150.000,00	9.200,00	URBACT/ INTERREG EUROPE	0,13	6,17
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	Community partnership for climate neutrality European projects + IPPU	5.633.846,00	45.070,76	EUI	0,62	11,76

*** When calculating % OF THE TOTAL CLIMATE NEUTRALITY BUDGET we considered just IMPLEMENTATION COSTS/CAPEX without OPERATIONAL COST**

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	8.726.816,70	0,96	2.838,23	1,60
MOBILITY AND TRANSPORT	600.671.412,99	65,87	66.203,39	37,26

WASTE AND CIRCULAR ECONOMY	14.976.142,85	1,64	9.125,00	5,14
GREEN INFRASTRUCTURE AND NATURE BASED SOLUTIONS	28.520.539,87	3,13	1.374,00	0,77
BUILT ENVIRONMENT	253.419.682,85	27,79	77.245,07	43,47
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)	5.633.846,00	0,62	20.903,02	11,76
TOTAL	**911.948.441,26**	**100%**	**177.688,71**	**100%**

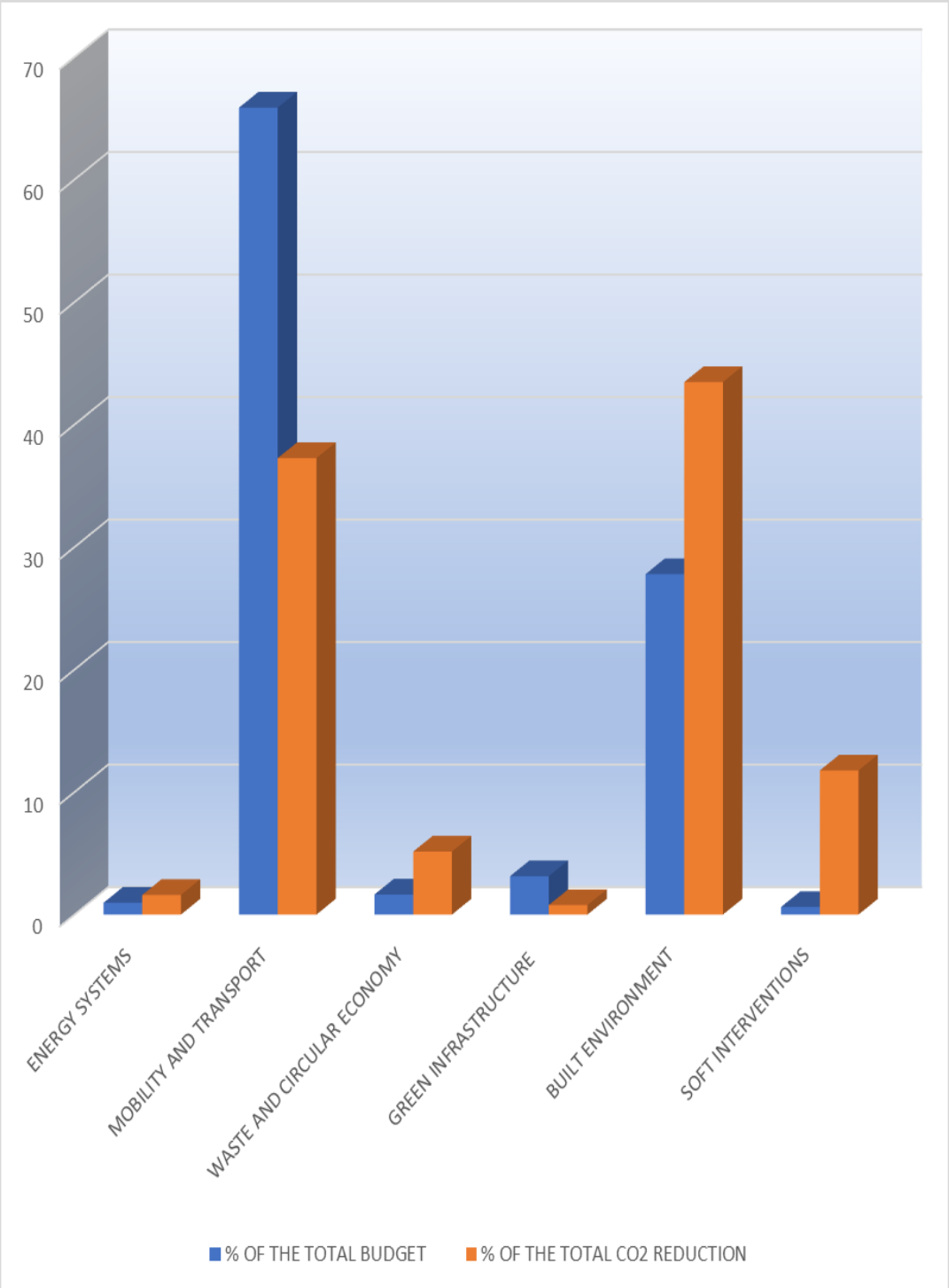

Figure 15 Bistrita Municipality costs and CO2 reductions by field of action

FINANCIAL INDICATORS FOR MONITORING, EVALUATION AND LEARNING

FINANCIAL INDICATORS BY FIELD OF ACTION

FIELDS OF ACTION	INDICATOR	INDICATOR VALUE AND UNIT
ENERGY SYSTEMS	(list every action)	CO2 kg / euro
	Photovoltaic Park	1,91
	Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, Stage 1	8,39
	Increasing energy efficiency in public lighting infrastructure in Bistrița municipality, stage 2.1”	218,48
	Increasing energy efficiency in public lighting infrastructure in Bistrita municipality, stage 2.2”	102,12
	Replacing inefficient lighting fixtures with LED devices (fixtures) with municipality resources	7,28
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM**
		3.074,74
MOBILITY AND TRANSPORT	(list every action)	CO2 kg / euro
	The bypass belt of Bistrița Municipality – an integral part of Dej–Bistrița express road	9,42
	Green public transport line using electric, hybrid or low-pollution vehicles	0,21
	Reconfiguration of the public transport axis on the route Gării street – Decebal boulevard – Andrei Mureşanu street – Năsăudului street	5,10
	Green corridor for urban mobility in the historical center of Bistrita municipality	729,17
	Sustainable mobility corridor along Bistrița River (Blue Line)	160,19
	Renewal of the public transport fleet in Bistrița Municipality and Livezile component locality - Procurement of 20 electric buses and 24 charging stations	2,88
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase I - Purchase and installation of 4 electric batteries recharging stations	
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase II - Purchase and installation of 14 electric batteries recharging stations	
	Electric Batteries Charging Stations and Plug-In Hybrid Electric Vehicles in Bistrița Municipality, Phase III - Electric Batteries Charging Stations at 44 private apartment block areas and 14 public buildings as kindergartens, schools and cultural buildings.	
	Extension of the network of private electric charging stations, by enforcing urban planning regulations: at least 50 new charging stations. Benefits for the residents purchasing electric vehicles (local taxes, subsidies (both national and local); parking discount and dedicated lots etc.) – at least 1000 beneficiaries by 2030".	
	Traffic management system extent in Bistrita Municipality	2,26
	Traffic management system extent in Bistrita Municipality, phase 2	2,01
	Development of four underpass road passages on DN17 at the entrances in Bistrita city	8,23
	Limited traffic zone	0,54
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM**
		9.073,12

WASTE AND CIRCULAR ECONOMY	Establishment of two voluntary collection centers in Bistrița municipality	1,64
	Development, redevelopment and completion of the integrated municipal waste management system at Bistriţa municipality level	
	Development, redevelopment and completion of the integrated municipal waste management system at Bistriţa municipality level - Phase 2	
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM**
		1.641,22
GREEN INFRASTRUCTURE & NATURE-BASED SOLUTIONS	Extension of ”Green Bistrita” Program - Rehabilitation and/or extension of existing parks. Tree planting: 10,000 new trees in public areas (streets, squares, courtyards of public institutions, parks etc.)	20,76
	Valea Castailor Blue Corridor	
	Unirea area Park	
	Bistriţa riverbanks will be fitted, from the Unirea locality to Berăriei bridge	
	Green roofs and facades for public and private buildings	
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM**
		20.757,31
BUILT ENVIRONMENT	Integrated renovation of dense multi apartment residential areas and their transition to climate neutral district (150 apartment buildings)	6,00
	Energy Renovation of Public Buildings (more than 20 public buildings)	25,04
	Construction of housing for young people from vulnerable groups/communities - nZEB building	0,00
	Green House program - increase from 1082 to 2500 (+1418) prosumers until 2030	1,57
	Urban regeneration of degraded public spaces - Andrei Muresanu area	0,41
	Urban regeneration of degraded public spaces - Independentei Nord area	1,42
	Urban regeneration of degraded public spaces in the micro hydro plant area	1,35
	Urban regeneration of the area on the perimeter "King Mihai I" Municipal Park, "Jean Pădureanu" Stadium and the right bank of Bistriţa River	1,29
	Urban Regeneration of the Area Bounded by Gării Street, Decebal Boulevard, Mihai Eminescu Street, and Republicii Boulevard – Including a park redevelopment and expansion, and the construction of a multi-storey car Park	4,77
	Urban regeneration of the area surrounding the former thermal energy Plant of Bistrita city	1,43
	Establishing local urban policies to achieve climate targets	0,10
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM**
		3.280,72
SOFT INTERVENTIONS (GOVERNANCE INNOVATION AND SOCIAL INNOVATION)		CO2 kg / euro
	Community partnership for climate neutrality European projects + IPPU	0,27
	TOTAL CO2 REDUCTION / CAPITAL INVESTED	**TONS CO2 / FINANCIAL SUM**
		269,52

CLIMATE POLICIES FOR CAPITAL FORMATION AND DEPLOYMENT

CLIMATE POLICIES TO ENABLE CAPITAL DEPLOYMENT

CLIMATE POLICY	DESCRIPTION OF THE POLICY	INTENDED OUTCOME FOR CAPITAL FORMATION
Sustainable Infrastructure Investment	Prioritized investments in green infrastructure, such as renewable energy systems, energy-efficient buildings, and sustainable transportation networks. This can include public-private partnerships to leverage additional funding	
Climate Resilience Planning	Develop policies that integrate climate resilience into urban planning. This includes assessing vulnerability to climate impacts and investing in adaptive infrastructure to protect against floods, and other climate-related risks	
Community Engagement and Education	Community involvement in climate initiatives through workshops, public forums, and educational programs. Engaged citizens are more likely to support and participate in sustainability efforts	
Energy Efficiency Programs	Launch programs aimed at improving energy efficiency in municipal buildings and facilities, which can serve as a model for the community. This could include retrofitting buildings with modern technologies	
Green Job Creation	Focus on creating green jobs through investments in renewable energy and sustainable practices. This not only supports economic growth but also helps in gaining public support for climate policies	
Collaboration with Stakeholders	Working with local businesses, non-profits, and academic institutions to foster innovation and share resources for climate action initiatives	
Long-term Vision and Goals	Set clear, measurable climate goals aligned with broader sustainability objectives. Periodically	

	review and update these goals to reflect new scientific findings and technological advancements	
Monitoring and Reporting	Establish a framework for monitoring the effectiveness of climate policies. Regular reporting can help assess progress and adjust strategies as needed.	

IV. OUTLOOK AND NEXT STEPS

The CNAP 2035 outlines the city's roadmap toward achieving climate neutrality. To ensure a sustainable, long-term path, the future steps for the plan must be structured and actionable, involving a series of well-defined methods, tools, milestones, and monitoring mechanisms. Thus, we consider the development of:

1. **An Integrated Communication Strategy** - as maximizing the resulting effects and the impact of actions are achieved through efficient communication, a complementary component to the implementation and monitoring processes.

In this context, citizens and the main stakeholders should be informed, by categories of recipients, by sending the correct message, so that the beneficiaries of public services perceive the direct benefits resulting from the measures implemented. Also, considering the information must often reach influential political factors at national and international level, we envisage organizing a strong lobbying activity, leading to obtaining the necessary sources of funding to materialize the CNAP 2035 actions.

In order to increase stakeholder's awareness on the importance and benefits of implementing measures to improve energy efficiency and the use of renewable energy sources and also, to educate and train all levels of beneficiaries and gain the local community engagement, we consider organizing events dedicated to:

- Informing and raising awareness among end consumers on benefits of implementing energy efficiency measures;
- Promoting high energy efficiency technologies, modern measurement and control systems;
- Cooperation between final consumers, producers, suppliers, energy distributors and public bodies in order to increase energy efficiency;
- Promoting fundamental and applied research in the field of energy efficiency;

The communication activities related to the CNAP 2035 will be monitored, measuring its media impact, reflected in media coverage. An archive will comprise articles / interviews in the press and a file containing promotional materials (brochures / leaflets, etc.) made by the Municipality of Bistrita, as well as materials from the press promoting the CNAP 2035 or related actions.

2. **Development of adequate local conditions to implement the CNAP 2035**

In this matter, Bistrita municipality is ongoing the procedure of recruiting an appropriate technical expert for the position of Energy Manager, the person able to provide consultancy and technical assistance for planning, implementation and monitoring of measures/projects aiming to increase energy efficiency. The Energy Manager together with other experts from the municipality will provide the support for data collection, monitoring and implementation of energy related projects. Some of its competencies will be related to sorting of consumption data for the purchase of electricity, methane gas, heat and drinking water, collecting and evaluating relevant data for the CO2 emissions inventory and updating this inventory by measuring progress, consultancy on the implementation of investment projects to ensure increased energy and economic efficiency, technical consultancy in the management of all energy resources, including the implementation of modern energy monitoring systems, maintenance and updating of databases on absolute and specific energy consumption and energy production from renewable sources, etc.

3. **Early start for projects implementation**

Bistrita municipality has already begun the implementation of many climate neutrality-related investment projects financed by National Recovery and Resilience Plan (NRRP), projects related to energy efficiency of public and residential buildings, green public transport, circular economy, electric buses, charging stations, cycling infrastructure, energy efficiency in public buildings etc.

4. **Cooperation at national and local level**

At national level, Bistrita municipality will be part of the 10 Mirror Mission Romanian cities network exchanging continuously on the CNAP 2035 related issues. As a member of national organizations and associations as the Romanian Municipalities Association and, more specifically, in the tackled field, as Civinet, will enable the dissemination and replication of the CNAP 2035 projects/objectives/actions. Locally, co - creation workshops gathering representatives from civil society, public institutions, university, architects and local experts will be put into place as well as surveys on citizens' perception on the quality of environment sustainability levelling thus their degree of acceptance of the actions that the city is taking on its pathway to climate neutrality.

5. **Cooperation at European level**

As part of 100 climate neutral European cities' big family, Bistrita municipality seeks to work together with other European city partners sharing the same objectives related to energy efficiency and GHG emission reduction. This cooperation is meant to facilitate the transfer of best practice solutions and know-how between European cities, the access to innovative and energy efficient technologies and solutions for a smooth transition to climate neutrality at European level.

6. **Monitoring of the CNAP 2035 implementation**

In order to ensure a good control in the implementation, we will ensure the functionality of the environment and climate change compartment, within the Sustainable Developpment Department 2030, dedicated to climate within the local administration which will integrate cross - departmental climate teams, gathering people with experience in energy efficiency, to facilitate mainstreaming of climate goals, and also, to enhance inter-institutional cooperation, improve decision-making efficiency, and foster policy coherence. However, since the transition towards climate neutrality is not an individual responsibility, but rather a collective effort, Bistrita municipality will launch an invitation to the entire local ecosystem to engage all the key local actors, stakeholders, private and public sector as a local Coalition for Climate Neutrality, with the scope of serving the local climate-neutrality pursuit.

7. **Re-evaluation and update of the CNAP 2035**

To guarantee the long-term effectiveness of the CNAP 2035, Bistrita municipality will establish a structured process for periodic re-evaluation and updating of the plan. This will include regular progress assessments, based on measurable indicators, as well as external reviews to benchmark against best practices at the national and European level. The Sustainable Development Department, together with the Coalition for Climate Neutrality, will coordinate the collection of feedback from citizens, businesses, and institutions to ensure that the plan remains relevant, inclusive, and adaptive to new challenges, opportunities, and technological innovations. Updates of the CNAP 2035 will be presented transparently and submitted for public consultation, ensuring accountability and reinforcing trust in the municipality's climate-neutrality pathway.

V. ANNEXES

Annexes:

Bistrita Municipality CNAP 2035 signatories` letters of support

Links:

2030 Bistrita Integrated Urban Development Strategy - https://www.primariabistrita.ro/wp-content/uploads/2022/11/Strategia-de-dezvoltare-locala-a-municipiului-Bistrita-2010-2030-actualizata-2022-1.pdf
Sustainable Urban Mobility Plan - https://www.primariabistrita.ro/wp-content/uploads/2022/11/Plan-de-Mobilitate-Urbana-Durabila-2021-2027.pdf
Sustainable Energy Climate Action Plan - https://www.primariabistrita.ro/wp-content/uploads/2021/02/Plan-de-actiune-pentru-energie-durabila-si-clima-al-municipiului-Bistrita.pdf
Bistrita 2030 Climate Strategy and Plan: https://www.primariabistrita.ro/wp-content/uploads/2023/06/Strategia-de-atenuare-si-adaptare-la-schimbarile-climatice-pentru-municipiul-Bistrita.pdf

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of the Youth Mayor's Office of Bistrița, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița Municipality for its proactive leadership in mitigating climate change. As representatives of the younger generation, we are particularly invested in this mission, as the actions we take today will shape the future we inherit tomorrow. 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 Bistrița Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and successful actions), in order to inspire other communities and stakeholders to follow its example. Transparency, innovation, and cooperation will pave the way to a more sustainable and equitable future.

We also invite other organisations and community members—especially young people—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, the young people of Bistrița, stand ready to support and promote this important journey.

Sincerely,
Băldean Paul
Youth Mayor of Bistrița
CLT Bistrița

DIRECŢIA DE SĂNĂTATE PUBLICĂ A JUDEŢULUI BISTRIŢA-NĂSĂUD

1.Str.Grănicerilor,nr.5,420095,Bistriţa ☎ Director executiv, Secretariat, RUNOS, Financiar-contabilitate: 0263 232601, 231592; Fax: 0263 231137
2.Str. Zimbrului, nr.5, 420075 Bistriţa, ☎ Secretariat 0263 217337, 217309 Supravegherea Stării de Sănătate 0263 234694, Inspecţie sanitară: 0263 235568, Laboratoare, Autorizări, Administrativ; Fax:0263 212934

Nr. 2453 din 07.04.2025

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Public Health Directorate of Bistrita Nasaud County, am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,
Dr.Anca Roxana Andrițoiu
Executive Director
Bistrita Nasaud County Public Health Directorate

Andritoiu Anca-Roxana
Digitally signed by Andritoiu Anca-Roxana
Date: 2025.04.07 11:12:17 +03'00'

Mirror Mission Cities Hub Romania

S.C. I.C.P.E. BISTRIȚA S.A.
7 Parcului, 420035, BISTRIȚA
jud. BISTRIȚA-NĂSĂUD
Tel./fax: +40 263 210938 E-mail: icpe@icpebn.ro www.icpebn.ro

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of SC I.C.P.E. Bistrița SA, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,
Dr. eng. Grigore VLAD
General manager
SC I.C.P.E. Bistrița SA

CF R 13355153 S.C. I.C.P.E. BISTRIȚA S.A. BISTRIȚA-NĂSĂUD

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Cities Hub Romania

ASOCIAȚIA HARTA VERDE ROMÂNIA
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0742 098 731 contact@harta-verde.ro harta-verde.ro
Centrul Harta Verde România | Centrul de Cercetare și Educație pentru Natură | Biblioteca Naturii

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Asociația Harta Verde România, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,

Samoilă Ciprian
President
Asociația Harta Verde România

Mirror Mission
Cities Hub Romania

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of National Organization of Romanian Scouts – Oscar Skrabel Branch, Bistrița, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,

Sidor Costinași
President
National Organization of Romanian Scouts – Oscar Skrabel Branch, Bistrița

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Cities Hub Romania

ROMÂNIA
CONSILIUL JUDEȚEAN
BISTRIȚA-NĂSĂUD

JUDEȚUL BISTRIȚA NĂSĂUD
Poarta Transilvaniei

CIF: 4347550, Municipiul Bistrița, Piața Petru Rareș, Nr.1, CP.420080, Tel:(40) 263/213657, Fax: 0263/214750, www.portalbn.ro, E-mail: cjbn@cjbn.ro

CABINET PREȘEDINTE
Nr.VIII/ 15651 / 09.05.2025

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Bistrița-Năsăud County Council, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,

EMIL RADU MOLDOVAN
PRESIDENT
BISTRIȚA-NĂSĂUD COUNTY COUNCIL

CONSILIUL JUDEȚEAN 1 JUDEȚUL BISTRIȚA-NĂSĂUD

ROMÂNIA

No. IA 7640/ 04.25.2025

MINISTRY OF INTERNAL AFFAIRS
BISTRIŢA-NĂSĂUD COUNTY PREFECTURE

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Instituția prefectului – jud. Bistrița-Năsăud, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,

PREFECT

Teofil-Iulian CIOARBA

ROMÂNIA • GUVERNUL ROMÂNIEI • INSTITUȚIA PREFECTULUI – JUDEȚUL BISTRIȚA-NĂSĂUD
- 1 -

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MINISTERUL MEDIULUI, APELOR ȘI PĂDURILOR

NATIONAL AGENCY FOR THE ENVIRONMENT AND PROTECTED AREAS

Environmental Directorate of Bistrița-Năsăud County
Nr.4536/09.04.2025

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Environmental Directorate of Bistrița-Năsăud County, I am writing to express our strong support for Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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.

Sincerely,

Sever Ioan ROMAN
Executive Director
Environmental Directorate of Bistrița-Năsăud County

Direcția Județeană de Mediu Bistrița-Năsăud
Adresa: Strada Parcului, nr. 20, Bistrița, jud. Bistrița-Năsăud, cod poștal 420035
Tel.: +4 0263224064 e-mail: office@apmbn.anpm.ro website: http://apmbn.anpm.ro

ENERGYCITIES

LETTER OF SUPPORT FOR BISTRITA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Energy Cities, I am writing to express our strong support for the Bistrita Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrita 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.

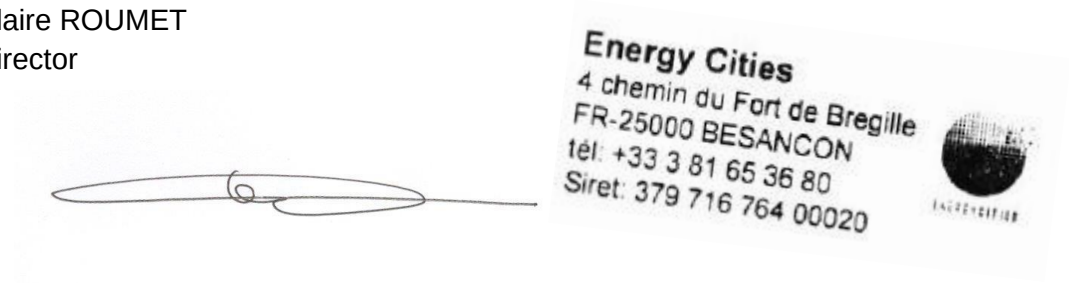
We warmly encourage Bistrita Municipality to take a leading role in disseminating the milestones and results of its climate neutrality efforts (including the innovative solutions and the successful actions), in order to inspire other communities and stakeholders to follow its example.

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,

Claire ROUMET
Director



MOO
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Cities Hub Romania

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Bistrița-Năsăud County School Inspectorate, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,
Prof. Șteopoaie Vasile
General School Inspector
Bistrița-Năsăud County School Inspectorate

ROMÂNIA * MINISTERUL EDUCAȚIEI ȘI CERCETĂRII * INSPECTORATUL ȘCOLAR JUDEȚEAN BISTRIȚA-NĂSĂUD

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contact: 0263-233459, 0730-014103; Dispecerat 0263-234904
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CS: 624.690 lei, RC: J/06/120/1991, CUI: RO 570362
IBAN: RO89 MIRO 0000 9066 6060 0101- Procredit Bank - Lei
IBAN: RO89 MIRO 0000 9066 6060 0004 - Procredit Bank – Euro

LETTER OF SUPPORT FOR BISTRITA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Transmixt SA company, I am writing to express our strong support for the Bistrita Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrita 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 Bistrita 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,

Horoba Melente

General manager

Transmixt SA

ORDINUL ARHITECȚILOR DIN ROMÂNIA
TRANSILVANIA

LETTER OF SUPPORT FOR BISTRȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

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400129 Cluj-Napoca, jud. Cluj

T: +40 (0)264 450 375
F: +40 (0)264 450 375
E: secretar@oartransilvania.ro
W: www.oartransilvania.ro

On behalf of Romanian Order of Architects, Transylvania branch, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrita 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 Bistrita 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,

Daniela Maier

President ROA Transylvania

ORDINUL ARHITECȚILOR DIN ROMÂNIA
TRANSILVANIA

Asociația Tineri pentru Comunitate Bistrița,
Bistrița, strada Independenței nr. 52
www.asociatiatineripentrucomunitate.ro
e-mail: telciancristinamaria@yahoo.com

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Asociația Tineri pentru Comunitate Bistrița, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,

Hangea Cristina Maria
President
Asociația Tineri pentru Comunitate Bistrița

Mirror Mission
Cities Hub Romania

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Sediul secundar: 400293, Strada Donath, nr. 53A, Cluj-Napoca
(+40)264-431550 | (+40)755-777020
secretariat@nord-vest.ro | comunicare@nord-vest.ro
www.nord-vest.ro

AGENȚIA DE DEZVOLTARE REGIONALĂ NORD-VEST

Letter of support for Bistrița Municipality's Climate City Contract

On behalf of the North-West Regional Development Agency, I would like to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We commend the Municipality of Bistrița for its proactive leadership and dedication to climate change mitigation. We are enthusiastic about the opportunity to collaborate with the Municipality and all relevant stakeholders to ensure the effective implementation of the Climate City Contract, as we firmly believe that meaningful partnerships are vital to achieving our shared climate objectives.

We strongly encourage Bistrița Municipality to take on a leadership role in sharing the milestones, outcomes, and lessons learned from its efforts toward climate neutrality—including innovative solutions and successful actions—in order to inspire other communities and stakeholders to follow suit.

We also invite other organizations and community members to join us in this bold endeavor. Together, we can make a lasting and meaningful impact in the fight against climate change and contribute to a future free from greenhouse gas emissions.

Thank you for your continued commitment to building a carbon-neutral city. We look forward to supporting this important journey.

Sincerely,

Csilla Hegedüs

Interim General Director

Csilla Hegedus

Digitally signed by Csilla Hegedus
Date: 2025.05.08 16:27:55 +03'00'

Regional Development Agency North - West

Mirror Mission Cities Hub Romania

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Rotary Club Bistrita Nosa Association, I am writing to express our strong support for the Bistrita Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrita 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 Bistrita 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,

[Chiuzan Sorin Ioan]
Rotary Club Bistrita Nosa Association

ROTARY CLUB BISTRIȚA NOSA
ROTARY
INTERNATIONAL
DISTRICT 2241

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Cities Hub Romania

MINISTERUL MEDIULUI, APELOR ȘI PĂDURILOR

ADMINISTRAȚIA NAȚIONALĂ APELE ROMÂNE
ADMINISTRAȚIA BAZINALĂ DE APĂ SOMEȘ-TISA

SISTEMUL DE GOSPODĂRIRE A APELOR BISTRIȚA-NĂSĂUD

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Water Management System of Bistrița-Năsăud County, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,

Teodor Hăsmășan
Director
Sistemul de Gospodărire a Apelor Bistrița-Năsăud

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Cities Hub Romania

UNIVERSITATEA BABEŞ-BOLYAI
BABEŞ-BOLYAI TUDOMÁNYEGYETEM
BABEŞ-BOLYAI UNIVERSITÄT
BABEŞ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

BISTRIȚA UNIVERSITY EXTENSION
3-5 Andrei Mureșanu str.
RO-420114 Bistrița
Tel/Fax :0263/213524
http://bistrita.extensii.ubbcluj.ro

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Babeş-Bolyai University, Bistrița Extension, I am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,
Andras-Istvan Barta, PhD.
Extension Director
Babeş-Bolyai University, Bistrița Extension

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Cities Hub Romania

MINISTRY OF EDUCATION AND RESEARCH

TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA, ROMANIA

LETTER OF SUPPORT FOR BISTRIȚA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Technical University of Cluj Napoca, am writing to express our strong support for the Bistrița Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrița 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 Bistrița 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,
Associate professor engineerVirgil ISPAS
Director,
The Bistrita University Extension of the Technical University of Cluj-Napoca

MDD
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Cities Hub Romania

LIONS CLUB Bistrița

LETTER OF SUPPORT

FOR BISTRITA MUNICIPALITY'S CLIMATE CITY CONTRACT

On behalf of Lions Club Bistrita, I am writing to express our strong support for the Bistrita Municipality's Climate City Contract and its ambitious goal of achieving climate neutrality by 2035.

We applaud Bistrita Municipality for its proactive leadership in mitigating climate change.

We are eager to collaborate with the Municipality and other stakeholders to ensure the effective I mplementation of the Climate City Contract, as we believe that partnership is essential in achieving our shared climate objectives.

We warmly encourage Bistrita 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.

CLUB LIONS BISTRIȚA
President - Silviu Crețu

ASOCIAȚIA CLUBUL LIONS BISTRIȚA, ROMÂNIA

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Cities Hub Romania