

Consiliul Județean Bihor

# BIHOR COUNTY INTEGRATED STRATEGY FOR SUSTAINABLE DEVELOPMENT

2021-2027





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# The process of drafting the Integrated Strategy for Sustainable Development of Bihor County for the period 2021 - 2027

This document is an integrated territorial strategy aimed at the sustainable development of Bihor County by 2027. Taking into account the existing opportunities and threats, the Integrated Strategy for Sustainable Development of Bihor County 2021-2027, hereinafter referred to as the strategy, addresses the economic challenges, demographic, environmental and social aspects of the county, being based on an objective analysis of the existing situation and trends in the mentioned fields, as well as on the consultation and participation of stakeholders in the sustainable development of Bihor County. The strategy was drafted between October 2020 - February 2022 within the project "Optimizing the decision-making process and strategic and budgetary planning at the level of Bihor County Council", a project co-financed by POCA 2014 - 2020 and implemented by Bihor County Council.

The strategic planning process was based on three fundamental principles:

1. **Methodological rigor** - the development of the strategy was done starting from empirical data, the use of specific planning tools and in partnership with local stakeholders, so that the final project can be used as a real tool of local management.
2. **Participation of local stakeholders** - in each stage of the project the participation of local stakeholders played an essential role, both for understanding the specifics of the community and for defining the vision, objectives and directions of development. No planning effort can be made and successfully implemented without the active participation of the community.
3. **Long-term guidance** - the key issues of a community are generally complex, structural and interdependent. The essence of a strategy lies in identifying them and developing a realistic plan that allows them to be overcome effectively. The strategy was conceived as a practical tool at the disposal of local authorities for the long-term development of the community, detached from the current political pressures.

## Stages of the strategic planning process

**The first stage** was the **identification and co-optation of local actors in the county** (stakeholders / actors influenced by the county's strategy) **in order to consult them**. With the support of the representatives of the Bihor County Council, representatives of the territorial administrative units (communes, cities, municipalities) from Bihor County, of the decentralized and deconcentrated public institutions in the territory, representatives of the largest companies, representatives of the SME sector, professional associations, clusters, NGOs and other community and civil society organizations, academia, culture, etc. were identified and invited to participate in consultations.

In parallel with the identification and co-optation of local actors in the county, **the second stage** of the strategic planning process took place, namely **conducting the preliminary analysis** (diagnostic analysis). In this approach, based on the processing and analysis of existing statistical data from official databases (National Institute of Statistics, Eurostat, National Trade Register Office, Directorate for Local Fiscal and Budgetary Policies, etc.), as well as the data provided (at request) by the Bihor County Council, a diagnosis was made of the economic, tourist, social, health, cultural, demographic, educational, administrative, digital, territorial, urban and environmental situation in Bihor County. The analysis was completed with elements of comparative analysis with the counties in the region or with those with a similar profile (counties on the western border of Romania).

In order to correlate the results of the analysis of data with the perception of the inhabitants of the county, the analysis was completed with an opinion poll on quality of life. The survey was conducted in February 2021 on a sample of 850 respondents (telephone interviews – CATI method), a sample (simple random) statistically representative in Bihor County. The tolerable error is 3.7%, at a 95% probability level. The opinion poll report is attached to the extended version of the strategy (*Appendix 4 - available only in electronical format in Romanian language*).

The presentation of the European, national, regional, county strategic framework completes the preliminary analysis, thus providing an overview of the objectives, priorities and funding opportunities for the next period.

The SWOT analysis of the county, together with the strategic perspectives are based on the preliminary and complementary analysis, thus synthesizing this part of the analysis.

The permanent participation of local stakeholders in the stages of the strategy is a fundamental element for ensuring a transparent process, based on participation, representativeness and adaptation to real local needs. Thus, the preliminary analysis was presented and discussed in four thematic working groups. The working groups were made up of people representative for the community who confirmed their participation in the strategic planning process following the invitations sent by the Bihor County Council. Four thematic working groups have been set up:

- Local economic development and tourism
- Spatial planning, urbanism and the environment
- Sectoral policies: education, health, social, culture
- Administrative capacity and digitization

The debates of the preliminary analysis within 3 thematic working groups took place on May 17, 2021 in the Great Meeting Room of the Bihor County Council, Traian Park no. 5, Oradea, as highlighted in the following table, and for the fourth an online session was organized on March 24, 2021:

Thematic group	Date and time interval	Represented organizations
Local economic development and tourism	May 17, 2021 10:00 - 12:00	<ul style="list-style-type: none"> <li>● Bihor County Council, General Economic Directorate</li> <li>● Order of Architects of Romania Bihor (OAR Bihor)</li> <li>● Marghita City Hall</li> <li>● Oradea Local Development Agency SA (ADLO)</li> <li>● Oradea Airport</li> <li>● Oradea University</li> <li>● Oradea City Hall</li> <li>● Oradea Metropolitan Area Intercommunity Development Association (ADIZMO)</li> <li>● Stei City Hall</li> <li>● Beiuș City Hall</li> <li>● Bihor Chamber of Commerce and Industry</li> <li>● SC Turism Felix</li> <li>● Bihor County Agency for Employment</li> <li>● Association for the Promotion of Tourism in Oradea and Region</li> <li>● Transylvania Travel</li> <li>● Bihor Territorial Labor Inspectorate</li> </ul>
Spatial planning, urbanism and the environment	May 17, 2021 12:00 - 14:00	<ul style="list-style-type: none"> <li>● The Chief Architect of the Bihor County Council,</li> <li>● Order of Architects of Romania Bihor</li> <li>● Oradea University</li> <li>● Bihor County Construction Inspectorate</li> <li>● Crisuri Water Basin Administration</li> <li>● Office of Cadastre and Real Estate Advertising Bihor</li> <li>● Bihor Forestry Department</li> <li>● Bihor Environmental Protection Agency</li> <li>● Urban Team</li> <li>● Ecolect Bihor Intercommunity Development Association</li> </ul>
Sectoral policies: education, health, social, culture	May 17, 2021 14:00 - 16:00	<ul style="list-style-type: none"> <li>● Bihor County Council</li> <li>● “Gheorghe Șincai” County Library Bihor</li> <li>● Bihor County School Inspectorate</li> <li>● Oradea University</li> <li>● Oradea Social Assistance Department</li> <li>● Romanian-German Association ALSTERDORF, Oradea branch</li> <li>● General Directorate of Social Assistance and Child Protection Bihor</li> <li>● Bihor Public Health Directorate</li> <li>● “Regina Maria” Theater Oradea</li> <li>● Szigligeti Theater Oradea</li> <li>● Bihor County Directorate for Sports and Youth</li> </ul>

Thematic group	Date and time interval	Represented organizations
		<ul style="list-style-type: none"> <li>● Bihor County Directorate for Culture</li> <li>● Oradea State Philharmonic</li> <li>● RUHAMA Foundation</li> </ul>
Administrative capacity and digitization	The debate within the thematic group Administrative capacity and digitization took place on March 24, 2021 between 9:00 and 11:00 and took place online, through the platform Zoom.	<ul style="list-style-type: none"> <li>● Oradea City Hall</li> <li>● Sălcea commune town hall</li> <li>● SC Smartware</li> <li>● SC INDECO Soft</li> <li>● University of Oradea - Faculty of Law, Faculty of Electrical Engineering and Information Technology, Faculty of Informatics and Synthesis</li> </ul>

Prior to the thematic debates, the participants received the sections of the preliminary analysis related to the group's topic. During the meetings, after the presentation of the preliminary analysis sections (of the section related to the topic of each group), the participants discussed the content and structure of the preliminary analysis. The debates were of the question-answer type, the participants also having the opportunity to make observations and recommendations regarding the preliminary analysis / diagnosis in question. Based on their comments and proposals, the preliminary analysis has been completed and updated. Also, the participants in the debates answered a questionnaire regarding the main problems of the county, the solutions to them, the directions of development, the competitive advantages and the priority projects of the county. The debates were organized in the large meeting room of the Bihor County Council. Those who could not participate on site had the opportunity to participate online, through the platform Zoom. The secretariat of each working group was provided by the representatives of the Bihor County Council and by the experts of the consulting company.

In **the third stage**, based on the preliminary analysis completed and updated following the debates within the thematic groups, the strategic profile of the county was achieved. A working meeting was organized with the participation of experts from the consulting firm and local stakeholders who took part in the discussions in the thematic groups. The working meeting took place on June 23, 2021, in the large meeting room of the Bihor County Council, between 10:00 and 14:00. The workshop was intended at brainstorming. Along with three experts from the consulting company, the meeting was attended by representatives (17 people) of the Bihor County Council, Oradea City Hall, S.C. TRANSGEX S.A. Oradea, ADIZMO, Bihor Employers' Federation, Bihor Forestry Department,

Bihor Chamber of Commerce and Industry, Bihor County Culture Department, Oradea County Emergency Clinical Hospital, ALSTERDORF Association, Ruhama Foundation, OAR Bihor. The result of the working meeting materialized in finalizing the strategic profile of Bihor County, more precisely the identification of strategic threats, the sources of competitive advantage and the definition of the vision. The key strategic factors and strategic objectives have also been set. Subsequently, during an online working meeting held through the Zoom platform on August 9, 2021, between 13:00 and 16:00, the specific objectives related to each strategic objective were defined. The working meeting was attended by representatives of the Bihor County Council, ADIZMO, the Association for the Promotion of Tourism in Oradea and the Region and OAR, as well as experts from the consulting company. The specific objectives of the working meeting are SMART. These are complemented by directions of action and indicative actions which may contribute to the achievement of specific and strategic objectives. The strategic objectives, the specific ones, the directions of action and the indicative actions were established on the basis of the strategic profile (and consequently of the diagnostic analysis), as well as in close correlation with the targets, objectives and priorities, directions of action and indicative actions. European, national and regional, especially with those of the National Strategy for the sustainable development of Romania 2030 and with those of the North-West Regional Development Plan 2021 - 2027.

The realization of the action plan / project portfolio was **the fourth stage** of the strategic planning process. At this stage, the portfolio of projects envisaged for the period 2021 - 2027 was established. It was divided into two categories: strategic projects and support projects.

- Strategic projects are those that directly answer to the strategic threats of the county and which, taking into account the sources of competitive advantage and key strategic factors, contribute decisively to achieving strategic objectives and pursuing the development vision of the county. Also, strategic projects are those projects that fall within the remit of the Bihor County Council and for which it has the resources, tools and levers necessary for their initiation and implementation.
- Support projects (*Appendix 1-available in an online format*) are those projects that contribute to solving specific / local problems identified in the preliminary analysis and that fall totally or partially into the remit of the other local administrative-territorial units: municipalities, cities, communes.

For strategic projects, the structure of the project portfolio includes elements related to the strategic objectives of the European Union concerned, the main beneficiaries / target group, the specific objectives to which the project implementation contributes, the location, the stage / maturity of the projects, the planned implementation period, the budget estimated, the main people responsible for initiating and coordinating the implementation. For support projects, the project portfolio includes elements related to the field of intervention, the estimated value, the possible source of funding, the Administrative Territorial Unit<sup>1</sup> (ATU) in which it will be implemented

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<sup>1</sup> In Romania, the territory is divided in administrative territorial units (ATUs) which are municipalities (usually the largest and most developed cities), cities and communes (the communes are located in rural area).

and the beneficiaries of the project. The representatives of the Bihor County Council, local stakeholders who participated in the debates on the preliminary analysis, the strategic profile and the specific objectives, and the experts from the consultant contributed to the realization of the portfolio of strategic projects. This operationalization process was carried out in co-participation to ensure a high level of realism, objectivity and transparency. The ATUs (communes, cities and municipalities) from Bihor County contributed to the creation of the portfolio of support projects.

The resources of any community are limited. For this reason, it is necessary to prioritize actions and projects according to need, timeliness, efficiency, sustainability and other criteria. In this sense, following their identification and proposal, the strategic projects of Bihor County were prioritized based on six criteria. Their criteria and weights were established during a debate of the representatives of the Bihor County Council. The project prioritization process was transparent and objective and was carried out taking into account the “Guide for the Development of Integrated Urban Development Strategies” developed by the Ministry of Development, Public Works and Administration in partnership with the World Bank.

Following the debates, the final list of criteria and their weight was established (*see Annex 2 - Criteria for prioritizing strategic projects in the Integrated Sustainable Development Strategy of Bihor County 2021 - 2027*). The proposed criteria were based on consultations and debates with stakeholders and representatives of the Bihor County Council during the strategic planning process, especially those within the stages of achieving the strategic profile and the action plan. Following the consultations with the representatives of the Bihor County Council, six criteria were chosen, establishing the weights of each of the criteria, the method of awarding scores and the method of drawing in case of equal score (*see Annex 2 - Criteria for prioritizing projects from the Integrated Sustainable Development Strategy of Bihor County 2021 - 2027*). Each project was awarded points on each criterion. Finally, the weighted average score of each project was calculated. Based on the score thus calculated, the projects were prioritized in descending order (*Annex 3 - Prioritized list of strategic projects of Bihor County for the period 2021 - 2027*).

The prioritization of projects once established and assumed, can be changed only on the basis of an objective substantiation.

In **the fifth stage**, the framework for implementing, monitoring and evaluating the strategy was established. This was done by the experts of the consulting company in collaboration with the representatives of the Bihor County Council and with local stakeholders who participated in the working meetings and debates previously organized. The implementation, monitoring and evaluation framework of the strategy establishes the implementation mechanism (institutional framework / responsible bodies, principles, risks), monitoring chart and indicators, how to evaluate the implementation stage and the measures required depending on the evaluation results.

The strategy paper was supplemented with elements of comparative analysis of local strategic planning in **the sixth stage**. This analysis was carried out with the participation of an international expert in strategic planning and offers a comparative international perspective on the development strategy of Bihor County.

The public consultation on the development strategy was **the seventh stage** of the planning process. The consultation procedure was carried out in compliance with the provisions of Law 52/2003 on decision-making transparency in public administration and taking into account the guide *Efficient public consultation at central and local administration* by the Ministry for Public Consultation and Civic Dialogue and the Ministry of Regional Development and Public Administration in 2016. The strategic document was posted on the website of the Bihor County Council ([www.cjbihor.ro](http://www.cjbihor.ro)), all those interested having the opportunity to make recommendations and register to take the floor at the public debate. The public consultation process took place between 17.11.2021 - 20.01.2022. Following the comments and proposals made during the public consultation process, especially those from NGOs in the field of environmental protection and conservation, the strategy paper was completed and improved in the Preliminary *Analysis / Diagnosis section* regarding the analyses on the environment and tourism, by adding analyses on energy efficiency, adaptation to climate change, protected natural areas and the network of tourist caves.

Another strategic objective has been included in the strategy, namely *Conservation, Improving Environmental Factors and Adapting to Climate Change*, together with specific objectives, directions and indicative actions for this strategic objective. Additions and improvements were also made to digitalization and e-government, cross-border and inter-county cooperation and micro-regional development, with express reference to the *Integrated Development Strategy of the Stone Country Microregion*. All these additions were also transposed in the section on the *Strategic Profile*, respectively in the section on *Strategic Objectives, specific objectives, directions for action and indicative actions*. A public debate on the final form of the strategy was organized on January 20, 2022 in the large meeting room of the Bihor County Council, but also online, through the Zoom platform. It was attended by 26 people in physical format. Along with representatives of the Bihor County Council and the consulting company SC CMPG Consultancy SRL, participated representatives of ADI Oradea Metropolitan Area, Institution of the Prefect of Bihor, Chamber of Commerce and Industry, "Gheorghe Șincai" County Library, Bihari Napló Association, Asteldorf Association, Redpoint Sports Club, Archery Association, Pro Polis Association, Naive Artists Association of Romania, Transilvania Advisors. Representatives of the Bihor Chamber of Commerce and Industry, the Bihor Health Insurance House, the Tourist Caves Association, DGASPC, CMPG Consultancy participated online. Discussions recorded. The debate was of the question-and-answer type. The main recommendations focused on the components of e-government and digitization, how to update the strategy, international / transnational and inter-county cooperation, forest economic potential, tourism capitalization of inherited cultural heritage, climate change and strategy implementation management. The strategy was updated based on suggestions received during the public debate.

In the last stage of the strategic planning process, the strategic document was presented by the experts of the consulting company in the meeting of the Bihor County Council in March 2022 for approval.

The implementation of the strategy requires the involvement of all actors interested in the sustainable development of the county. Thus, **strengthening the partnership of the county administration** with the stakeholders in the county is essential in order to implement the strategy.

The coordination, implementation, monitoring and updating of the strategy will be carried out by the Technical Directorate (DT) within the Bihor County Council, the Monitoring Commission within the Bihor County Council and the President's Office. The Projects with Non-reimbursable Financing Service (SPFN Bihor) will provide the secretariat of the Technical Directorate and the management and implementation of the projects that fall under the direct responsibility of the Bihor County Council.

# Analysis of the strategic framework

The analysis of the strategic framework aims to reconcile and integrate the strategy at the county level with the strategic directions and priorities at the higher levels (regional, national and European) in order to make the most of existing opportunities and integrate the local strategic effort into the major development directions adopted at national and European level.

## European strategic framework

The EU's long-term budget and the **NextGenerationEU** (a temporary instrument designed to stimulate recovery) will form the largest incentive package funded from the EU budget. A **total of 1.8 billion EUROS** will support the reconstruction of Europe in the wake of the COVID-19 crisis. A reconstruction that will make Europe greener, more digital and more resilient.

Domains	EU long-term budget (2021-2027)	NextGenerationEU	Total
<b>The single market, innovation and the digital sector</b>	132.8 billion EUR	10.6 billion EUR	143.4 billion EUR
<b>Cohesion, resilience and values</b>	377.8 billion EUR	721.9 billion EUR	1,099.7 billion EUR
<b>Natural resources and the environment</b>	356.4 billion EUR	17.5 billion EUR	373.9 billion EUR
<b>Migration and border management</b>	22.7 billion EUR	-	22.7 billion EUR
<b>Security and defense</b>	13.2 billion EUR	-	13.2 billion EUR
<b>Neighborhood and the whole world</b>	98.4 billion EUR	-	98.4 billion EUR
<b>European Public Administration</b>	73.1 billion EUR	-	73.1 billion EUR
<b>TOTAL</b>	<b>1,074.4 billion EUR</b>	<b>750 billion EUR</b>	<b>1,824.4 billion EUR</b>

**Table 1:** Distribution of funds in the multi-annual budget 2021-2027

**Source:** European Commission

- **Over 50% of the amount** will support modernization through policies that include **research and innovation**, through Horizon Europe; **a fair climate and digital transitions**, through the **Fair Transition Fund** and the **Digital Europe program**; preparation, recovery and resilience, through the **Recovery and Resilience Mechanism**, RescEU and a new health program, **EU4Health**;
- Traditional policies such as cohesion and the common agricultural policy will be modernized and will continue to receive significant EU budget funding in order to support **green and digital transitions**;

- **30% of EU funds, both under NextGenerationEU and in the MFF (long-term budget), will be spent on combating climate change.** The package also pays specific attention to biodiversity protection and gender mainstreaming;

The 6 major strategic directions, at EU level, for the period 2020-2027 are:

**1. European Green Pact** - 55% reduction in greenhouse gas emissions by 2030, climate **neutrality by 2050.**

**2. A Europe prepared for the digital age** - a comprehensive package of policies and programs that should support the process of digital transformation at EU level with a focus on (directions for action): 1) Technologies at the service of the citizen (European Digital Strategy), 2) A fair and competitive digital economy, 3) An open, democratic and sustainable digital society.

**3. An economy at the service of its citizens** - economically, the EU pursues two key elements: sustaining social equity while increasing economic prosperity. EU citizens and businesses can only thrive if the economy supports them. Thus, the EU has three directions of action: 1) Deeper economic and monetary union, 2) A fairer single market, 3) Jobs, growth and investment.

**4. A stronger Europe on the international stage** - strengthening the EU's position as a global player internationally in areas of strategic interest. The directions for action are: 1) Foreign policy, 2) European Neighborhood Policy, 3) International cooperation and development, 4) Humanitarian aid and civil protection, 5) Trade policy, 6) Security and defense, 7) EU enlargement.

**5. Promoting the European way of life** - is based on 1) the European Strategy on a Security Union to effectively combat terrorism, radicalization, organized crime and cyber threats. In addition, other areas of action include: 2) Judicial cooperation between Member States, 3) Fundamental rights, 4) Consumer protection, 5) Pact on migration and asylum, 6) The rule of law.

**6. A new impetus for European democracy** - focused on increasing public participation and openness of the administration - directions for action: 1) Future of Europe (an EC initiative aimed at a major pan-European democratic exercise, a new public forum for open debate, inclusive, transparent and structured with citizens around a number of key priorities and challenges for the future of EUROPE), 2) Instruments of public participation / have your say, 3) Strategic perspective (the use of collective intelligence in a structured, systematic and systemic way to anticipate developments - integrated into the EU policy process).

## National strategic framework

**The 2021-2027 Partnership Agreement between the European Commission and Romania<sup>2</sup>** - has been outlined around the policy objectives set by the European Commission and aims at:

- 1. Policy Objective 1 - A smarter Europe, by promoting an innovative and smart economic transformation** - Increasing the degree of integration of the Romanian Research, Development and Innovation system in the European Research Area by strengthening cooperation between RDI organizations and enterprises, increasing the level of investment in RDI, digitization of public services

<sup>2</sup> First draft published by the Ministry of European Funds, online: <http://mfe.gov.ro/wp-content/uploads/2020/07/d3e42c68a072a75dbc279d807b8a2b72.pdf>

by modernizing and simplifying the procedures of local and central public administration, including Smart city.

2. **Policy Objective 2 - A greener, low-carbon Europe by promoting the transition to clean and fair energy, green and blue investment, the circular economy, climate change adaptation and risk prevention and management** - adapting to change climate change by increasing energy efficiency and developing smart energy systems, storage solutions and energy adequacy, risk prevention and management, water and wastewater infrastructure, circular economy, biodiversity conservation, air quality, decontamination of polluted sites, urban regeneration, urban mobility, district heating, fishing and aquaculture.
3. **Policy Objective 3 - A more connected Europe through the development of regional ICT mobility and connectivity** - increasing transport connectivity, developing sustainable, smart, secure and intermodal TEN-T networks, resilient to climate change, sustainable, smart and intermodal at national, regional and locally including better access to the TEN-T network and cross-border mobility.
4. **Policy Objective 4 - A more social Europe through the implementation of the European Pillar of Social Rights** - creating the fundamental levers for the development of all economic sectors, namely investing in people. In this context, the interventions concerned cover four major issues:
  - ensuring inclusive education at all levels;
  - adapting human resources to labor market dynamics and technological progress;
  - combating poverty and promoting social inclusion through personalized measures;
  - ensuring quality and accessible health services for all.
5. **Policy Objective 5 - Bringing Europe closer to citizens by promoting sustainable and integrated development of urban, rural and coastal areas and local initiatives** - an integrated approach to territorial and local issues, involving local authorities and partnerships, in order to ensure economic and social cohesion, to reverse the widening gap between more developed and less developed regions and areas, but also to reduce the gap with other EU countries.

**The Partnership Agreement and Operational Programs for the period 2021-2027** have been strengthened following an inter-institutional consultation process, informal negotiations with the European Commission, as well as on the basis of valuable input from relevant socio-economic partners.

National Recovery and Resilience Plan

**The Recovery and Resilience Mechanism (RRM)** is the largest financial instrument created by the European Union outside the multiannual financial framework, designed to provide financial support to Member States to ensure a rapid economic recovery. The regulation was approved at European level on 12 February 2021. This mechanism is built on a different logic from the cohesion funds, being based only on the results obtained at the end of the implementation period. Thus, Member States set out in their national recovery and resilience plans the reforms and investments they will make by the end of 2026.

<b>Pillar I - Green transition</b>	<ol style="list-style-type: none"> <li>1. Water management system</li> <li>2. Reforestation and protection of biodiversity</li> <li>3. Waste management</li> <li>4. Sustainable transport</li> <li>5. Renovation Wave Fund</li> <li>6. Energy</li> </ol>	<b>Allocated funds</b>  15.89 bil. Euro
<b>Pillar II - Digital Transformation</b>	<ol style="list-style-type: none"> <li>7. Government cloud and digital public systems</li> </ol>	1.89 bil. Euro
<b>Pillar III - Smart, sustainable and inclusive growth</b>	<ol style="list-style-type: none"> <li>8. Fiscal reforms and pension reform</li> <li>9. Support for the private sector, research, development and innovation</li> </ol>	2.85 bil. Euro
<b>Pillar IV - Social and territorial cohesion</b>	<ol style="list-style-type: none"> <li>10. Local fund for green and digital transition</li> <li>11. Tourism and culture</li> </ol>	2.3 bil. Euro
<b>Pillar V - Health and economic, social and institutional resilience</b>	<ol style="list-style-type: none"> <li>12. Health</li> <li>13. Social reform</li> <li>14. Public sector reform, increasing the efficiency of the judiciary and strengthening the capacity of the social partners</li> </ol>	2.7 bil. Euro
<b>Pillar IV - Policies for the next generation of children and young people</b>	<ol style="list-style-type: none"> <li>15. Educated Romania</li> </ol>	3.6 bil. Euro

**Table 2:** Structure of National Plan for Recovery and Resilience (NPRR)

**Source:** National Plan for Recovery and Resilience (2021)

NPRR is a major opportunity for ATUs to make transformations that allow communities to develop a high level of resilience and adapt to the current economic and social dynamics (transition to sustainable solutions and mechanisms, both economically and socially, technological and digital transformation, demographic and cultural dynamics). ATUs should build their strategic development plans in line with these directions in order to increase the chances of sustainable positive change.

## Regional Strategic Framework

At the regional level, the main relevant strategic documents are:

- North-West Regional Development Plan 2021-2027<sup>3</sup>
- Smart Specialization Strategy 2021-2027<sup>4</sup>

### North-West Regional Development Plan 2021-2027<sup>5</sup>

The Regional Development Plan (RDP) is the main planning document developed at the regional level and reflects the relevant development policies at the national level in relation to the specific needs at the

<sup>3</sup> Online: <https://www.nord-vest.ro/planul-de-dezvoltare-regionala-2021-2027/>

<sup>4</sup> Online: [https://www.nord-vest.ro/wp-content/uploads/2020/09/RIS3NV-2021-2027\\_200914.pdf](https://www.nord-vest.ro/wp-content/uploads/2020/09/RIS3NV-2021-2027_200914.pdf)

<sup>5</sup> The information contained in this section is taken (in whole, in part or in summary) from the North-West Regional Development Plan 2021-2027

regional level, but also the strategic policy directions of the other main funders of development programs related to that region.

**Vision (horizon 2034)** - the communities of the North-West Region (Northern Transylvania) understand to capitalize together, respecting the principles of sustainable development, natural, material, human resources, historical and intercultural traditions for a sustained, constant development that makes Transylvania North one of the most dynamic regions in Europe.

**PDR-NV 2021-2027 objectives:**

- 1) Competitive economy based on innovation and digitalization
- 2) Developed human and social capital
- 3) Sustainable, authentic and attractive living environment
- 4) Responsible capitalized natural environment
- 5) High physical and digital connectivity

**Smart Specialization Strategy 2021-2027, North-West Development Region<sup>6</sup>**

Smart specialization starts from the premise that no region has enough resources to be competitive in all areas, which is why it is much more effective to identify areas where it can make a difference in global competition and then focus on those areas. The Smart Specialization Strategy identifies the priority sectors for intervention and the appropriate models to address this specialization in order to support specialized innovation processes among economic agents through which to achieve a structural transformation of these sectors to increase their competitiveness in the global economy.

**Strategic Objectives**

1. **Structural transformation of the economy** through innovation based on new technologies to meet the main societal and economic challenges, based on the principles of sustainability and the circular economy.
2. **Developing the regional innovation ecosystem and connecting it** to national, European and global networks.
3. **Developing the research capacity and capitalizing on research results** in order to increase the degree of innovation
4. **Leveraging the benefits of digitization** in both the public and private sectors

Development direction	Strategic objective	Priorities
<b>PILLAR I - INNOVATION FOR HEALTH AND WELL-BEING</b>	Supporting innovation in traditional areas in the region in order to improve the health and well-being of a large population.	<ol style="list-style-type: none"> <li>1. Agri-Food field</li> <li>2. Cosmetics and Food Supplements</li> <li>3. The field of Health</li> </ol>

<sup>6</sup> The full document available online: <https://www.nord-vest.ro/specializare-inteligenta/>. The information contained in this section is taken (in whole, in part or in summary) from the original document.

Development direction	Strategic objective	Priorities
<b>PILLAR II - DEVELOPMENT OF EMERGING SECTORS</b>	Capitalizing on the results of research and development activity based on advanced technologies in order to develop emerging, niche economic activities, in line with global trends	<ol style="list-style-type: none"> <li>1. New Materials domain</li> <li>2. The field of Advanced Production Technologies</li> </ol>
<b>PILLAR III - DIGITAL TRANSFORMATION: THE REGIONAL DIGITAL AGENDA</b>	Digitization of the economy and society, supported by the transition to innovation in the ICT sector	<ol style="list-style-type: none"> <li>1. Information and Communication Technology domain</li> </ol>

**Table 3:** Priority areas / Smart specialization trends / Priorities

**Source:** Own synthesis, adapted from Smart Specialization Strategy 2021-2027, North-West Development Region

## The micro-regional strategic framework

Integrated Development Strategy of the „Țara de piatră” Microregion

At the micro-regional level, there is the Integrated Development Strategy of the „Țara de Piatră” Microregion, a strategy of the „Moșii - Țara de piatră” Intercommunity Development Association. This strategy was implemented between March and October 2021 with external expertise from the European Investment Bank (EIB) and Ernst & Young Romania (EY) under a Program Management Support contract in Romania, contract concluded on March 8, 2021. The result of the contract is a territorial strategy aimed at integrated territorial investments (ITI) in the „Țara de piatră” Microregion, which covers an area of 7,471 km<sup>2</sup> (3.13% of the national territory) and had 186,902 inhabitants in 2020. „Țara de piatră” includes 76 ATUs from urban and rural areas from 5 counties, the covered area being also known as “Țara Moșilor”. The counties and ATUs that are part of the Țara de piatră Intercommunity Development Association and that overlap with the “Țării Moșilor” area are:

- Alba County: 23 communes, 4 cities (Abrud, Baia De Arieș, Câmpani, Zlatna) and Alba County Council;
- Arad County: 9 communes, one city (Sebeș) and Arad County Council;
- Bihar County: 8 communes (Budureasa, Buntești, Cărpinet, Câmpani, Drăgănești, Lunca, Pietroasa, Rieni), 2 cities (Steii, Vașcău) and Bihar County Council;
- Cluj County: 13 communes;
- Hunedoara County: 14 communes, one city (Geoagiu), one municipality (Brad) and Hunedoara County Council.

„Țara de piatră” Integrated Development Strategy covers the period 2021-2030, including the ITI implementation framework and the action plan until 2027. The development vision of the „Țara de piatră”

Microregion is: “A competitive, sustainable, safe, inclusive and attractive, which responds to the ever-changing needs expressed by citizens and economic partners.”<sup>7</sup>

To achieve this vision, a set of priority themes for development has been proposed, grouped around three pillars: A competitive region, a sustainable region, and an inclusive region.

Starting from the three pillars and 12 development themes, 14 specific objectives were set:

1. Stimulating the rural economy by improving agricultural productivity and promoting organic farming and production.
2. Stimulating the competitiveness of SMEs and strengthening their position in internal and external markets.
3. Increasing the level of digitalization, through the development and integration of digital technologies at the level of public and private entities.
4. Increasing urban mobility and promoting public and non-motorized transport.
5. Improving regional connectivity to TEN-T corridors and diversifying modes of transport.
6. Supporting the protection, conservation and sustainable use of cultural and natural heritage objectives and stimulating the development of tourist, leisure and leisure areas.
7. Improving energy efficiency.
8. Ensure efficient waste management and promote the transition to a circular economy.
9. Promoting sustainable regional development by improving the quality of green spaces and infrastructure.
10. Development of education infrastructures and services and improvement of access in isolated areas and / or at high risk of dropping out of school.
11. Development of social infrastructure and services and combating material deprivation.
12. Developing medical infrastructure and services and improving access for all walks of life.
13. Improving the occupational structure and promoting a healthy and balanced work environment.
14. Developing the administrative capacity for the efficient management of the ITI mechanism.

For each specific pillar and objective, a set of necessary interventions was proposed, taking into account the socio-economic analysis at the level of the micro-region and the potential sources of financing.

The implementation of the Strategy will be managed at national level by the Ministry of Public Works, Development and Administration (MLPDA), based on an inter-institutional agreement with the other ministries involved, including the Managing Authorities of the Operational Programs for 2021-2027 supporting the allocation of funds for ITI in the Apuseni Mountains area: Ministry of European Investments and Projects, Ministry of Transport, Infrastructure and Communications, Ministry of Agriculture and Rural Development and Central and North-West and West Regional Development Agencies. The Moții Țara de Piatră Intercommunity Development Association (ADI MTP) will coordinate the implementation in the territory of the actions in the strategy and will support the planning and implementation of projects, providing technical support to potential investors and beneficiaries.

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<sup>7</sup> Țara de piatră Microregion Integrated Development Strategy

## County strategic framework

### Bihor County Sustainable Development Strategy 2014-2020

#### *Vision*

Bihor County, dynamic, competitive, diverse, open.

Bihor aims to become a dynamic and competitive county by 2020, in which the well-being will be felt, directly, by all the inhabitants of the county. Bihor wants to be recognized as a gateway to and from Western Europe, where entrepreneurial initiatives are actively supported by public institutions through quality public services and appropriate infrastructure. In addition, the county wants to be known as an important tourist destination, both in Romania and in neighboring countries.

In order to reach the proposed level, four strategic development objectives are assumed within the development strategy:

1. Development of public infrastructure in the county;
2. Increasing economic competitiveness in industry and agriculture;
3. Capitalizing on the tourist potential of the county;
4. Development of public services and administrative capacity.

Bihor County Council has identified five strategic initiatives at the territorial level, which will directly contribute to achieving the county's vision. The initiatives capture the economic and social development, taking into account the specifics of the different areas of the county, resources, environment and level of specialization and equipment, respecting the established development principles:

1. Modernization of Oradea airport;
2. Development of the business environment in the Tileagd - Aleșd area;
3. Development of sustainable tourism in the Apuseni Mountains area;
4. Development of the business environment in the Beiuș area;
5. Diversification and consolidation of the economic base in the Valea Ierului micro-region (Marghita - Valea lui Mihai - Săcueni).

The strategic initiatives presuppose projects that are framed in all the objectives of the development strategy and present a type of intervention at territorial level, of integrated type. The five initiatives include project packages carried out by both the Bihor County Council and projects in which the Bihor County Council will act as a partner.

Strategic objective	Specific objectives
1. Development of public infrastructure in the county	1.1. Modernization of the transport infrastructure in the county 1.2. Development of built infrastructure and networks 1.3. Development of social infrastructure 1.4. Increasing energy efficiency in the county
2. Increasing economic competitiveness in industry and agriculture	2.1. Business environment development 2.2. Development of business support services
3. Capitalizing on the tourist potential of the county	3.1. Development of tourism services in the county 3.2. Preservation and capitalization of the natural heritage and the Built
4. Development of public services and administrative capacity	4.1. Development of public services 4.2. Increasing administrative capacity

**Table 4:** Strategic objectives

**Source:** adapted from Bihor County Sustainable Development Strategy 2014-2020

Bihor County Sustainable Development Strategy 2014-2020 is a programmatic document focused largely on the tactical and operational component - the definition of 5 specific strategic initiatives is proof of this (especially due to the limited powers of the County Council in certain areas of intervention).

The new strategy must be thought of starting from the new European priorities (COVID economic recovery digitalization, green economy / green pact). It must connect the main poles of urban development with the way in which the vision and the key strategic factors are defined. It also needs to adjust the operational component in relation to the new European funding opportunities.

#### **Sectoral strategic documents with relevance at county level**

The following documents represent tactical and operational strategies or plans with a high relevance from the perspective of implementing the Sustainable Development Strategy of Bihor County:

- Integrated Urban Development Strategy of Oradea 2021-2027<sup>8</sup>;
- County Strategy for the development of Social Services 2017-2021<sup>9</sup>;
- Cultural Strategy of Bihor County 2021-2027<sup>10</sup>;
- Sustainable development strategy of Bihor County, in the field of road transport, 2021-2027<sup>11</sup>.

<sup>8</sup> Available online: <https://www.oradea.ro/fisiere/userfiles/Europene/Strategia%20integrata.pdf>

<sup>9</sup> Available online: [http://www.dgaspbihor.ro/dgaspbihor.ro/informatii\\_publice/strategie\\_2017-2021.pdf](http://www.dgaspbihor.ro/dgaspbihor.ro/informatii_publice/strategie_2017-2021.pdf)

<sup>10</sup> Available online: <https://www.cjbihor.ro/wp-content/uploads/2021/10/00206B3EA248211015073512.pdf>

<sup>11</sup> Available online: <https://www.cjbihor.ro/wp-content/uploads/2021/02/h176-2.pdf>

## Strategic framework complementarity

Objective of the Integrated Sustainable Development Strategy, Bihor County, 2021-2027	European level	National level	Regional/county level
1. Knowledge-based economic development	O3. An economy at the service of the citizens	PNRR - III - Smart, sustainable and inclusive growth	RDP 2021-2027 - Objective 1. Competitive economy based on innovation and digitalization Complementary: POCIDIF / POR NORD-VEST/POS
2. Entrepreneurship development (economic, social and cultural) at local level	O3. An economy at the service of the citizens	PNRR - III - Smart, sustainable and inclusive growth	RDP 2021-2027 - Objective 1. Competitive economy based on innovation and digitalization Objective 2. Developed human and social capital Complementary POS/POEO/POIDS/POCIDIF/ PNS PAC
3. Increasing the quality of life	O1. European Green Pact O2. Europe ready for the digital age O3. An economy at the service of the citizens	PNRR - I - Green Transition PNRR - V - Health, as well as economic, social and institutional resilience	PDR 2021-2027 Objective 3. Sustainable, authentic and attractive living environment Complementary POR NORDVEST/PNS PAC
4. Development of sustainable tourism based on local identity, heritage and inherited resources	O2. Europe ready for the digital age - Culture and digital media - NextGeneration EU - Tourism	PNRR IV- Social and territorial cohesion - Tourism and culture	PDR 2021-2027 Objective 3. Sustainable, authentic and attractive living environment Complementary POR NORDVEST/PNS PAC
5. Development of the pre-university and university education system in relation to the strategic priorities of the county and to the market requirements	European Education Area -Strategic Framework	PNRR - VI - Policies for the new generation	Objective 2. Developed human and social capital Complementary POS/POEO / POIDS / POCIDIF / PNS PAC
6. Development of the cultural sector and creative industries in connection to the capitalization of cultural heritage	O2. Europe ready for the digital age - Culture and digital media - NextGeneration EU - culture	PNRR II - Digital transformation IV- Social and territorial cohesion - Tourism and culture	PDR 2021-2027 Objective 1. Competitive economy based on innovation and digitalization SSI 2021-2027 Pillar II Development of emerging sectors

Objective of the Integrated Sustainable Development Strategy, Bihor County, 2021-2027	European level	National level	Regional/county level
7. Increasing the administrative capacity and the degree of digitalization at the level of local administrations and county administration	O2. Europe ready for the digital age - EU digital transformation strategy DG Reform - Technical Support Instrument (TSI)	PNRR V- Health, as well as economic, social and institutional resilience	PDR 2021-2027 Objective 5. High physical and digital connectivity Complementary POT / POCIDIF / POR NORD-VEST
8. Balanced territorial development at county level	O1. European Green Pact O2. Europe ready for the digital age O3. An economy at the service of the citizens	PNRR I - The Green Transition III - Smart, sustainable and inclusive growth	PDR 2021-2027 Objective 2. Developed human and social capital Objective 3. Sustainable, authentic and attractive living environment Complementary POS/POEO / POIDS / POCIDIF / PNS PAC
9. Increasing domestic and international connectivity (road, rail, airport, digital)	O1. European Green Pact - Smart and Sustainable Mobility Strategy	PNRR I - Green transition - Sustainable transport	PDR 2021-2027 Objective 3. Sustainable, authentic and attractive living environment Objective 5. High physical and digital connectivity Complementary POR 2021 - 2027
10. Sustainable development of rural areas in the county	O1. European Green Pact O3. An economy at the service of the citizens	PNRR I - Green Transition - C5 Wave of Renewal, C6 Energy III - Smart, sustainable and inclusive growth	PDR 2021-2027 Objective 3. Sustainable, authentic and attractive living environment Objective 5. High physical and digital connectivity  Complementary POR 2021 - 2027/ PNS PAC
11. Conservation, improvement of environmental factors and adaptation to climate change	O1. European Green Pact	PNRR I - The Green Transition	PDR 2021-2027 Objective 4. Responsible capitalized natural environment

**Table 5:** Strategic Framework complementarity analysis

## Conclusions on the strategic framework

The new strategic orientation at European level continues the direction taken by the previous strategy (EUROPA 2020) with a stronger focus on the area of renewable energy, climate-neutral impact and digitalization.

1. At European level, the European Green Pact indicates the EU's determination to move towards a circular, climate-neutral economy with an ambitious goal: to reduce greenhouse gas emissions by 50-55% by 2030, and climate neutrality by 2050. The importance of the environmental component for the EU is also underlined by the recent change (September 2020) in the 2030 targets, from a 40% reduction (initial target, EUROPA 2020) to 50-55%, indicating a strong political orientation in this area. To support Member States, the Commission has set up the European Fair Transition Mechanism - the EU will provide financial support and technical assistance to help those most affected by the transition to the green economy. It provides specific support to help mobilize at least € 100 billion between 2021 and 2027 for the most affected regions, in order to mitigate the socio-economic impact of the transition.

This includes:

- (1) Fair Transition Fund<sup>12</sup> (FTF) - The fair transition fund is the first pillar of the fair transition mechanism. The fund comprises 40 billion euros;
- (2) InvestEU<sup>13</sup> - the second instrument of the European Fair Transition Mechanism - EUR 1.8 billion, will focus exclusively on transition objectives;
- (3) European Investment Bank (EIB) loan instrument<sup>14</sup> - with a contribution from the EU budget of EUR 1.5 billion, the public sector loan facility will allow the EIB to borrow EUR 10 billion, which in turn is expected to mobilize between EUR 25 and 30 billion in public investment to support transition only in the period 2021-2027. These loans would provide public sector entities with the resources to implement measures to facilitate the transition to climate neutrality.

The creation of its own institutional mechanism to support this goal, with three distinct financial instruments, indicates the importance that the EU attaches to this area, achieving the targets would make Europe the first climate-neutral continent.

2. Digitization is the Commission's second highest priority. The EU aims to (1) become a global example in the digital economy, (2) support the digitization of developing economies, and (3) develop digital standards to promote internationally. European Data Strategy<sup>15</sup> and the White Paper on Artificial Intelligence<sup>16</sup> are the first elements of the Commission's new digital strategy. Both focus on the need to put people first in the development of technology, as well as the need to defend and promote European values and rights in the way we design, build and implement technology in the real economy. The European Data Strategy aims to create a single data market that ensures Europe's global competitiveness and data sovereignty. Adoption of the Code of Good Practice on Disinformation<sup>17</sup> in 2018 is the first set of global self-regulatory standards to combat misinformation

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<sup>12</sup> Fund for a fair transition, online: [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism/just-transition-funding-sources\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism/just-transition-funding-sources_en)

<sup>13</sup> InvestEU, online platform: [https://europa.eu/investeu/home\\_en](https://europa.eu/investeu/home_en)

<sup>14</sup> EC Communication , online: <https://www.eib.org/en/press/all/2020-130-commission-proposes-a-public-loan-facility-to-support-green-investments-together-with-the-eib>

<sup>15</sup> European Data Strategy, online: <https://eur-lex.europa.eu/legal-content/RO/TXT/HTML/?uri=CELEX:52020DC0066&from=EN>

<sup>16</sup> WHITE PAPER On Artificial Intelligence - A European approach to excellence and trust, online: [https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020\\_en.pdf](https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf)

<sup>17</sup> Code of Practice on Disinformation, online: <https://ec.europa.eu/digital-single-market/en/news/code-practice-disinformation>

voluntarily signed by online platforms, social networks and the advertising industry. Last but not least, the EC has developed a specific tool for start-ups, Startup Europe, in order to connect high-tech startups, scale-ups, investors, accelerators, corporate networks, universities and the media. (includes EU Startup Nation, Innovation Radar<sup>18</sup> and Digital Innovation and Scale-up Initiative (DISC)<sup>19</sup>).

3. The other 4 strategic objectives are sustainable economic development (deeper economic integration - economic union), international politics (the EU becomes a key player in international politics - enlargement, neighborhood policy, migration), democracy and participation (mechanisms for enhancing participation, strategic prospecting for the future of Europe), the rule of law and European values (protection of citizens' rights, European Strategy for a Security Union (SEUS)).

4. At national level we are witnessing a transition period from previous programming (EUROPA2020) to the current one (2021-2027). This is reflected in the low number of sectoral strategies adopted from the new European strategic directions (and the new budget year), namely: (1) the Integrated National Plan for Energy and Climate Change 2020-2024, (2) the National Development Strategy Sustainable Development of Romania 2030 and (3) National Strategy for National Defense 2020-2024. In terms of financial support, the new EU Partnership Agreement 2021-2027 sets out 5 major priorities transposed into 9 Operational Programs - they are currently not finalized but the timeframe for completion is short - 3-6 months.

5. An important element in the short and medium term is the National Recovery and Resilience Plan (NRRP) - a new EC-level instrument that allows states to fund reform projects in key areas as long as they align with EU priorities. (especially the two cross-cutting objectives - the green transition and the digital transformation). NRRP is a major opportunity for ATUs to make transformations that allow communities to develop a high level of resilience and adapt to the current economic and social dynamics (transition to sustainable solutions and mechanisms, both economically and socially, technological and digital transformation, demographic and cultural dynamics). ATUs should build their strategic development plans in line with these directions in order to increase the chance of sustainable positive change.

6. At the regional level, both the North West Development Plan 2021-2027 and the Smart Specialization Strategy 2021-2027 are built in accordance with the new strategic documents and correlate the objectives set at national and European level. The specific objectives reflect, similarly to the European level, the importance given to innovation, digitalization and sustainability

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<sup>18</sup> <https://ec.europa.eu/digital-single-market/en/innovation-radar>

<sup>19</sup> [https://ec.europa.eu/newsroom/dae/document.cfm?doc\\_id=62486](https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=62486)

# Elements of comparative analysis. Examples of good international practice.

## **Strategic planning at local level: a comparative analysis of the models used by local authorities<sup>20</sup>**

The purpose of the comparative analysis carried out here is to provide an overview of what are the best practices in the field of strategic planning undertaken by local public authorities. Strategic planning is a broad process that can have various applications and takes a variety of forms, depending on the context. Thus, for a proper understanding of the specifics of strategic planning used in the public sector at local/territorial level, the study of good practice cases can help to identify the major stages of the process and local peculiarities so that the methodological approach is appropriate to the local specifics, anchored in the strategic context.

The comparative analysis indicates the major elements of good practice for a successful process, constituting the basis of the methodological approach adopted in the planning process initiated by the Bihor County Council.

### **Comparative perspective on strategic planning at local/territorial level**

This section is a summary of several planning models used by EU and US local authorities. It highlights the complex nature of the planning process, the great diversity of approaches coupled with a number of key methodological elements that are present in all processes:

- Analysis based on data and empirical evidence used throughout the process;
- Participatory nature - involvement of stakeholders in different stages of the planning process;
- Context-based planning - adapting the process to the specific context of the community in question;
- Orientation towards the future and the focused nature of the strategic orientation - a focus on a limited but strategic set of elements (strategic profile), being the main result of the effort.

This analysis aims to connect and compare current planning efforts with existing good practices in other local communities.

In the next section we will present a series of good practices in local planning to highlight the specifics of the process, followed by a set of general conclusions drawn by identifying the major models of the process.

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<sup>20</sup> The information used in this section is part of a large research project that has resulted in the publication of an extensive book: Hințea C., Profiroiu M., Țiclău T. (eds) Strategic Planning in Local Communities. Government and Public Management. Palgrave Macmillan, 2019. The information included in this section has been taken directly or adapted from the chapters of the book. For a full analysis of the local planning process please refer to the cited document.

## 1. Strategic planning in France. The example of Lyon and Nantes<sup>21</sup>

### Context

"Territorial Big Bang": an expression often used in both scientific and press articles to describe the latest French territorial reform. This latest reform is symptomatic of the French trend of local strategic planning. It stems from a tension between top-down and bottom-up logic with a schizophrenic nation-state constantly switching between consolidating central power and developing local strategic capacity. For example, the wave of reforms has redefined the institutional landscape and led to the strengthening of the region-metropolis couple. This type of collaboration is in fact imposed by the national state and responds to a top-down logic. The regional and metropolitan levels have no choice but to collaborate. In this regard, we note "a recentralization movement of decentralization." The main points are a cost reduction logic and a streamlining process guided by New Public Management (NPM) principles. It also promotes a multi-level strategic decision-making process and a growing influence of civil society in a New Public Governance (NPG) perspective.

France remained a centralized country until the early 1980s. This lack of local strategic capacity could be explained by historical reasons related in particular to the legacy of the French Revolution (late 18th century). For this reason, strategic planning was exclusively the prerogative of the central state and materialized in the national spatial planning policies.

Since 1984, the ways of strategic planning have evolved with the creation of Plan Contracts between the State and the Regions <sup>22</sup> (CPER for French abbreviation). The search for egalitarianism is abandoned in favor of concerns for the efficiency of public action and the competitiveness of territories. The latter requires cooperation between public actors aimed at improving local skills and comparative advantage. Strategic planning is now largely in the hands of territorial stakeholders, whose coordination is expected with national organizations. It is now taking place in a context of austerity and efficiency. Political, legal and administrative constraints on strategic planning authorities are on the rise.

Compared to the previous top-down logic, local authorities have progressively implemented a growing set of participatory democracy tools to involve citizens in local public decisions and in particular through their suggestions and opinions on local policies. In order to deal with the crisis of public legitimacy, some local authorities have directly involved citizens and are increasingly willing to open their strategic process and exchange information.

The data presented in this section are based on research conducted during 2016-2018 and published in the cited reference (see footnote below) based on responses (targeted survey) from 38 local managers

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<sup>21</sup> The information in this section (about Lyon and Nantes) is taken from Carmouze L., Hernandez S., Serval S. (2019) Through the Looking-Glass: What Does Strategic Planning Reveal in French Local Governments ?. In: Hîrteș C., Profiroiu M., Țiclău T. (eds) Strategic Planning in Local Communities. Governance and Public Management. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-03436-8\\_2](https://doi.org/10.1007/978-3-030-03436-8_2)

<sup>22</sup> Currently we are the 6<sup>th</sup> generation in CPER (2015-2020).

working in public authorities and 16 interviews with experts and civil servants, metropolis managers and metropolis planners (10 interviews in Lyon and 6 interviews in Nantes).

These are the main findings regarding the general planning process carried out by the local authorities in the two metropolitan areas mentioned (Lyon and Nantes):

- The average time period covered by a strategic plan (document) is 5 years (between 3 and 7).
- There are two main reasons why local authorities use strategic planning: (1) to improve local governance through stakeholder participation (2) and to increase public performance by reducing costs.
- The main stages of the process are analyzed on two axes: environmental analysis (1) and identification of stakeholders to be involved in the various phases of the process (2). More than half of the strategic planning includes a specific and distinct stage of analysis of the current situation.
- The strategic planning process in most cases dedicates a specific stage to identifying stakeholders. Stakeholder identification is based on an informal process through the social capital of local managers and their local networks - participation is mainly used to gather information, identify local issues and generate proposals for potential solutions.
- The planning process is led by a consultant in 2 out of 3 local authorities.
- In order to define and implement strategic planning, local governments develop participation and evaluation tools. On the one hand, participation differs from consultation and refers to a common governance process. On the other hand, evaluation is used as a necessary tool to adapt methods and scenarios to the needs of different stakeholders.
- In half of the cases analyzed, local governments include in this strategic planning process a specific survey on citizens and a certain phase of public consultation. Moreover, when conducting a survey of local authorities, the main focus is on identifying problems and potential solutions to these problems.
- In terms of evaluation, two thirds of local authorities have a formal institutional structure responsible for monitoring and evaluating the implementation of the strategy. These mostly include more than three types of stakeholders, such as citizens, members of the business sector, central government or universities. Most of them develop measurable indicators for purposes and objectives that would facilitate the evaluation of the implementation process.
- Finally, as public performance and local governance are the major goals of strategic planning, the analysis of the external environment and the involvement of stakeholders guide the strategic planning process. The concept of new public governance is at the heart of territorial managerial considerations implemented through strategic tools such as participation and evaluation.

### **The main conclusions of the planning process in France:**

The main driver of the planning process was the improvement of the governance process, with an emphasis on stakeholder participation and a specific performance-oriented and cost-cutting approach (New Public Management style approach).

Stakeholder participation takes place in several stages of planning with a diverse set of public, private, non-governmental and academic stakeholders.

The process is based on data, and the strategic profile is developed based on an analysis of the situation (distinct step in the process).

Evaluation and implementation mechanisms are developed - the institutional structures that are responsible for implementation include multiple actors, beyond the local administration - the evaluation mechanisms are based on performance indicators correlated with the objectives contained in the strategic document.

## **2. Strategic planning in US municipalities <sup>23</sup>**

### **Context**

Strategic planning began in the United States as a corporate planning effort. By the 1960s, it had become a major corporate management tool in Fortune 500. At first, it was seen as a way to combine policies, values, and goals with management, resources, and market information in a way that kept the organization together. In the 1950s, the concept was somewhat simplified to focus on SWOT analysis as a way to keep the corporation afloat in a more turbulent world.

The public sector has come under pressure to become more efficient, effective and responsive. Many felt that adopting business practices would help them achieve these goals. One tool borrowed from business was strategic planning.

At the local government level, strategic planning has become popular since the 1980s, and a community planning office has sometimes been called upon to lead the way. Town planning offices have been making long-term plans for decades, but as urban change accelerated, they felt the need for an action-oriented response. Urban planning in the US has been less oriented towards architectural design and physical-urban development than its European counterpart.

Some communities have realized that the vision of the strategic plan is in line with long-term planning. Increasingly, 30-year plans have been combined with five-year strategies or action plans as an ideal community management and planning methodology. In the 1980s, when the government was looking for new management tools in the private sector, strategic planning was often discussed. At the time, the definition and style of strategic planning was more narrow-minded than the more comprehensive Harvard policy model and was often called strategic management. Over the period from the 1980s to the present,

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<sup>23</sup> The information included in this section is taken from (partly, in whole or in part) Hamlin R.E., Van Ravensway J., Mastej M., Hamlin A. (2019) Strategic Planning in US Municipalities. In: Hîncea C., Profiroiu M., Țiclău T. (eds) Strategic Planning in Local Communities. Governance and Public Management. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-03436-8\\_8](https://doi.org/10.1007/978-3-030-03436-8_8)

strategic planning seems to have been adopted sporadically, defined in a variety of ways even more locally than at state and federal level.

In many cases, municipal executives who apply the narrower definition of strategic planning saw it more as a funding and management exercise than as a type of planning done in the planning office. Strategic planning has sometimes been used not only as a community effort, but also as a way to manage single-purpose entities, such as a library system, a recreation program, projects, or any government organization.

The data collected regarding the USA is based on a survey conducted in the Michigan Municipal League and was sent to the Executive Director, with reference to local planning in the municipality or locality.

**We provide below a summary of the research results <sup>24</sup>:**

- Although not all communities engage in strategic planning, those who do consider planning as “an exercise in vision” or have been specifically targeted at what has been described as financial, budgetary, or business planning. The capital improvement program has sometimes been called a strategic plan (f.n. Capital improvement programs are usually six-year financial plans for the implementation of costly capital projects that typically require debt financing, such as road infrastructure, bridges, town hall improvements, etc. These sometimes include expensive equipment, such as would be fire engines).
- Regarding the reasons or purpose of the planning process, over 90% indicated that this is due to the fact that community officials (employees) considered strategic planning a critical management tool and that it helps elected political leaders to highlight and prioritize important projects and programs.
- Local authorities surveyed indicated that the most important people in the planning process are department heads and a “special strategic planning committee, with few authorities indicating general citizens or non-governmental community leaders (although comprehensive long-term planning usually involves many public hearings and community meetings, the results of these surveys seem to suggest that strategic planning was seen by most as an internal management function).
- Regarding the effects of strategic planning efforts, there was an overwhelming recognition of the benefits, in order of importance: 1) The goals and objectives were achieved due to the existence of a plan 2) Organizing projects and programs around money-saving goals and objectives; 3) Many projects and programs suggested in the plan were being implemented; 4) The planning process has improved coordination between departments or parts of the municipality; 5) The planning process directly contributes to cost savings.
- Regarding the evaluation, over 70% of the respondents indicated that the evaluation is mainly concerned with measuring the achievement of the goals and objectives defined in the plan (emphasis on results).

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<sup>24</sup> The information included in this section is taken from (partly, in whole or in part) Hamlin R.E., Van Ravensway J., Mastej M., Hamlin A. (2019) Strategic Planning in US Municipalities. In: Hîncea C., Profireoiu M., Țiclău T. (eds) Strategic Planning in Local Communities. Governance and Public Management. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-03436-8\\_8](https://doi.org/10.1007/978-3-030-03436-8_8)

- Overall, survey results seem to indicate that a small percentage of communities are involved in community-wide strategic planning. Respondents defined strategic planning in a rather limited way. In general, they perceived it as an internal business/management tool, focused primarily on saving money, making good management decisions and promoting internal coordination.

For the USA, we present a specific case of local strategic planning as a model of the whole process <sup>25</sup>:

### **East Lansing Case Study, Michigan**

East Lansing, Michigan is a small but progressive town in the Lansing metropolitan area. It is home to Michigan State University, one of the largest public universities in America. The city has been governed by a city manager. The population is about 49,000, but most of the population and income data are distorted by the fact that students living in and around the university are considered residents. However, despite the diversity of the student population, almost 80% of the population is listed as white. The land area of the city is almost built, but the city has successfully annexed a new territory in the recent past. In 2002, the city of East Lansing began the process of preparing a new comprehensive long-term plan. Until then, the city was working on a series of targeted strategic plans that focused on a wide range of topics: housing for the elderly; redevelopment of the city center; revitalization of the neighborhood, etc. This target approach<sup>26</sup>, while trying to address significant needs, it lacked the coherent vision and consensus that were essential to reaching the right solutions. It was becoming a community-wide feeling. Professional planning staff also encouraged policy makers to move from pure short-term thinking to a broader approach to creating a community vision (comprehensive plan) that includes a community-based consensus on a prioritized strategic planning process.

#### **The Big Picture**

The first step in the process was to create a comprehensive plan. Called "The Big Picture," the community planning staff has embarked on a comprehensive public process to establish a long-term (20-year) vision for the entire city. The city was divided into seven neighborhood development areas. Each planning area underwent significant analysis, data collection and conducted numerous public meetings over the course of twelve months. At the end of the process, the seven planning areas were combined into a city-wide overview and submitted to another year of community-wide public meetings. From this process came a community consensus on its 20-year future of the whole city. This vision included a consensus on the specific outcomes that the community wanted to see highlighted and implemented using a series of focused strategic plans, aimed at steering the community towards its vision, step by step.

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<sup>25</sup> The case is taken directly from Hamlin RE, Van Ravensway J., Mastej M., Hamlin A. (2019) Strategic Planning in US Municipalities, pp. 209-239, In: Hîncea C., Profiroiu M., Țiclău T. ( eds) Planning in Local Communities. Governance and Public Management. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-030-03436-8\\_8](https://doi.org/10.1007/978-3-030-03436-8_8)

<sup>26</sup> That is, addressing a problem at once, as if it were unconnected, rather than pursuing a comprehensive, interconnected approach.

## **Strategic plans: East Village and Avondale Square**

The Comprehensive Overview Plan identified several topics and areas that the community expressed a desire to see included in a strategic planning process. So strategic planning is defined as a management tool that focuses on a short-term action plan for smaller areas or issues. Two such efforts are described here.

### **East Village**

East Village is a 35-acre area adjacent to the two-part Michigan State University campus. Michigan State University is a public university with a number of enrollments ranging from 40,000 to 50,000 students. The central campus has about 3 square kilometers of university buildings, with another 3 square kilometers of experimental farms. The East Village area was originally developed in the 1950s and 1960s in response to the rapid growth of Michigan State University. More recently, East Village has undergone significant divestment and has become exclusively a student rental community. The Big Picture document focused on the East Village neighborhood for potential redevelopment, as follows:

"Vision - This area presents an opportunity for redevelopment for the benefit of the city and the university. The plan encourages the formation of a unique environment that combines housing, offices, shopping and dining in a university-oriented enclave designed to attract not only students but also young professionals who are no longer employed."

In support of this vision for the area, the Big Picture document led to the creation of a detailed strategic plan. With these instructions in the Big Picture document, the community initiated a strategic planning process to implement a redevelopment plan for East Village. The process included:

1. Formation of a Citizens' Committee to oversee the planning process.
2. Create a detailed redevelopment plan and strategy.
3. Completion of a process of selecting a major developer through a public/private partnership.
4. Delimitation of a timetable and related responsibilities.
5. Preparing a budget - of which public investment has become part of the Capital Improvement Program (PIC).

### **Avondale Square**

Avondale Square is a redevelopment project located in a historic student rental area. Recent developments in student apartments in other parts of the city and the region have greatly reduced Avondale as an attractive location for students. The housing units were old and small, and the disinvestment of the owners became obvious. As part of the Big Picture planning process, this neighborhood has received significant attention. A vision for the future of the city suggested that this area be redeveloped and returned to an owner-occupied neighborhood. The document said:

"Vision: Creative ways should be pursued to increase the number, size, style and value of single-family homes occupied by homeowners in this area to attract families with children.

Objective: To promote incentives for the conversion of rented housing into owner-occupied housing:

Action 1-2.1: "Through the city's community development grant program, redeveloping the 600 block of Virginia Avenue into new owner-occupied homes."

Under this direction, the planning staff, with the contribution of the community, prepared a strategic plan that set in motion the city's program to create what is now called Avondale Square.

The strategic plan included:

1. Specific activities required.
2. The people and organizations needed to implement the strategy.
3. The necessary sources of capital (financing) and the timing of that financing.
4. The process of selecting the private partner and the capital.
5. Preparation of a budget - from which public investment has entered the Capital Improvement Program.

#### **The main findings of the US planning process:**

In general, strategic planning in the US is seen primarily as an internal management tool in the hands of municipal or urban administrators, focused on an NMP-style approach, with cost savings and improved service quality for citizens - so strategic planning has a narrower focus and short-medium term range. The East Lansing case is a good example of this, it (planning) has been used as a management tool to create an action plan for specific projects or neighborhoods. The city talked about each target neighborhood as having a separate strategic plan that acted as a work plan or action plan to implement a long-term vision. In this way, the city has shown a strong link between these individual "strategic plans" and the long-term and comprehensive "big picture". It also systematized the link between the comprehensive long-term plan, the strategic plans and the capital improvement program.

### **3. Strategic planning in Spain <sup>27</sup>**

#### **Context**

The first experiences of strategic planning in Spain took place in the late 1980s and early 1990s in order to address the deficiencies of basic infrastructure in large cities and to achieve their physical transformation. Later, the next generations of strategic plans placed the quality of life at the center of their interest in improving the attractiveness of cities from a perspective that integrates post-material values such as social cohesion or sustainable economic development.

The Autonomous Communities are the main institutional actor in the sense that they are responsible for the provision of the main basic public services, such as health or education, employ the majority of public employees in the country and spend most of the public expenditure. On the other hand, local governments are dependent on the legal and fiscal resources of higher levels of

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<sup>27</sup> The information in this section is taken from and partially adapted from: Ruano JM (2019) Actors, Aims and Challenges of Local Strategic Planning in Spain, pp. 157-177 In: Hîncea C., Profiroiu M., Țiclău T. (eds) Strategic Planning in Local Communities. Governance and Public Management. Palgrave Macmillan, 2019

government, but they have a wide margin of maneuver to provide public services in most areas and to cover service shortages to the extent that they have the personal and financial resources to make it as a consequence of the principle of subsidiarity.

In terms of municipal structure, its main features are weakness and fragmentation. Spain has 8,122 municipalities, of which 84% have less than 5,000 inhabitants and 60% less than 1,000 inhabitants.

Spain's first strategic plans are Barcelona (1988) and Bilbao (1989). In both cases, the aim was to overcome the city's infrastructure shortcomings and to look for alternatives to a productive model based on declining industrial sectors. In addition, Barcelona's strategic plan coincided with its designation as the venue for the 1992 Olympic Games, which was used as a springboard for the city's comprehensive transformation and inaugurated in Spain a model of public-private partnership (represented by through companies, unions, universities and neighborhood associations), which will be replicated in future plans for the next 25 years.

The research on strategic planning carried out by local authorities in Spain is based on the analysis of 65 urban and interurban communities (with a number of 80 documents analyzed) located in Andalusia, Catalonia and the Basque Country.

**Below is a summary of the research results:**

- About 70% of the strategic plans have been developed by local communities who expect to use them to access European funding for various types of development projects.
- In most cases, strategic planning projects have been promoted by city or supra-municipal governments, coupled with the active participation of local stakeholders, especially in large cities (Barcelona, Bilbao), with a particularly strong involvement of business representatives in both the planning and policy implementation process.
- A strong mayor with leadership and credibility with the neighborhood community and the ability to call on various stakeholders has been a key factor in the successful design and implementation of many local strategic plans (the important role of the political leader as a catalyst/facilitator); 14 of the 80 plans analyzed were initiated at the request of public-private organizations, which would represent a more progressive involvement of civil society in long-term local planning processes.
- The vast majority of plans are focused on economic development goals (largely due to the strong negative effects of the 2008 financial crisis) - the latest plans have a more diverse strategic perspective - concern for issues such as the environment, social cohesion, transparency and governance (perhaps due to the many cases of corruption at local level), culture and heritage, education or the use of ICT to improve public services under the label of "smart city"; the objectives related to the quality of life of the citizen have increased significantly in importance compared to the physical transformation of the city.
- Another interesting element concerns the public responsibilities of local authorities in relation to the set strategic objectives - many of the objectives of urban strategic plans are not of exclusive municipal competence (such as education, welfare, health, safety, transport or housing), but collaborates with other levels of government, reflecting the city's concept as an institutional entity capable of generating participation and responding to issues beyond strict

jurisdiction or legal responsibility - this requires good coordination with city stakeholders and other institutional actors at territorial levels superior.

- All strategic plans had an initial analysis of the situation, with key elements of analysis such as education, health, demography and its evolution or the local workforce, the local economy.
- Participation of local stakeholders is an important element of the planning process with representatives of the private sector (enterprises/businesses), minority associations, representatives of civil and local neighborhoods, employers' organizations and trade unions - participation takes place in all phases of the process. Another important stakeholder is represented by the academic environment - universities offer their know-how to the process and are one of the institutions that participate especially in the phases of formulation and implementation of plans.
- Regarding the main challenges and problems, they face during the process, the most common problems refer to the difficulty of engaging citizens continuously and throughout the process of formulating and implementing the plan (this is the case for half of the communities) and to persuade political parties to set aside their particular interests and ideologies and to commit to long-term planning even in the event of a change of government.

### **The main conclusions regarding the planning process in Spain**

Observing the results of the analysis on the local planning process in urban communities in Spain, we can draw some conclusions: (1) the participation of multiple and diverse stakeholders is a specific feature and is highlighted both by participation in all stages of the process and by established objectives which go beyond the legal responsibilities of the local authority; (2) Local economic development is the main concern of the plans (largely due to the impact of the 2008 economic crisis) with a shift in recent years towards increasing the quality of life for citizens; (3) Access to European funds seems to be the main driver for the development of strategic plans in Spanish local communities.

### **Major conclusions and trends in local strategic planning - lessons for Bihor County Council**

In the final section of the comparative analysis, we indicate the main characteristics of the planning process for each of the analyzed cases and we draw the implications for the methodological approach of Bihor County.

Case	Specific elements	Input in the methodological approach - Bihor County
France	Used as a tool for city development focused on good governance and cost savings; Steps include: situation analysis, stakeholder consultation, implementation and establishment of evaluation mechanisms;	<ul style="list-style-type: none"> <li>● The stages of the planning process;</li> <li>● Focus on the elements of good governance;</li> </ul>
USA	Focus restricted by planning - managerial instrument, connection with specific projects of local authorities; Possibility to reduce the costs, monitoring, and evaluation.	<ul style="list-style-type: none"> <li>● Connecting the planning process with the institutional objectives;</li> <li>● Used as a tool for better local governance;</li> </ul>
Spain	The planning process built around stakeholder participation; Local businesses have a significant involvement;	<ul style="list-style-type: none"> <li>● Stakeholder participation - contribution to local problems and solutions;</li> <li>● Survey of citizens.</li> </ul>

**Table 6:** Inputs for strategic planning process for Bihor County Council

**Source:** authors contribution

Considering the best practices included in the analysis, the strategic planning process should include the following:

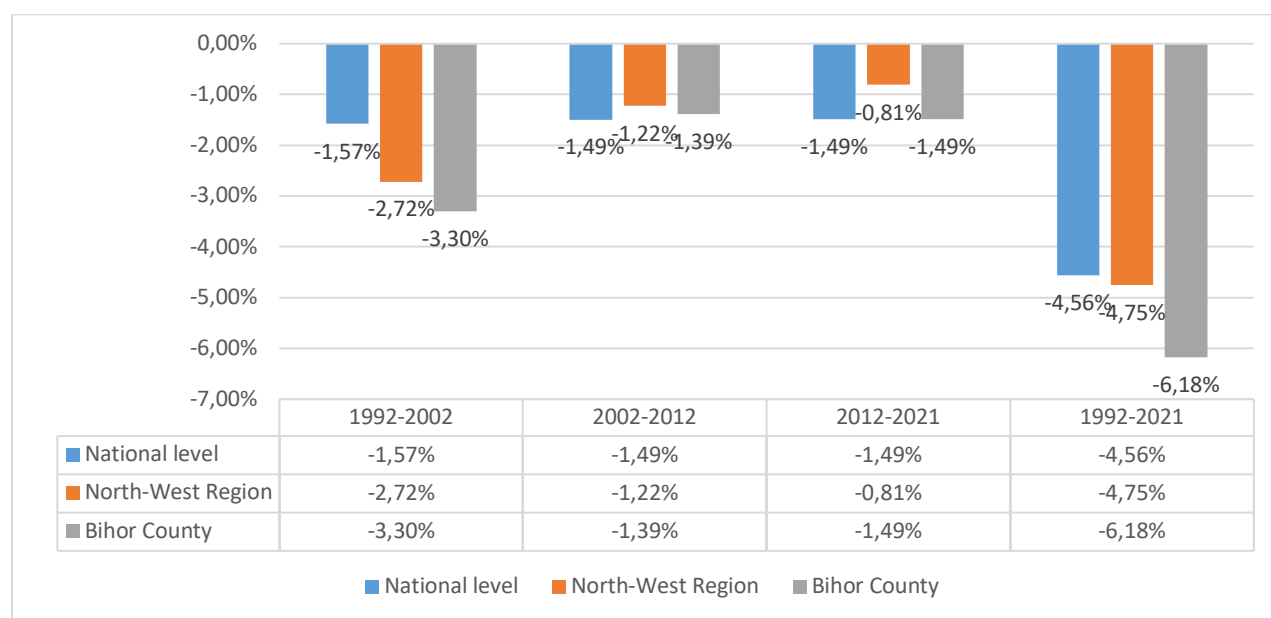
1. The initial analysis of the local context must be based on data - the analysis must cover the main dimensions that are relevant to a local community - economy, social dimension (education, health), demography, environment, spatial and urban development. The analysis should be used to identify major trends and potential risk factors in the community that can be mitigated through an appropriate strategy.
2. Given the specific nature of each local community, stakeholder participation, especially in identifying local issues and solutions, is essential. Data collection efforts can be complemented by opinion polls focusing on elements of everyday life in the community (satisfaction with services, quality of life indicators, perceptions of sensitive issues).
3. In order to ensure a long-term positive impact of the planning effort, documents should include implementation, monitoring and evaluation mechanisms, which serve as "tools" at the disposal of local authorities to ensure that they are in line with the objectives set and provides data on how the implementation process is progressing compared to projections.

# Analysis of the main indicators

## Demography

### Demographic evolution of Bihor County

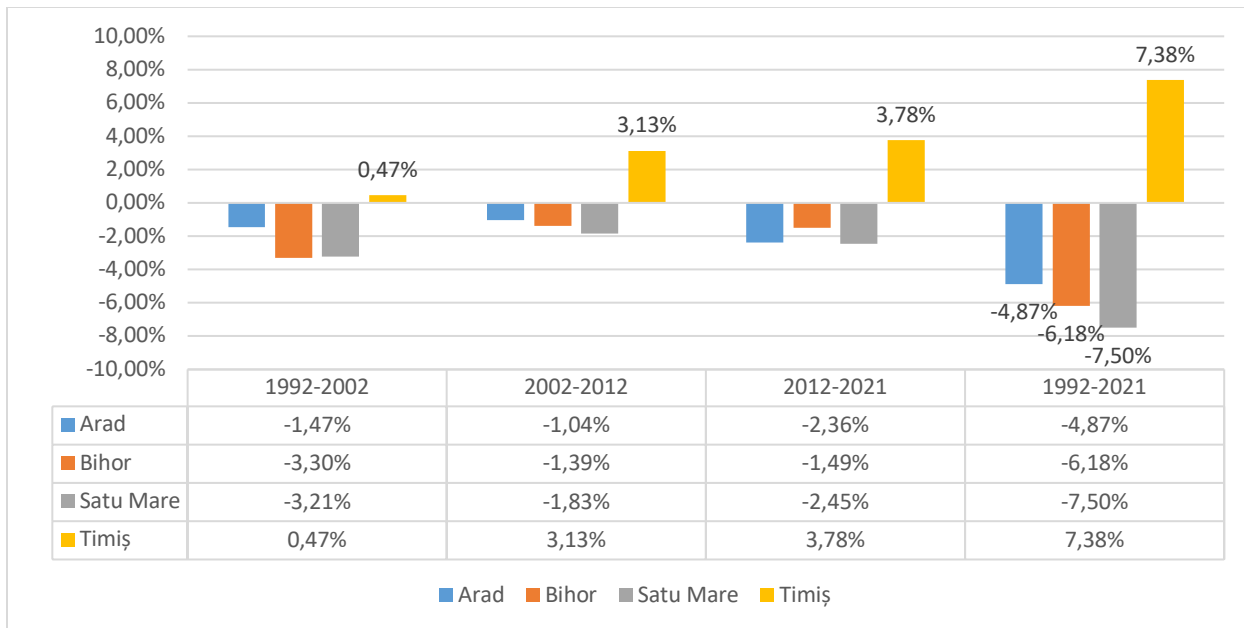
Bihor County currently has (2021) a number of 614,001 inhabitants and is on a slightly decreasing trend, having lost about 6% of the population in the last 29 years (Figure 1). The population of the county decreased by approximately 40,000 inhabitants in 29 years, of which 3.3% in the first decade and then 1.39% and 1.49% respectively in the next 2 decades. Comparing the situation of Bihor (Figure 2) with the evolution of the population at regional (-4.75 %) and national (-4.56%) level, we find a similar trend, although less accentuated than at the level of Bihor County (-6.18%).



**Figure 1:** Population evolution (1992-2021) at national, regional and county level

**Source:** Own calculations based on NIS data (National Institute for Statistics)

In order to better understand the demographic evolution of Bihor County, we made a comparison of the population evolution in the period 1992-2021 with three other similar counties (in size and socio-economic profile) with it: Arad, Satu Mare and Timiș. Comparing the evolution of the population of Bihor County with that of the other three counties (Figure 2), we find that only Timiș County has experienced an increase in population in the last 29 years (+ 7.38%), while all the other three are on a downward trend: Arad (-4.78%), Bihor (-6.18%), Satu Mare (-7.5%).

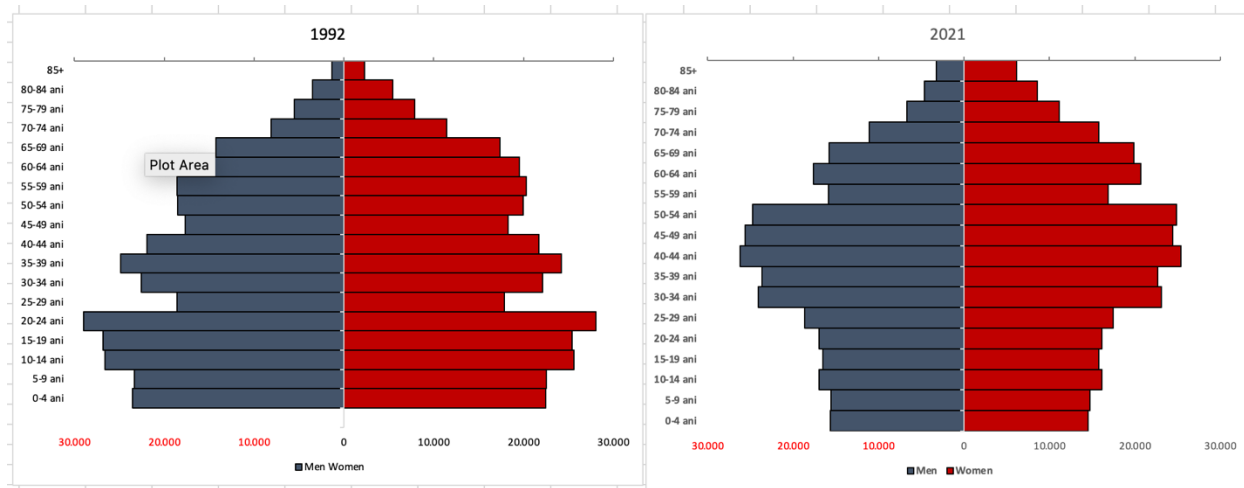


**Figure 2:** Population evolution (1992-2021) comparison between counties

**Source:** Own calculations based on NIS data

### Population aging

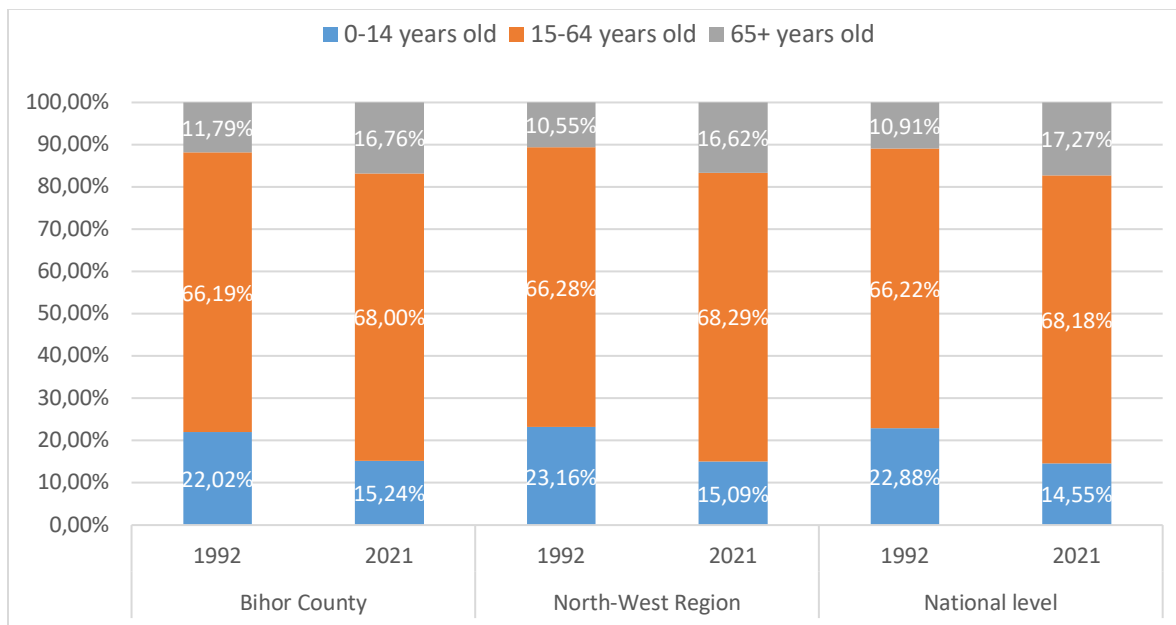
The demographic situation of Bihor County is also highlighted by the population pyramid below (Figure 3). The tendency of accentuated narrowing of the base and widening of the top of the pyramid suggests an accentuated process of aging of the population. In the medium and long term, the evolution will mean an increase in demand for services for the elderly, but also a decrease in competitiveness, both for investors looking for consumer markets - an aging population with a tendency to consume less - and for those looking for a job.



**Figure 3:** Population Pyramid (1992 vs.2021)

**Source:** Own calculations based on NIS data

The aging trend of the population is also visible in the graph below (Figure 4), where we see that the share of the population under 14 in the total population has decreased from 22% (1992) to 15% (2021), while the population over the age of 65 increased by 11% in 1992 to 16% in 2021. We find the same trend at national and regional level, the differences not being significant.



**Figure 4:** Comparative population structure by age (1992 vs.2021)

**Source:** Own calculations based on INS data

### Birth and death rates

Demographic fluctuations usually have two sources: the natural movement of the population (birth/death rate) and the migratory movement of the population (changes of residence). Regarding the natural movement of the population, we notice in Table 7 the fact that the birth rate for Bihor County is, in 2020, 8.8 per thousand, decreasing compared to previous years. In the last 10 years this birth rate had stabilized at 10 per thousand, but then began to decline after 2018. The year 2020 may not be the most relevant in this regard, being the year of the COVID pandemic, which profoundly affected the birth rate.

Birth rate (live-born births per 1.000 inhabitants)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
National level	9,4	8,7	9	9,6	9,1	9,3	9,4	9,7	9,3	9,2	8,1
Nord-West Region	9,8	9,2	9,4	10	9,5	9,8	10	10,3	9,9	9,8	8,8
Arad County	8,9	8,3	8,7	9	8,8	9	9,3	9,4	9,3	9,2	8,1
Bihor County	10,2	9,5	10	10	9,6	9,6	9,8	10,2	10	9,8	8,8
Satu Mare County	9,1	8,7	8,8	10	9,4	9,2	9,6	10,1	9,2	9,2	7,9
Timiș County	9,4	8,9	9	9,8	9,5	9,9	10,2	10,4	10,2	10	8,8
<b>Natural increase</b>											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
National level	-47.524	-55.197	-54.435	-35.534	-53.103	-56.791	-49.255	-47.883	-57.742	-57.244	-118.736
Nord-West Region	-4.007	-4.933	-4.709	-2.592	-4.260	-4.919	-3.201	-3.336	-4.392	-3.873	-12.141
Arad County	-1.878	-1.845	-1.845	-1.578	-1.667	-1.890	-1.476	-1.894	-1.510	-1.521	-3.089
Bihor County	-1.059	-1.308	-1.177	-1.199	-1.341	-1.610	-1.224	-1.145	-1.389	-1.224	-3.058
Satu Mare County	-921	-989	-754	-363	-598	-906	-582	-535	-873	-834	-1.966
Timiș County	-1.016	-1.190	-947	-305	-582	-779	-88	-221	90	-181	-1.914
<b>Natural increase per 1.000 inhabitants</b>											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
National level	-2,1	-2,5	-2,4	-1,6	-2,4	-2,5	-2,2	-2,1	-2,6	-2,6	-5,3
Nord-West Region	-1,4	-1,7	-1,7	-0,9	-1,5	-1,7	-1,1	-1,1	-1,6	-1,4	-4,3
Arad County	-3,9	-3,9	-3,8	-3,3	-3,5	-3,9	-3,1	-4	-3,2	-3,3	-6,6
Bihor County	-1,7	-2,1	-1,9	-2	-2,1	-2,6	-2	-1,9	-2,2	-2	-5
Satu Mare County	-2,4	-2,5	-1,9	-0,9	-1,5	-2,3	-1,5	-1,4	-2,3	-2,2	-5,1
Timiș County	-1,4	-1,6	-1,2	-0,4	-0,8	-1,1	-0,1	-0,3	0,1	-0,2	-2,5

**Table 7:** Birth rate

**Source:** Own calculations based on NIS data

The natural increase (the difference between births and deaths) is negative, as in the national, regional and in the case of the other counties. The death rate in 2020 was 13.8 per thousand (affected, of course, by the pandemic), comparable to the regional and national level. Only Timiș County has a better situation, with a rate of 11.3 per thousand.

Deaths per 1000 inhabitants	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
National level	11,5	11,2	11,4	11,2	11,5	11,8	11,6	11,8	11,9	11,7	13,4
Nord-West Region	11,2	10,9	11,1	10,9	11	11,5	11,1	11,4	11,5	11,2	13,1
Arad County	11,9	11,6	11,9	12	11,7	12,2	11,8	12,1	12,2	11,8	13,8
Bihor County	11,5	11,2	10,7	10,9	10,9	11,5	11,1	11,5	11,5	11,4	13
Satu Mare County	12,8	12,2	12,5	12,3	12,3	12,9	12,4	13,4	12,5	12,5	14,7
Timiș County	10,8	10,5	10,2	10,2	10,3	11	10,3	10,7	10,1	10,2	11,3
<b>Deaths in the first year of life per 1000 live births</b>											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
National level	9,8	9,4	9	7,8	8,1	7,3	6,7	6,4	5,9	5,7	6,1
Nord-West Region	8,9	8,7	8,4	7,5	7,3	7,7	6,9	6,5	6,9	6,2	7,3
Arad County	9,5	10,7	8,5	9,8	6,4	8,2	8,4	5,5	6,8	6,9	7,2
Bihor County	10,5	10,5	10,7	7,9	7,6	8,4	10,1	7,1	7	5,1	12,8
Satu Mare County	9,6	9,3	8,9	8,4	7,7	5,9	5,7	6,1	4,3	7,4	6,3
Timiș County	10,7	8,2	9,3	5,8	7	7,1	4,3	7,2	4,2	4,8	4,6

**Table 8:** Mortality and infant mortality

**Source:** Own calculations based on NIS data

## Migration

Regarding the migration of the population, it is observed from Table 9 that at the level of Bihor County there is a positive balance, in the sense that the number of those who settle in the county is higher than those who leave the county. However, there is also a trend of moving the population from urban to rural, which in the near future generates more pressure on local budgets of municipalities and their need to develop quality public services.

Net settling of domicile											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Bihor County</b>	811	394	493	477	569	215	398	576	533	636	551
<b>Satu Mare County</b>	-231	-140	-4	-44	-23	-83	-83	-339	-179	-410	-261
<b>Arad County</b>	1.324	554	770	670	669	755	640	823	986	738	704
<b>Timis County</b>	4.901	3.649	3.934	3.742	3.997	3.549	3.828	4.443	4.775	4.864	3.418
Net settling of residence											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Bihor County</b>	889	1234	1276	1331	1238	1323	1400	1497	1254	1453	1331
<b>Satu Mare County</b>	-1685	-1574	-1199	-1015	-870	-522	-425	-495	-537	-472	86
<b>Arad County</b>	-289	-8	108	144	111	91	407	307	396	521	733
<b>Timis County</b>	9825	5720	5594	4219	3913	4278	4181	4612	4937	4021	930
Net settling of domicile - Bihor county - Urban vs. Rural											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total</b>	811	394	493	477	569	215	398	576	533	636	551
<b>Urban</b>	-988	-738	-1137	-458	-653	-731	-911	-695	-530	-160	-1069
<b>Rural</b>	1799	1132	1630	935	1222	946	1309	1271	1063	796	1620

**Table 9: Changes of domicile and residence**

**Source:** Own calculations based on NIS data

## SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Increase of the active population (15-64 years) by 2%;</li> <li>• Life expectancy reached 75.3 years (2021), an increase of 10% compared to 1992;</li> <li>• Infant mortality is declining, reaching 7.2 (2021) compared to 9.5 (2010), similar to the regional level (7.3) where trends are still downward;</li> <li>• Regarding the change of address, the balance is positive (+551), the people who come to the county are more than those who leave, but this is due to the rural environment (+1620), rather than the urban one (-1069);</li> </ul>	<ul style="list-style-type: none"> <li>• The county's population is declining (-6% in the last 29 years). The trend is visible in all the cities of the county and in most of the communes in the county;</li> <li>• The increase of the population over the age of 65 (by 5%) is concomitant with the decrease of the young population (under 14 years) by 6%;</li> <li>• The demographic aging index is on an upward trend, reaching 110 elderly people (over 65 years old) in 2021 for every 100 young people (under 15 years old);</li> <li>• The ratio of demographic dependence is increasing; for every 100 active people (15-64 years old) there are 47 dependent people (under 15 years old and over 65 years old);</li> </ul>

	<ul style="list-style-type: none"> <li>• The average age of the county's population is (in 2021) 41.3 years, increasing by 15% compared to 1992;</li> <li>• Natural increase is negative (-5 per 1,000 inhabitants), in the same downward trend as at regional (-4.3) or national (-5.3) level;</li> <li>• Mortality is rising, reaching 13.8 (2021) deaths per 1,000 inhabitants, compared to 11.9 in 2010, while at the regional level they are 13.1 and at the national level 13.4;</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Internal immigration (from other counties) to Oradea municipality which enjoys a very good image at international level;</li> </ul>	<ul style="list-style-type: none"> <li>• The birth rate in Bihor County is 8.8 per thousand (2021), decreasing compared to previous years (10 per thousand in 2010), compared to the national level (8.1) or regional (8.8);</li> <li>• Population aging;</li> <li>• Emigration, especially from rural areas to cities/municipalities outside the county or country (where citizens have access to better services), given that the small urban area in the county is not attractive;</li> </ul>

### Strategic perspectives

- The county's population is declining (-6% in the last 29 years).
- The trend is visible in all the cities of the county and in most of the communes in the county.
- 50% of the population lives in urban areas.
- Population growth over 65 years (by 5%) is concomitant with the decrease of the young population (under 14 years) by 6% and with the increase of the active population (15-64 years) by 2%.
- The demographic aging index is also on an upward trend, reaching 110 elderly people (over 65 years old) in 2021 for every 100 young people (under 15 years old).
- The ratio of demographic dependence is increasing; for every 100 active people (15-64 years old) there are 47 dependent people (under 15 years old and over 65 years old).
- The average age of the county's population is (in 2021), 41.3 years, increasing by 15% (1992)
- Life expectancy reached (2021) 75.3 years, increasing by 10% (1992).
- The birth rate in Bihor County is 8.8 per thousand (2021), decreasing compared to previous years (10 per thousand in 2010), compared to the national level (8.1) or regional (8.8).
- The natural increase is negative (-5 per 1,000 inhabitants), in the same downward trend as at regional (-4.3) or national (-5.3) level.
- Mortality is rising, reaching 13.8 (2021) deaths per 1,000 inhabitants, compared to 11.9 in 2010, while at the regional level they are 13.1 and at the national level 13.4.

- Infant mortality is declining, reaching 7.2 (2021) compared to 9.5 (2010), similar to the regional (7.3) and national (6.1) levels, where trends are still downward.
- Regarding the change of address, the balance is positive (+551), more people come to the county than those who leave, but this is due to the rural environment (+1620), rather than the urban one (-1069).

## Education

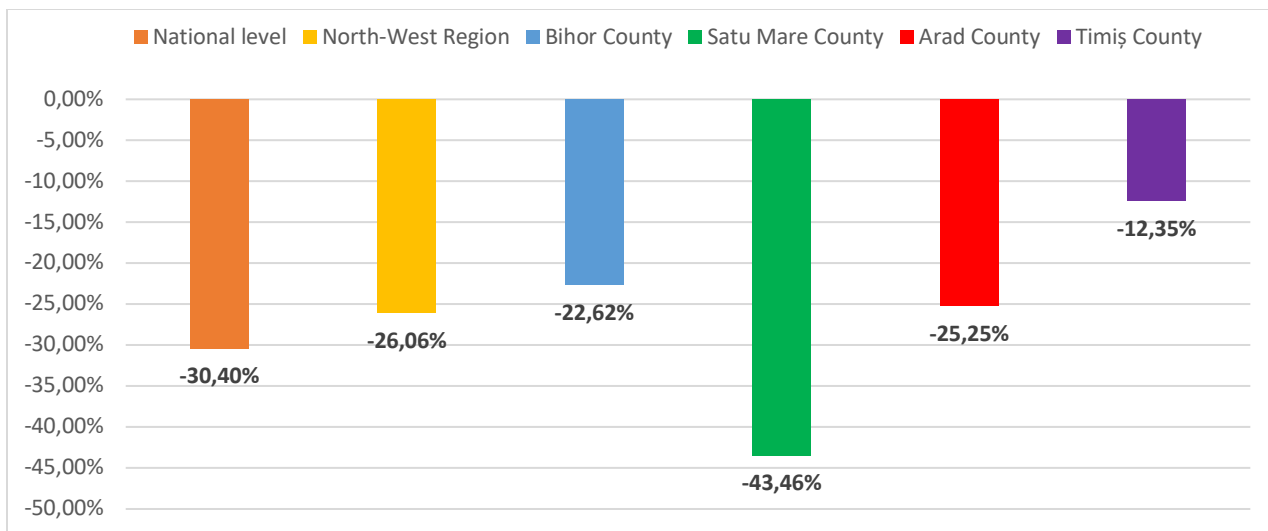
### The level of education of the population

The educational capital of an area, defined in terms of the distribution of the population according to the last school graduated, the educational infrastructure, the educational results and the public expenditures with the education system, is a good way to understand the capacity of a community to develop sustainably prosper in the long run.

Associated with the level of health, income, involvement in the community, the last school graduated is a crucial indicator in understanding the competitiveness of a region or area. It is difficult for a low-income community, for example, to attract investment and opportunities that generate significant added value in the community and provide high incomes to the population. In the same vein, as talent attracts talent, a community with a high share of the population with higher education will attract new residents with the same profile in the long run, further amplifying the competitive advantage and attractiveness of the community. It thus becomes critical for local authorities to support the local education system and the efforts of the population to continuously improve.

### The evolution of the school population

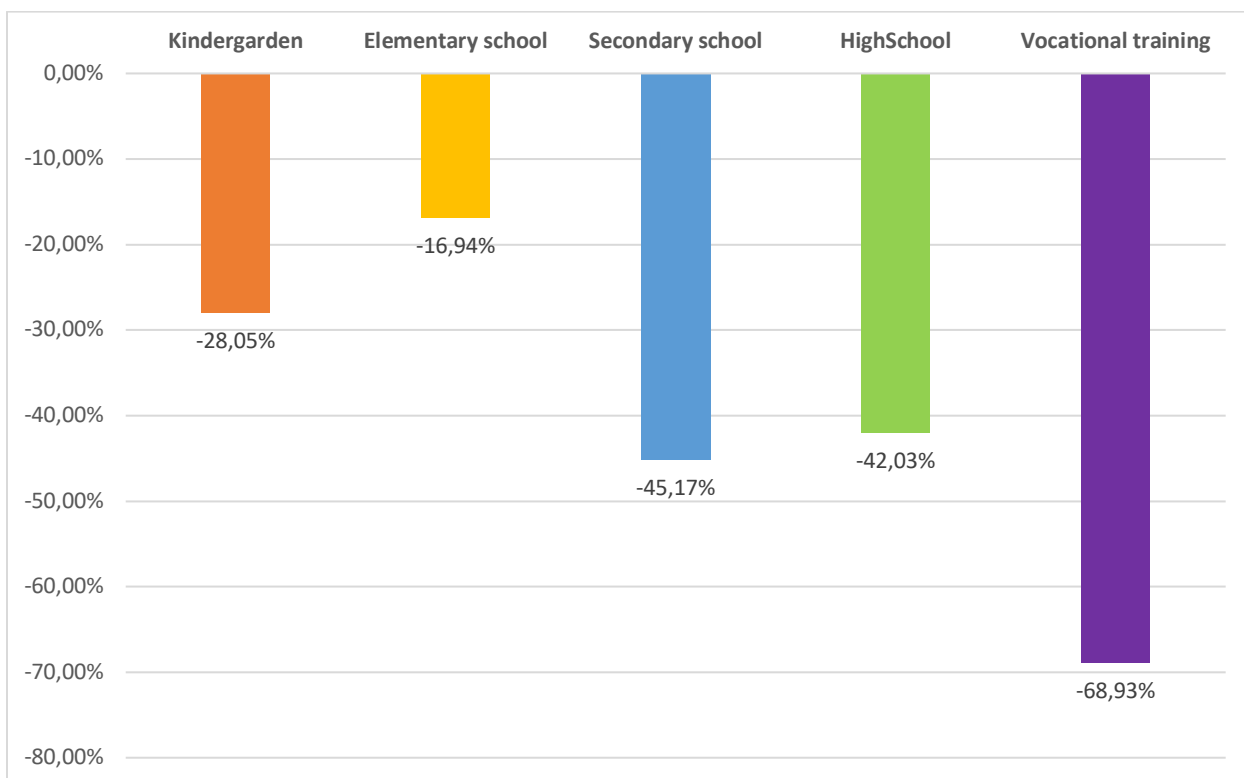
Regarding the evolution of the school population at the county level (Figure 5), the INS data show the same downward trend encountered in the evolution of the county population. We find (Figure 6) a decrease of 22.62% in the last 29 years (1990-2019), compared to 30.40% nationally and 26.06% regionally. At the same time, Timiș County had a decrease of only 12.35%, compared to 25.25% in Arad County and 43.46% for Satu Mare County.



**Figure 5:** Evolution of the school population (1990-2019)

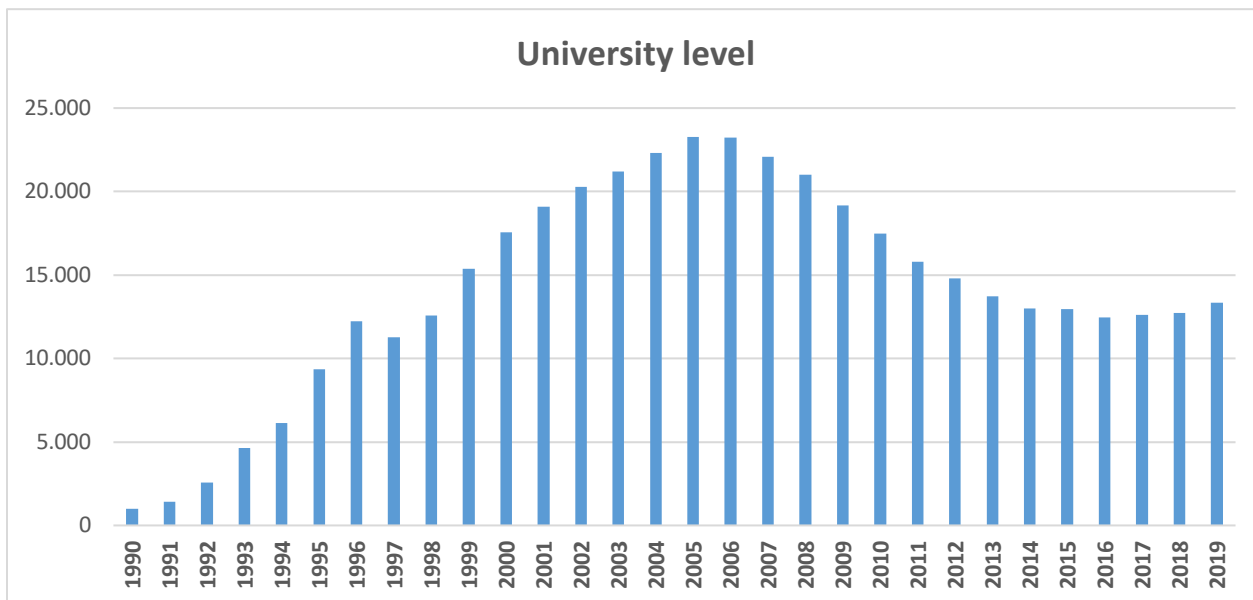
**Source:** Own calculations based on NIS data

The downward trend is visible (Figure 6) and at different levels of education, the largest decrease being recorded by the professional level (-68%), then the middle school (-45%) and high school (-42%). Bihor County had in 2019 a number of approximately 13,000 students, down 43% compared to 2005, when it had 23,000 students, the peak of the number of students in the county (Figure 7).



**Figure 6:** Evolution of the school population in Bihor County, by education levels (1990-2019)

**Source:** Own calculations based on NIS data

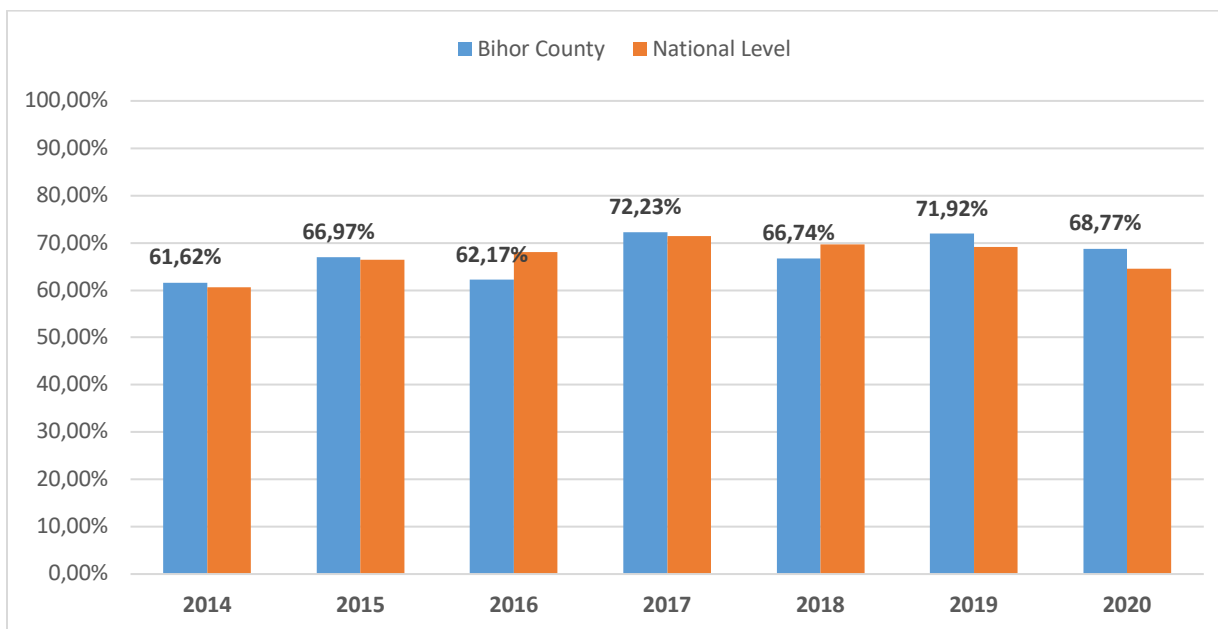


**Figure 7:** Evolution of the school population in Bihor County - university level

**Source:** Own calculations based on NIS data

### School results - BAC pass rates

The BAC pass rate at the county level is similar to that at the national level, with small oscillations, sometimes above the national average (2020, 2019, 2017, 2015, 2014), sometimes below the national average (2018, 2016).



**Figure 8:** BAC pass rates, Bihor County

**Source:** Own calculations based on data provided by ISJ Bihor (County School Inspectorate)

## SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>The pass rate at the BAC of the high schools in the county is somewhat constant in the last 7 years, starting from 61.6% in 2014 and reaching 69.8% in 2020, slightly above the pass rate at national level (69.5%), the highest level highest in 2017 (72.1%)</li> </ul>	<ul style="list-style-type: none"> <li>In Bihor there were 13,342 students in 2019, down from 23,261 in 2005</li> <li>The pass rate for the national assessment was in 2020 of 75.1% in Bihor County, slightly below the average pass rate in the country (76.2%)</li> <li>The school population in the county is declining, losing 22% in the last 29 years</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>71% of the respondents of the opinion poll consider to a large and very large extent that the school has an important role in the development of the county</li> <li>Encouraging dual education and business partnerships</li> <li>Use of non-reimbursable funding for the renovation and modernization of school units</li> </ul>	<ul style="list-style-type: none"> <li>High potential for attraction of high school graduates of the university environment of Cluj and Timisoara, which can lead to accentuation of the decrease of the university population</li> </ul>

## Strategic perspectives

- According to the census, 14% of the county's population has higher education, similar to the regional and national level, but below Timiș County (19%); At the same time, 24% of the population has high school education, 13% primary education and 3.5% have no schooling at all.
- The school population in the county is declining, losing 22% in the last 29 years. However, the situation is better compared to the national level (-30%), the regional level (-26%) or other similar counties: Arad (-25%), Satu Mare (-43%). Only Timiș County is better, with a decrease of only 12%.
- The downward trend is visible at all levels of education kindergarten (-28%), primary (-17%), middle school (-45%), high school (-42%) and vocational (-69%).
- In Bihor there were 13,342 students in 2019, down from 23,261 in 2005.
- The pass rate at the BAC of the high schools in the county is somewhat constant in the last 7 years, starting from 61.6% in 2014 and reaching 69.8% in 2020, slightly above the pass rate at national level (69.5%), the highest level the highest being reached in 2017 (72.1%). By comparison, the other similar counties have the following pass rates: Arad (63.8%), Satu Mare (70.8%), Timiș (67.8%).
- The pass rate for the national assessment in 2020 was 75.1% in Bihor County, slightly below the average pass rate in the country (76.2%) and below similar counties such as Timiș (76.5%) and Satu Mare (79, 2%), but over Arad (73.0%).

- 52% of the county's population is satisfied and very satisfied with the quality of education in the county, and 71% of them consider to a large and very large extent that the school has an important role in the development of the county.

## Healthcare

### Sanitary infrastructure

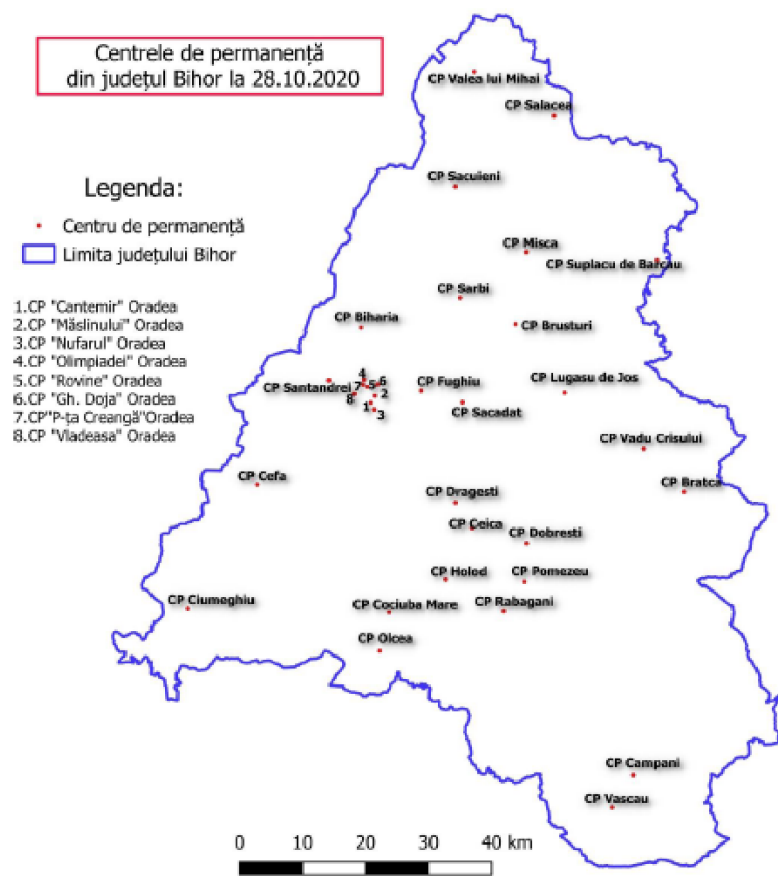
Easy access to diverse and high quality educational, medical, social, cultural and recreational services is one of the fundamental conditions for ensuring a high quality of life in the community. The accessibility and performance of public services are at the same time indicators for the attractiveness of a community, being among the basic elements considered by the highly competitive workforce when making decisions regarding relocation (emigration or immigration).

The analysis of statistical data from the National Institute of Statistics provides a complex picture of the accessibility of health services in Bihor County. The population has access to most general and specialized medical services, the number of healthcare units remaining constant in recent years. In 2019, the population of Bihor County had access to medical services through the following categories of healthcare units: 12 public and 2 private hospitals; Specialized clinics - 1 public; Hospital integrated clinics - 12 public and 2 private; Polyclinics: 5 private; Medical dispensary - 5 public; Mental health centers - 2 public; Medical and social units - 4 public; Diagnostic and treatment centers - 1 public and 5 private; Specialized medical centers - 3 private; Specialized medical centers with hospital beds - 5 private; Working points of dialysis centers - 2 private; General practice medical offices - 7 private; School medical offices - 65 public; Student medical offices - 1 public; Family medical offices - 372 private; Dental offices - 1 public and 719 private; Specialized medical offices - 265 private; Pharmacies - 11 public and 312 private; Pharmaceutical points - 5 public; Pharmaceutical warehouses - 8 private; Medical laboratories - 67 public and 17 private; Dental laboratories - 48 private; Transfusion centers - 1 public; Other types of medical offices - 9 public and 1 private.

From the perspective of health infrastructure, in Bihor County the number of beds in public healthcare units has decreased steadily in recent years, a trend which is also present at national level, from 7,135 beds in 1990 to just under 4,000 since 2010, in order to stabilize at 3,800 since 2015. However, we can observe that the number of beds in private units has increased, from 87 in 2009 to a maximum of 280 since 2018; the number of beds has also increased in the case of public medical social units (from 283 in 2003 to 338 since 2018). On the other hand, the number of (public) nursery beds decreased from 785 in 1996 to just under 500 in the period 2002-2010, to later increase back to 700.

The number of beds in public and private hospitals relative to the population also shows an interesting dynamic: this indicator decreased from just over 10 beds per 1,000 inhabitants in 1995 to just over 8 beds/1,000 inhabitants in the period 2003-2009, in order to decrease below 8 beds per 1,000 inhabitants in 2010-2013, respectively below 7/1,000 inhabitants in 2014-2017. The number of beds per 1,000 inhabitants increases from 2018 to around 7.4 beds per 1,000 inhabitants.

In 2020, there were 34 permanent healthcare centers in Bihor County (see Figure 9). Permanent healthcare centers are forms of organization of medical activity without legal personality, which operate on duty and ensure the continuity of primary health care of local authorities, free of charge. According to Bihor County Health Service (DSP Bihor), out of the 34 permanent centers functioning in the county, 11 operate in urban areas and 23 in rural areas, thus ensuring good coverage at the level of all communities. 166 doctors and 203 nurses participated in ensuring the continuity of health care through the permanent centers in 2020, providing medical care to a number of 118,409 patients.



**Figure 9:** Permanent healthcare centers in Bihor County (October, 2020)

**Source:** Bihor County Health Service (DSP Bihor), Activity Report for 2020, p. 118

*\*Legend: CP refers to permanent healthcare centers, market with a red dot in the figure*

### Human resources in health

An interesting trend can also be observed regarding the medical-sanitary personnel who works at county level. Thus, the number of public sector doctors initially decreased from 1,149 in 1990 to about 8-900 in 2007-2010, steadily increasing to over 1,000 later in 2011-2017. The maximum number of doctors in the public sector (1,411) was reached in 2019. In the private sector the number

of doctors increased relatively constant in the period under review, from only 20 in 1997 to 846 in 2019, closely related to the establishment of new private medical institutions and services or transformations (privatizations) of existing medical institutions and facilities.

In the case of family doctors we apparently have a different trend, the number increasing in the private sector (to a maximum of 375 in 2019) as it decreases in the public sector (to a minimum of 46 in the same year), but this is rather an effect of public policies in the field and a change in their classification. Similarly, the dental field as well as that of pharmacists are dominated by the private sector, in 2019 there are only 40 dentists in the public sector and 719 in the private sector, respectively 29 pharmacists employed in the public sector and 532 in the private sector.

In the case of the medium specialized healthcare personnel (nurses, orderly, technicians) we have a noticeable decrease in the public sector after 1990 (from 3,977 employees in 1990 to 2,791 in 2019), but the trend is not linear, the number varying during this period between a maximum of 4,014 in 1995 and a minimum of 2,449 in 2012. At the same time, the medium healthcare workforce employed in the private sector increased relatively steadily from 127 in 1998 to 1,354 in 2019, making up for the decline identified in the public sector.

### The main indicators of population healthcare (diseases)

In order to complete the analysis of healthcare services from Bihor County, data provided by the National Center for Statistics and Informatics in Public Health (CNSISP) was analyzed. The evolution of these indicators was compared with the national average, as well as with the incidence at the level of other counties in the North-West Development Region, respectively Bistrița-Năsăud, Cluj, Maramureș, Sălaj and Satu Mare.

Regarding the evolution of the incidence of tuberculosis (Table 10), the trend in Bihor County is similar to that of other counties in the region, of steadily decreasing the incidence of this disease. Despite the fact that the decrease in Bihor County is lower compared to the decreases recorded by other counties, such as Satu Mare or Sălaj, the incidence in 2020 is below that in these counties.

County	2017	2018	2019	2020	Evolution 2017-2020
<b>Bihor</b>	38.7	38	34.6	22.1	-42.89%
<b>Bistrița-Năsăud</b>	41.8	36.3	27.9	22.3	-46.65%
<b>Cluj</b>	28.6	26.6	22.9	16.5	-42.31%
<b>Maramureș</b>	57.8	44.6	47.2	32.2	-44.29%
<b>Sălaj</b>	40.6	38.6	34.3	18	-55.67%
<b>Satu Mare</b>	63.1	52.7	51.2	22	-65.13%
<b>National</b>	62.7	59.4	57.1	37.3	-40.51%

**Table 10:** Incidence of tuberculosis per 100,000 inhabitants in Bihor County and the North-West region

**Source:** National Center for Statistics and Informatics in Public Health (CNSISP)

In the case of counties from the North-West region there were considerable differences in the evolution of the number of cancer patients during the analyzed period (Table 11). Unfortunately, Bihor County had the highest level of incidence in the region throughout the analyzed period and the incidence in 2020 in Bihor County is considerably higher compared to the national average

County	2017	2018	2019	2020	Evolution 2017-2020
Bihor	H	472.5	444.1	408.4	-3.04%
Bistrița-Năsăud	343.3	346.3	377.8	325.4	-5.21%
Cluj	310.4	367.6	284.3	315.9	1.77%
Maramureș	318	325.3	333	293.4	-7.74%
Sălaj	351.2	382	405.4	337.6	-3.87%
Satu Mare	293.2	309	297.3	244.6	-16.58%
National	303.5	317.3	307.6	267.5	-11.86%

**Table 11:** The evidence of cancer patients per 100,000 inhabitants in Bihor County and the North-West region

**Source:** National Center for Statistics and Informatics in Public Health (CNSISP)

In the case of the number of patients suffering from diabetes, we also observe considerable differences between the counties in the region (Table 12). Bihor County had one of the highest incidences of this disease in the period 2017-2019 and in 2020 there was a considerable decrease, falling to 359.6 cases per 100,000 inhabitants. Thus, during this period the reported incidence of diabetes patients decreased by 29.68% in the county. Although in 2020 the incidence rate in Bihor County was above the national average, it was smaller compared to other counties in the region such as Bistrița-Năsăud, Maramureș or Satu Mare.

County	2017	2018	2019	2020	Evolution 2017-2020
Bihor	511.4	500.8	540.4	359.6	-29.68%
Bistrița-Năsăud	306.6	388.6	391.8	448.6	46.31%
Cluj	204	202.9	253	132.8	-34.90%
Maramureș	403.1	406.9	409.6	462.4	14.71%
Sălaj	469.4	402.2	443.8	342.3	-27.08%
Satu Mare	336.1	517.6	584.9	428.9	27.61%
National	372.9	391	397.2	309.2	-17.08%

**Table 12:** The evidence of diabetes patients per 100,000 inhabitants in Bihor County

**Source:** National Center for Statistics and Informatics in Public Health (CNSISP)

Considerable differences between counties also exist from the perspective of the evolution of the incidence of the mental illnesses (Table 13). At the level of Bihor County there is a decrease trend, reaching the lowest level (191.3/100,000 inhabitants) in 2020. Thus, during this period the incidence of people with this condition decreased by 48.70%, being one of the largest declines in the North-West development region. However, despite this decrease, the rate of mental illness in Bihor County in 2020 was above the national average (which stood at 181.4 cases per 100,000 inhabitants).

County	2017	2018	2019	2020	Evolution 2017-2020
Bihor	372.9	404.1	348	191.3	-48.70%
Bistrița-Năsăud	114.7	114.5	92.3	321.8	180.56%
Cluj	291.9	410.1	405.3	365.4	25.18%
Maramureș	42.4	46.3	22	19.1	-54.95%
Sălaj	121.9	112.3	123.6	162.6	33.39%
Satu Mare	210.7	218.2	221.4	207.2	-1.66%
National	233.7	259.7	241.3	181.4	-22.38%

**Table 13:** Evidence of mental illness per 100,000 inhabitants in Bihor County and the North-West region  
**Source:** National Center for Statistics and Informatics in Public Health (CNSISP)

The rate of children with protein-caloric malnutrition is an important indicator for the general quality of life and level of development (economic and social) of a community. The data presented in Table 14 shows that in the 2017-2020 period the rate of children with protein-caloric malnutrition decreased by 96.19% in Bihor County and by 25.17% nationally. Thus, in 2020 Bihor County was the county with the lowest rate of children with this problem in the North-West development region; also, the rate reached in 2020 (16.6) is considerably lower compared to the national average.

County	2017	2018	2019	2020	Evolution 2017-2020
Bihor	435.7	220	160	16.6	-96.19%
Bistrița-Năsăud	-	828.8	216.9	197.2	-2.38%
Cluj	90.7	83.7	127.4	45.5	-49.83%
Maramureș	380.9	423.8	343.9	508.9	33.60%
Sălaj	166	195.1	167.6	55.9	-66.33%
Satu Mare	75.9	37.5	36.9	18.5	-75.63%
National	374.6	161.9	266.2	280.3	-25.17%

**Table 14:** Evidence of children with protein-caloric malnutrition per 100,000 inhabitants aged between 0 and 2 years in Bihor County and the North-West region

**Source:** National Center for Statistics and Informatics in Public Health (CNSISP)

Table 15 shows the rate of patients with various diseases in the period 2018-2020; for these conditions there were no data for 2017, thus the percentage evolution of the rate for these conditions in 2020 was calculated compared to 2018.

There are similarities between the counties regarding the trend of the rate of people suffering from obesity and people suffering from hypertensive diseases. All counties in the Northwest Region have seen an increasing trend in the incidence of these diseases. Bihor County has had considerable increases in both diseases. In 2020, Bihor County had the highest rate of obese people in the region, the rate being about 3 times higher compared to the national average. The rate of people with hypertension has increased during this period, most likely due to the increase in the number of people suffering from obesity. Bihor County registered in 2020 the highest rate of people with hypertensive diseases, this being considerably above the national average. The rate of people suffering from cerebrovascular diseases

followed a similar trend, registering an increase of 21.96% in the analyzed period, Bihor County having the highest incidence in the North-West region.

Regarding the incidence of the other diseases analyzed, namely kidney failure, cirrhosis and ulcer disease, Bihor County has experienced a growing trend. However, in the case of these diseases, the percentage increases are lower, being between 4.70% and 14.77%. Regarding the incidence of people with cirrhosis and ulcer disease, as in the case of previous diseases, Bihor County has registered among the highest values in the region. Thus, the incidence of people with kidney failure is the only indicator for which the situation in Bihor County is better compared to other counties in the region and the national average.

County	Obesity				Hypertensive disease			
	2018	2019	2020	Evolution 2017-2020	2018	2019	2020	Evolution 2017-2020
Bihor	3,466.4	4,243.1	4,888.2	41.02%	16,312	18,436.2	20,204.3	23.86%
Bistrița-Năsăud	829.7	1,050.3	1,048	26.31%	11,354.2	12,196.3	13,205.5	16.30%
Cluj	1,893.6	1,918.5	1,951.2	3.04%	14,351.5	14,489.1	14,474.6	0.86%
Maramureș	1,552.8	1,580.2	1,641.5	5.71%	12,789.7	12,839.4	12,987.9	1.55%
Sălaj	1,143.1	1,162.7	1,186.7	3.81%	17,756.4	17,919.6	17,764.7	0.05%
Satu Mare	424.4	459.1	472.3	11.29%	6,406.9	6,773.4	7,080.9	10.52%
Național	1,694.5	1,775.8	1,791.6	5.73%	13,296.5	13,629.2	13,743.4	3.36%
Județ	Cerebrovascular disease				Renal insufficiency			
	2018	2019	2020	Evolution 2017-2020	2018	2019	2020	Evolution 2017-2020
Bihor	1,879.9	2,107.5	2,292.7	21.96%	174.7	186.3	196.1	12.25%
Bistrița-Năsăud	1,331.3	1,443.7	1,759.1	32.13%	212.5	271.9	295.2	38.92%
Cluj	1,605.6	1,652.5	1,658.6	3.30%	296.1	302.8	316.7	6.96%
Maramureș	1,856.9	1,852.2	1,882	1.35%	271.2	272.1	268.8	-0.88%
Sălaj	1,791.5	1,809.5	1,783.2	-0.46%	339.7	356.6	347.5	2.30%
Satu Mare	818.9	904.7	971.4	18.62%	190	241.3	280.4	47.58%
Național	1,873.7	1,944.8	1,990.5	6.23%	359.1	380.1	380.1	5.85%
Județ	Cirrhosis				Ulcerative disease			
	2018	2019	2020	Evolution 2017-2020	2018	2019	2020	Evolution 2017-2020
Bihor	1,994	2,156.9	2,288.6	14.77%	1,327.5	1,367	1,389.9	4.70%
Bistrița-Năsăud	944.2	943.7	977.9	3.57%	1,490.2	1,174.3	1,112.3	-25.36%
Cluj	966.4	973.5	952	-1.49%	1,232.3	1,239.7	1,232.5	0.02%
Maramureș	1,346.9	1,287.2	1,273.9	-5.42%	1,037	997.7	975.1	-5.97%
Sălaj	1,865.8	1,873.9	1,772.7	-4.99%	2,006.7	1,927.1	1,856.6	-7.48%
Satu Mare	918.4	1,010.7	1,072.9	16.82%	761.6	776	796.4	4.57%
Național	1,576.5	1,603	1,628.5	3.30%	1,478.1	1,455.7	1,422.4	-3.77%

**Table 15:** The rate of patients with various diseases per 100,000 inhabitants

**Source:** National Center for Statistics and Informatics in Public Health (CNSISP)

The number of internal infections provides a picture of the health conditions in the medical system. Table 16 shows both the evolution of the absolute number of these infections and the incidence per 100,000 inhabitants. In 2020, the number of these infections decreased in Bihor County, this being the year in which the lowest number of these infections was registered. Although Bihor County had a higher total number of internal infections in 2020 compared to Sălaj, Bistrița-Năsăud and Satu Mare counties, when taking into account the number of inhabitants, Bihor County actually had the lowest rate of internal infections in the region.

County	Total number			Per 100.000 inhabitants		
	2018	2019	2020	2018	2019	2020
Bihor	310	326	269	54.9	58.0	48.0
Bistrița-Năsăud	123	71	218	43.9	25.5	78.5
Cluj	1,892	2,298	1,621	268.5	325.1	228.4
Maramureș	284	347	399	61.3	75.3	87.0
Satu Mare	433	309	219	129.4	92.9	66.1
Sălaj	127	211	194	59.4	99.7	92.4
Național	20,240	23,312	23,348	103.6	120.0	120.8

**Table 16:** Number of internal infections in Bihor County and other counties in the North-West region

**Source:** CNSISP

#### Local public spending on health

The analysis of the budgetary data reveals a constant increase of the expenditures made by the Bihor County Council for healthcare and related services in the 2006-2019 period, both in relation to the actual amount (which increased from 100,000 lei in 2006 to 6,403,493 lei in 2019) and as a percentage of the total expenditures of the institution (from 0.06% in 2006 to 1.51% in 2019).

Bihor County Council's health expenditures decreased slightly in 2020 compared to 2019, amid the pandemic and the general decrease in the organization's expenditures; even if the decrease is not significant, it was on the background of a pandemic situation. The increase of public expenditures at county level in the field of healthcare is also reflected in the amount allocated per inhabitant, this constantly increasing in the analyzed period, from 2.9 lei/inhabitant in 2007 to 9.97 lei per inhabitant in 2020 (respectively more than 3 times).

#### Strategic perspectives and SWOT analysis

Adjacent to the data collected from the National Institute of Statistics, the websites of public organizations, the data received directly from various public institutions and the publicly available reports and analyses, the preliminary analysis is also based on the results of an opinion poll on quality of life in Bihor County. The data were collected between January and February 2021 through 850 telephone interviews (CATI method). The sample is simple random and the data were weighted on the basis of gender, age, education, occupation, ethnicity and type of locality (urban-rural).

The analysis of the data collected through the opinion poll indicates that 57% of the county's residents are satisfied or very satisfied with the medical services, 20% are dissatisfied or not at all satisfied with them and 21% are neither satisfied nor dissatisfied.

We note that the rural population seems to be more polarized regarding the quality of medical services, only 15% declaring themselves neither satisfied nor dissatisfied in the rural area, compared to 27% in the urban area (Table 17).

Satisfaction towards Medical Services	Total	Oradea vs others ATUs from Bihor County		Location	
		Oradea	The rest of the county	Urban	Rural
1 - not at all satisfied	10%	6%	13%	7%	14%
2	10%	12%	8%	11%	8%
3	21%	26%	18%	27%	15%
4	23%	27%	21%	27%	20%
5 - very satisfied	34%	28%	38%	27%	41%
I don't know / I don't answer	1%	1%	2%	1%	2%

**Table 17:** Satisfaction towards medical services in Bihor County

**Source:** Study on the Quality of Life in Bihor County, 2021

The analyses presented above help to identify some strategic perspectives/trends regarding the development of Bihor County from the perspective of the healthcare sector, as follows:

- After an initial decline in medical resources (medical units, number of beds, human resources, etc.) in the 1990s, they have stabilized since the mid-2010s;
- Increased involvement of the private sector in providing medical services, including solving health problems with a high degree of complexity/difficulty (oncology);
- Increasing local public spending on healthcare - higher importance of this area in local public policies;
- The existence of a rather high general level of satisfaction with the quality of medical services, with small differences between urban and rural areas;

### SWOT analysis

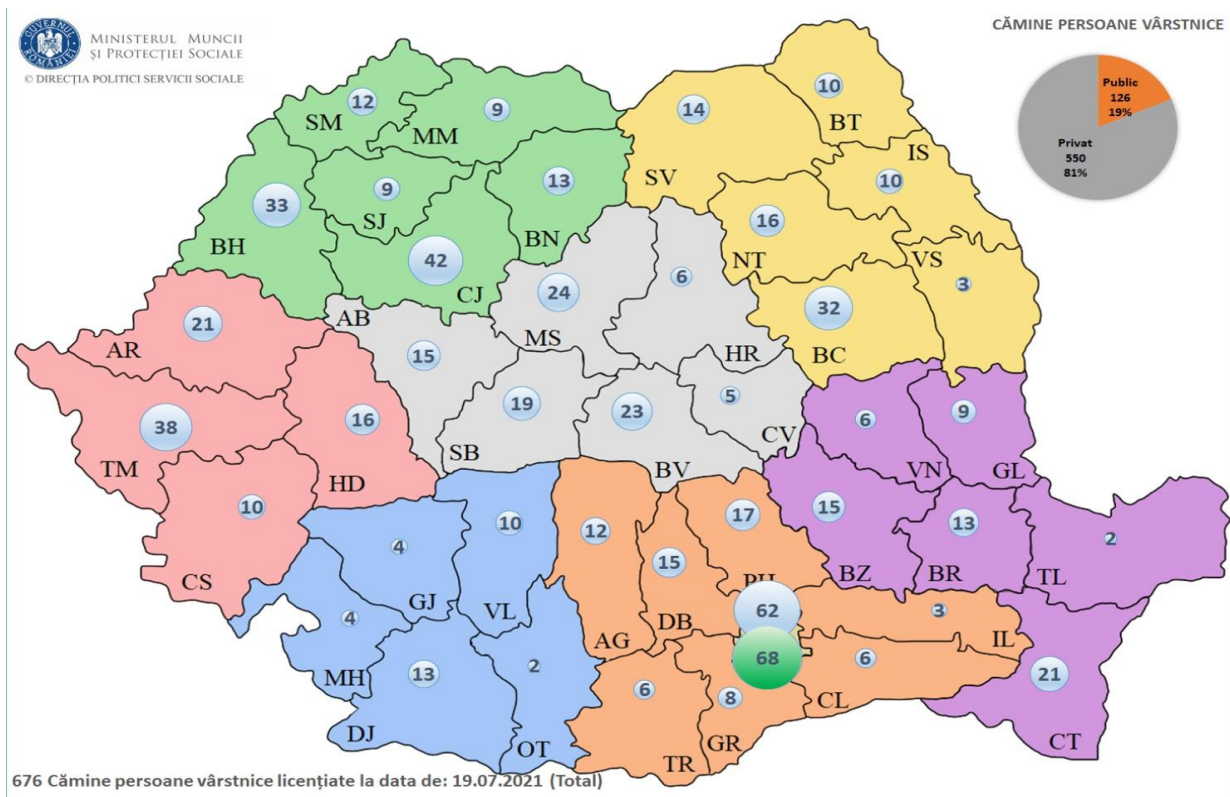
Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• The diversity of medical services (public and private) accessible to the community.</li> <li>• The emergence of new private healthcare units and facilities.</li> <li>• Increase in the number of doctors and other categories of healthcare personnel in the private sector;</li> <li>• Increasing local budget allocations in the field of healthcare;</li> </ul>	<ul style="list-style-type: none"> <li>• Demographic aspects (low birth rate, high migration) that can exert increased pressure on the healthcare system;</li> <li>• Disappearance of public medical services - lower financial accessibility of private services;</li> </ul>

Opportunities	Threats
<ul style="list-style-type: none"> <li>● European policies for healthcare protection and development of the infrastructure;</li> <li>● Availability of EU funds for the development of the healthcare protection segment;</li> <li>● Attracting private funds in order to establish public-private partnerships or to make private investments;</li> </ul>	<ul style="list-style-type: none"> <li>● Geographical location compared to other centers with higher attractiveness (which may become regional poles in certain areas - healthcare services);</li> <li>● Greater attractiveness of the private sector/external environment for doctors - the risk of them leaving the public system;</li> <li>● Lack of major/strategic investors in the healthcare field;</li> </ul>

## Social

### Aging population

The average annual (or quarterly for 2021) number of pensioners decreased both in the case of state social insurance pensions (from 156,806 in 2004 to 137,798 in 2020) and in the case of farmers' pensions (from 44,508 in 2004 to 5,338 in 2020), the decrease being much more pronounced in the case of the second category. On the other hand, the average monthly pension increased constantly in the analyzed period, from 253 lei in 2005 to 1,528 at the beginning of 2021 in the case of the state social insurance pension, respectively from 78 lei in 2005 to 633 lei in the 1st quarter of 2021 in the case of the farmer's pension.



**Figure 10:** Licensed Elderly Nursing Homes at county level (2021)

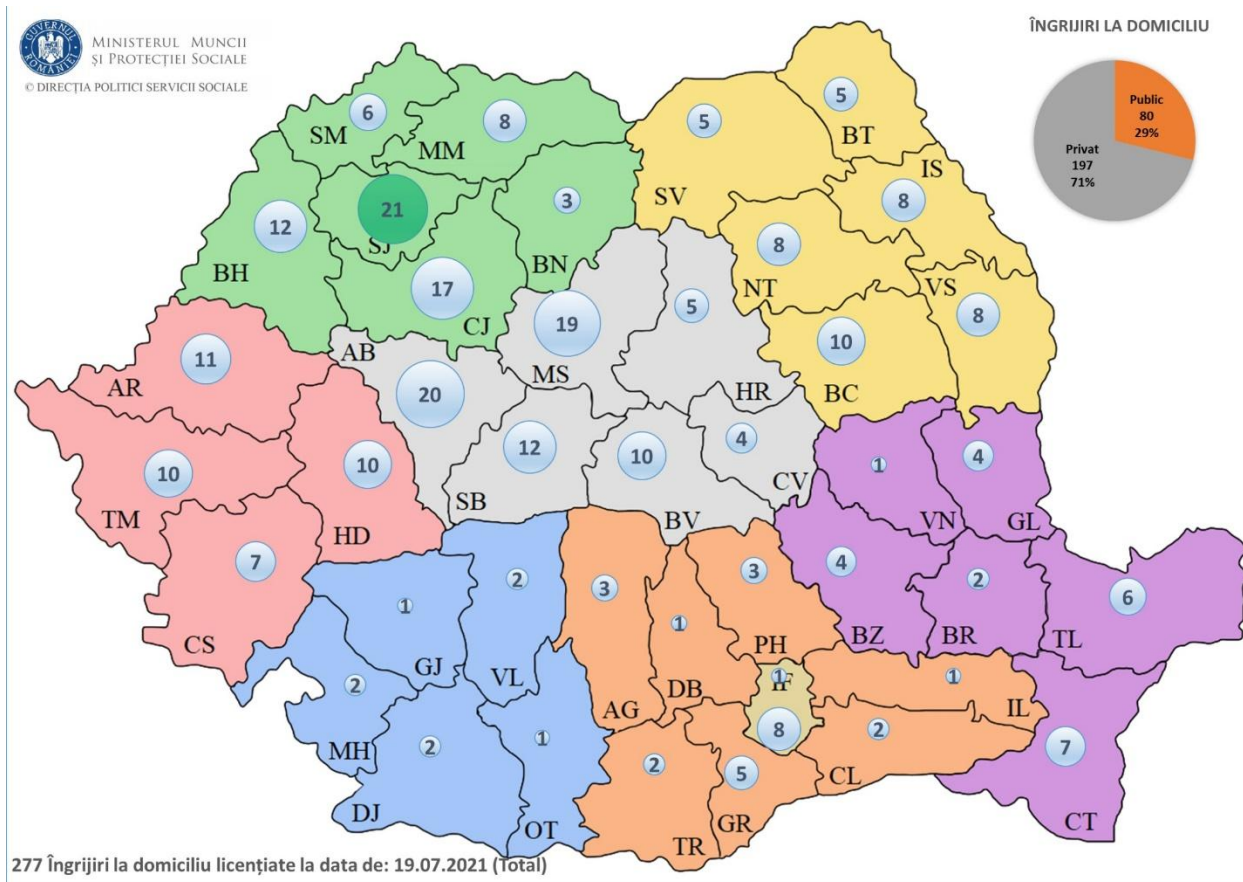
**Source:** Ministry of Labor and Social Protection

*\*Legend: number of licensed elderly nursing homes at national level (both public and private, at county level).*

According to official data from the Ministry of Labor and Social Protection, in 2021 there were 33 elderly nursing homes for the elderly licensed in Bihor County, most of which are managed by private providers. These facilities are located in both urban (small and large) and rural areas, thus facilitating the access to this type of services for all the inhabitants of the county.

### People with disabilities and chronic diseases

Adjacent to the elderly, another social group that needs support and assistance from social services refers to people with disabilities and/or chronic illnesses. In the case of the monthly allowance for people with severe visual impairments, the average number of beneficiaries decreased from 1,226 in 2011 to 999 in 2019, but there was also a maximum of 1,425 in 2017. Even if the number of beneficiaries decreased relatively constantly during the analyzed period, the amounts paid to them doubled in time, from 7,511,563 lei in 2011 to 15,068,753 lei in 2019, which may indicate an improvement (at least from a financial point of view) of the assistance provided.



**Figure 11:** Nationally licensed At-Home Care Services (2021)

**Source:** Ministry of Labor and Social Protection

*\*Legend: number of licensed at-home care services (both public and private, at county level).*

In Bihor County, 12 at-home care services are licensed (one service operates outside the county, but a provider from outside Bihor County also provides assistance in the county). At the regional level (see Figure 11) most such services are in Sălaj County (21), on the second place being Cluj County (17) and Bihor being on the third position.

The number of people receiving a monthly allowance for adults with severe disabilities remained relatively constant, noting a very small increase from 17,449 people in 2011 to 17,681 people in 2019 (the maximum of 19,108 people being reached in 2017). The amounts paid to these beneficiaries also increased constantly, almost doubling during this period, from 36,702,057 lei in 2011 to 63,833,608 lei in 2019.

The number of people who received a monthly supplementary personal budget for people with severe or moderate disabilities also decreased in the period under analysis, from 20,438 in 2011 to 18,793 in 2019, while the amounts paid increased from 17,410,100 lei to 27,713,937 lei.

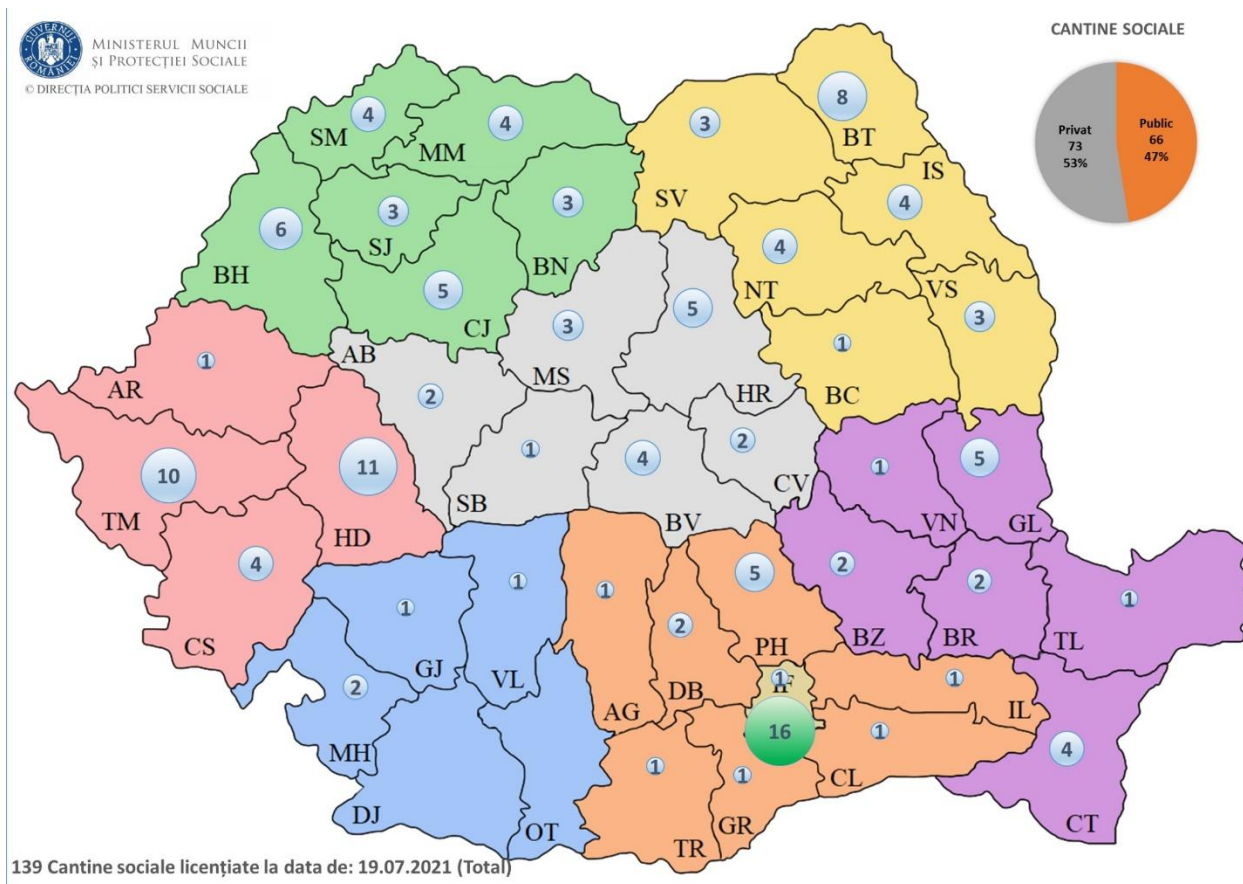
The number of beneficiaries of the monthly food allowance for people living with HIV or AIDS increased during the period under review from 20 beneficiaries (18 adults and 2 children) in 2011 to 77 beneficiaries (3 children and 74 adults) in 2019, most of them being from rural areas. Similar to other social benefits, the allocated amounts also increased constantly during the analyzed period, from 93,248 lei in 2011 to 451,177 lei in 2019.

### Guaranteed minimum income, social canteens and social protection for the unemployed

The average number of guaranteed minimum income social benefits paid (to families) decreased by almost a third in the 2011-2020 period while the total amounts paid remained relatively constant. However, the evolution during this period is not linear: the average number of guaranteed minimum income social assistance beneficiaries initially increased from 4,505 in 2011 to a maximum of 6,282 in 2014, and then decreased to 3,098 in 2020. The total payments made also increased from 10,644,128 lei in 2011 to 22,308,404 lei in 2016 (the increase being more than double), the amount then decreasing until 2020, when it reached 10,231,061 lei, almost at the initial value. Regarding the beneficiaries of social assistance to ensure the minimum guaranteed income, we note that single people are usually the most common category, followed by families of 2, 3 or 4 people.

The number of public social assistance canteens varied considerably during the period under review, from a minimum of 1 canteen in 1993 to a maximum of 10 in 2007, to be reduced and then stabilized at 2. Similar to the number of canteens, the capacity (measured by the number of seats available) of public canteens also ranged from 150 seats in 1993 to a maximum of 2,040 in 1998, to be reduced and then stabilize at 220 starting with 2016. The average daily number of beneficiaries of these services also varied, from 260 in 1994 to a maximum of 1,152 in 2000, to then be reduced to only 77 in 2017.

In 2021, in Bihor County there are 6 licensed social canteens, of which 5 are private and 1 public. At the level of the North-West region, most social canteens are in Bihor County, followed by Cluj (5 units) and Maramureş and Satu Mare (each with 4 canteens).



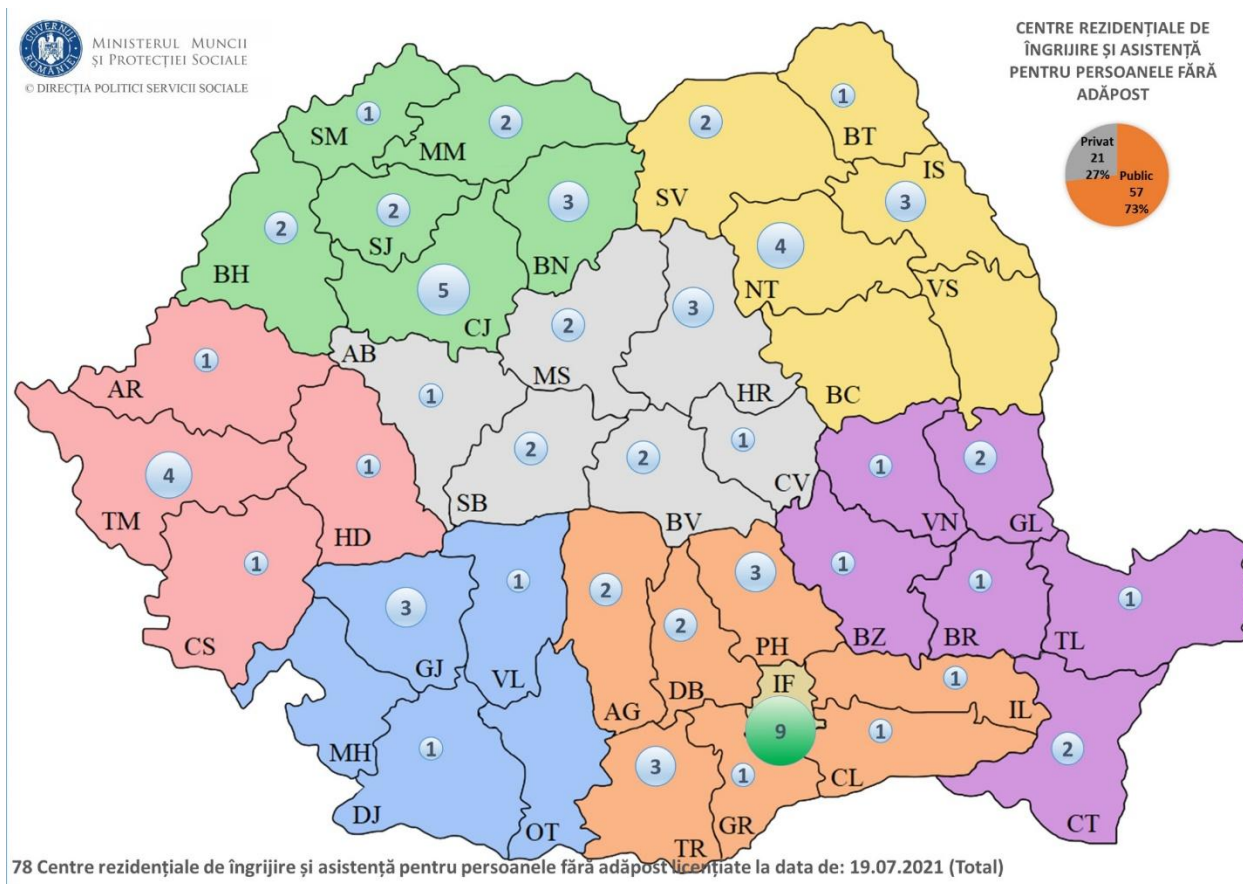
**Figure 12:** National licensed social canteens (2021)

**Source:** Ministry of Labor and Social Protection

*\*Legend: number of licensed social canteens (both public and private, at county level).*

In Bihor County, two residential care and assistance centers for homeless people are licensed, both located in Oradea. The Oradea Social Assistance Department administers a Night Shelter (located in Oradea, no. 8 Johann Guttenberg Street) which can provide assistance to a number of 47 beneficiaries. The General Directorate of Social Assistance and Child Protection of Bihor manages the Residential Center for assistance and social integration/reintegration for homeless people in Oradea (located on no. 3 Traian Lalescu Street) with a capacity of 50 people.

In the case of the North-West region, most such centers are found in Cluj County (5 centers), Bistrița-Năsăud being on the second place (with 3 centers) and Bihor (along with Sălaj and Maramureș) on the third place.



**Figure 13:** Nationally licensed residential care and assistance centers for homeless people (2021)

**Source:** Ministry of Labor and Social Protection

*\*Legend: number of licensed residential care and assistance centers for homeless people (both public and private, at county level).*

Expenditure on social protection for the unemployed increased almost 2.5 times in the 2008-2019 period, but decreased considerably in 2020. There are considerable differences between the evolutions of different categories of expenditure:

- The amount paid as unemployment benefit for unemployed people with work experience decreased from 10,629,149 lei paid in 2008 to 8,645,889 lei paid in 2019, but increased considerably in 2020 due to the pandemic and the cessation of activity in various fields.
- The amount paid as unemployment benefit for the unemployed without work experience decreased more than 3 times, from 657,923 lei in 2008 to 201,972 lei in 2019.
- The expenses incurred for the professional training of the unemployed also decreased more than 3 times, from 173,046 lei in 2008 lei to 47,632 lei in 2019.
- The amounts spent for the payment of graduates decreased to less than half, from 2,634,089 lei in 2008 to 1,122,397 lei in 2019, but the payments for stimulating graduates increased from 103,178 lei in 2008 to 122,600 lei in 2019.

- Payments for stimulating the unemployed who are employed (find a job) before the expiration of the unemployment period have increased almost 3 times, from 283,711 lei in 2008 to 851,154 lei in 2019.
- The amounts spent to combat social marginalization decreased from 184,540 in 2008 to 119,057 lei in 2018.
- Payments made to stimulate labor mobility decreased from 74,190 lei in 2008 to 65,848 lei in 2019.
- Payments made to stimulate employers who employ unemployed people from disadvantaged categories increased from 1,095,475 lei in 2008 to 1,341,104 lei in 2019.
- The amounts spent on activation premiums decreased from 351,984 in 2017 to 263,200 in 2019, but those related to relocation premiums increased considerably, from 9,534 lei in 2017 to 374,118 lei in 2009.

### Child care and birth stimulation

Social services and benefits for children are some of the main activities of Directorate General for Social Welfare and Child Protection Services Bihor (alongside other specialized organizations), while stimulating the birth rate is an essential element for ensuring the sustainability of any local community, especially in the current context in which migratory flows have been facilitated by Romania's accession to the EU (if we refer to external migration) or the emergence of growth poles (if we refer to internal migration). The total number of beneficiaries of the child allowance decreased from 114,692 people in 2011 to 105,187 in 2019; at the same time, the amounts paid increased more than twice, from 84,518,047 lei in 2011 to 186,138,201 lei in 2019, respectively 237,810,317 lei in 2020.

The average monthly number of people receiving the child raising allowance decreased from 7,045 in 2011 to 6,255 in 2020 (the minimum number of 6,184 beneficiaries being registered in 2016), while the number of people receiving the monthly growth incentive for children increased considerably, from 229 in 2011 to 3,088 in 2020. Similar to other social benefits, the amounts paid also increased, from 68,868,357 lei in 2011 to 146,585,681 lei in 2020 in the case of the child raising allowance, respectively from 455,686 lei in 2011 to 23,258,818 in 2020 in the case of the monthly incentive for raising a child.

The average monthly number of beneficiaries of the family support allowance has halved between 2011 and 2020, from 7,080 to 3,245, while the amounts allocated to these social protection measures have increased from 5,167,909 lei in 2011 to 7,609. 655 lei in 2020. In the case of the amounts actually allocated, we notice that the evolution was rather fluctuating, increasing until 2015 to the value of 12,450,137 lei, in order to later decrease.

We note that about 25% of the family support allowances were given to single-parent families, but also the fact that the actual number of children receiving this type of support is higher than the actual number of allowances offered. For example, the 7,080 allowances granted in 2011 provided support for 14,202 children, while the 4,276 allowances granted in 2018 provided support for 9,625 children. Another important aspect refers to the environment of origin of the children who benefitted from these allowances: if at the beginning of the period for each child in urban areas there were about 2 children in

rural areas who benefited from this form of support, in 2018 for each child in the urban area there were 6 children assisted through the allowance to support the family in the rural area.

### Public safety

The number of crimes (solved by the police) increased in several stages in Bihor County: in the period 1990-2000 the number increased almost fourfold (from 2,451 to 9,529), after 2000 until the middle of 2010 it fluctuated around 4-6,000 cases; since 2014 we observe a considerable increase, reaching 8,716 cases in 2019. Compared to the other counties included in the analysis, only Timiș (11,587) and Cluj (10,570) have more cases.

Regarding the number of persons definitively convicted by the courts, we note that although the number fluctuated considerably between 1990 and 2019 (the minimum being 765 in 2019 and the maximum 4,434 in 2004), there are no considerable differences between the initial and final situation: in 1990 886 people were definitively convicted and in 2019 there were 898 (here, however, there is an increase of over 100 people compared to the previous year). From a comparative perspective, in the counties of Maramureș, Cluj and Timiș the number of persons definitively convicted by the courts is higher.

Regarding the number of convicted/sanctioned persons in penitentiaries (including detention centers and educational centers), this indicator decreased by almost a third in Bihor County, from 997 in 2014 to 658 in 2019. From the perspective of this indicator, we find several cases in Timiș County (820 in 2019) and Cluj (894).

Referring to the crime rate (the number of people definitively sentenced per 100,000 inhabitants), in Bihor County (160) the situation is better than at the national (174) or regional (199) level. At county level, the rate fluctuated considerably, between a maximum of 706 in 2004 and a minimum of 122 in 2009, to stabilize below 200 starting with 2016. Compared to the other counties from the North-West Region, in 2019, the crime rate was lower than in Bihor only in Satu Mare county (142).

From the perspective of the crime rate (respectively the number of crimes solved by the police per 100,000 inhabitants) the situation in 2019 in Bihor County (1,554) is better than the national level (1,821) but not compared to the regional one (1,441). Compared to the other counties from the region, we find lower crime rates in Satu Mare (1,081), Sălaj (1,215), Maramureș (1,334) and Cluj (1,492). Referring to the evolution over time, it can be observed that the crime rate in Bihor County has a rather increasing trend since 2016.

### Local public spending on social assistance

The expenses with social assistance made by the Bihor County Council varied in the 2008-2020 period, from a minimum of 1,420,676 lei (or 0.61% of the total expenditures) in 2008 to a maximum of 12,003,754 lei (or 4.28% of total expenditures) in 2015. In 2019, social assistance expenditures decreased from 10,130,983 lei (or 2.64% of total expenditures in 2018) to 8,063,567 lei (or 1.91% of the total expenditures), the decrease being accentuated in 2020, when social assistance

expenditures of the Bihor County Council were of 5,825,867 lei, representing 1.39% of the total expenditures.

Local public expenditures in the field of social assistance also varied regarding the amount allocated per inhabitant, this constantly varying in the analyzed period, from a minimum of 2.27 lei/inhabitant in 2008 to 19.3 lei/inhabitant in 2014; in 2020, the most recent year for which the data were centralized, public expenditures on social assistance at county level were 9.44 lei/inhabitant, which decreased by almost a third compared to the previous year.

### Strategic perspectives and SWOT analysis

The analysis of the data collected through the opinion poll indicates that the inhabitants of the county are 38% satisfied or very satisfied with social services, 29% are dissatisfied or not at all satisfied with them, 24% are neither satisfied nor dissatisfied while 9% of the respondents did not answer this question.

Satisfaction towards Social services	Total	Oradea vs others		You live in an urban or rural area?	
		Oradea	The rest of the county	Urban	Rural
1 - not at all satisfied	18%	8%	24%	10%	26%
2	11%	10%	11%	10%	11%
3	24%	27%	22%	29%	18%
4	24%	30%	21%	28%	21%
5 - very satisfied	14%	15%	13%	13%	15%
I don't know / I don't answer	9%	10%	9%	10%	9%

**Table 18:** Satisfaction towards social services

**Source:** Study on the Quality of Life in Bihor County, 2021

The analyses presented above help to identify some strategic perspectives/trends regarding Bihor County:

- Increasing local public spending in the field of social assistance;
- Decreasing or stable number of beneficiaries of social assistance services (elderly, disabled and chronically ill) provided at the local level in the context in which the amounts allocated to them have increased steadily;
- The number of people receiving the child raising allowance decreased from 7,045 in 2011 to 6,255 in 2020, while the number of people receiving the monthly child growth incentives increased considerably, from 229 in 2011 to 3,088 in 2020;
- The average monthly number of beneficiaries of the family support allowance has halved between 2011 and 2020, from 7,080 to 3,245; there are considerable differences between urban and rural areas: in 2018 for every child in urban areas there were 6 children assisted through the allowance to support the family in rural areas;
- The average number of guaranteed minimum social income benefits paid (to families) decreased by almost a third in the period 2011-2020 (from 4,505 to 3,098);

- Expenditure on unemployment benefits (for the unemployed and inexperienced), vocational training, graduate pay, payments for combating social marginalization, payments for stimulating labor mobility and employers employing disadvantaged unemployed decreased in 2015 -2019;
- The inhabitants of Oradea and those in urban areas generally seem to be more satisfied with the quality of social services than those in rural areas;
- Higher satisfaction with personal safety and the safety of personal belongings in Oradea compared to the rest of the county, and in urban areas (in general) compared to rural areas;

### SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>● Increasing local budget allocations in the field of social assistance;</li> <li>● The diversity of local public services involved in solving social problems of the community;</li> <li>● The multitude of public and private actors involved in the provision of specific social services;</li> <li>● Existence of non-governmental and religious associations active in the field with specific activities;</li> <li>● Collaboration between the public and the private sector in the field of social assistance;</li> <li>● Decrease of the number of beneficiaries for certain social assistance services, in the conditions in which the amounts allocated remained the same or increased;</li> </ul>	<ul style="list-style-type: none"> <li>● Demographic issues that may exert extra pressure on the social assistance system, especially from the perspective of caring for the elderly or children left in the country after the migration of parents;</li> <li>● Differences between urban and rural environment (less satisfied with the social services received/available);</li> <li>● Higher risk of impoverishment in rural areas - higher impact on children;</li> <li>● The existence of marginalized communities;</li> <li>● Less sense of security in rural areas.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>● European policies for social protection and the development of social infrastructure;</li> <li>● Availability of EU funds for the development of the social protection system and the increase of the quality of services;</li> <li>● Providing specific services through public-private partnerships;</li> </ul>	<ul style="list-style-type: none"> <li>● Increasing disparities between rural and urban areas;</li> <li>● Potential economic crisis with long-term effects, generated by the current public health crisis;</li> </ul>

## Culture, creative industries and multiculturalism

The cultural and creative sectors are an important in defining and understanding regional and local economic development based on unique resources, creativity and knowledge. They can be an almost inexhaustible resource for urban regeneration and economic development for the community, they contribute to the increase of quality of life, but they are often ignored and unused at their true potential.

The Integrated Strategy for Sustainable Development of Bihor County 2021-2027 is corroborated with the Cultural Strategy of Bihor County for the 2021-2027 period by the proposed vision (which expressly mentions the goal of having an active cultural life) but also by strategic objective no. 6 (Development of the cultural sector and creative industries in connection with the capitalization of cultural heritage), the specific objectives related to it, respectively the directions of actions and indicative actions proposed to achieve the aforementioned strategic objective.

### Culture

#### Institutions and cultural heritage

Before analyzing the specificity and cultural potential of Bihor County, we must mention the existence of specific institutions with general competencies in their coordination and capitalization of cultural potential, namely: (a) Bihor County Center for Preservation and Promotion of Traditional Culture and (b) Bihor County Council for Culture. In addition to the natural heritage, Bihor County benefits from a consistent built heritage, consisting of 431 built heritage monuments, of which 170 are archaeological sites and monuments, 221 are architectural monuments and ensembles, and 40 are memorial houses and fine art monuments.

A considerable resource of the county consists in the monasteries and places of worship representative for several religions:

- The Monastery of Voivozi (11th-12th centuries), the Reformed Church of Remetea (13th century), the Cathedral of the Orthodox Episcopate of Oradea and Bihor, the Church of St. Nicholas (former Greek Catholic Cathedral);
- Wooden churches, built or rebuilt during the 18th and 19th centuries. Today, 61 wooden churches are still preserved, all of them being declared architectural monuments.

One of the important attractions of Bihor County is the intangible heritage consisting of customs and traditions, traditional cultural events, architecture, folk costumes and traditional crafts. Among the cultural events with an annual periodicity we mention: the decoration of the Easter egg and the drumming rhythms of Drăgoteni - Remetea commune, Rieni, Dobrești, Lunca, Budureasa; lighting solar fires for the living and the dead: Campani; Șuști (Lunca commune); Săliște de Vașcău (Criștioru de Jos commune); the feast of Sângeorz (Saint George) in Vașcău and the Sângiorz fair in Beiuș, Brădet, Chișcău, Măgura.

Also, there are annual country festivals: Acacia Days in Bloom (Mihai's Valley), Salt Customs Fair (Vadu Crișului), Horea's Spring (Criștioru de Jos: Poiana and Săliște de Vașcău), Autumn on the Valley Ierului

(Săcuieni), Wine and brandy festival (Oradea Crișilor Country Museum), Bihor folk song, dance and dress festival (Oradea Crișurilor Country Museum), Festival of sacred music and Christmas and New Year customs (Oradea, Beiuș ), The Fair of the Popular Craftsmen of Romania (Museum of the Land of the Criș or the Oradea Fortress), the Folklore Festival of the Roma and the folkloric and religious celebration (Kirchweih) of the ethnic Germans (Palota).

The crafts, very well represented in the past, are still preserved, especially in the rural area of the county, as follows: decorating Easter eggs; pottery - white and red pottery; carpentry - making peasant furniture; fabrics - making popular stitches and embroidery; rotated; rattan braids and twigs; stone and marble carvers; luthiers; goldsmiths; wood carvers. There are active craft centers in the field of pottery (Beiuș-Leheceni, Săliște de Vașcău, Criștioru de Jos, red pottery; Crișul Repede - Vadu Crișului, white pottery), in the field of interior textiles (Chișcău, Pietroasa, Remetea - Beiuș, Bratca; - Crișul Repede), wooden dowry boxes (Budureasa), processing (Borș, Otomani - Crișul Repede and Barcău - Crasna), for wickerwork (Salonta - Crișul Repede) and poached eggs (Drăgoteni, Remetea - Beiuș).

### Libraries

The number of libraries decreased constantly during the analyzed period, from 521 such cultural units in 1990 to 273 in 2019, the decrease being of almost 50%. The number of specialized libraries has decreased more than 5 times (from 57 in 1993 to 11 in 2019), that of school libraries by a third (from 337 in 1990 to 216 in 2019 - here the decrease can be partially explained and by the closing of some schools or merging in rural areas), the number of public libraries has decreased more than 3 times (from 134 in 1990 to 42 in 2019), and the number of communal/rural libraries has decreased almost 3 times (since 86 in 1990 to 32 in 2019). However, there are also positive aspects regarding these cultural resources: the number of municipal and city libraries has increased from 8 in 1990 to 9 in 2004), and the number of libraries belonging to higher education institutions has increased from 1 to 4.

Even though the number of libraries decreased by almost 50% between 1990 and 2019, the total number of existing volumes decreased by only 15%, from 4,164,529 volumes in 1990 to 3,513,260 volumes in 2019; we note that most volumes are found in schools and public libraries. The number of volumes in the libraries of higher education institutions increased from 114,636 in 1990 to 571,036 in 2019, in the county library the number increased marginally from 578,130 to 586,857. On the other hand, between 1990 and 2019 the number of volumes in specialized libraries decreased from 196,010 to 82,055, the number of volumes in school libraries decreased from 1,720,903 to 1,661,664, the number of volumes in public ones decreased from 2,132,980 at 1,198,505, in the city and municipal libraries the number of volumes decreased from 393,920 to 367,620 while in the communal/rural libraries the number of volumes decreased from 931,689 in 1990 to 244,028 in 2019.

Referring to the use of these cultural resources, a downward trend seems to be present in the number of users, which decreased from 187,475 in 1990 to 67,853 in 2019, the maximum of 200,160 users being reached in 2001. Obviously, we should not ignore the possibility that the decrease in use is a normal development for this period, with community members looking for information in other sources,

especially with the development of new information technologies, the expansion of Internet networks or the coverage of mobile internet and the overall reduction of these costs for consumers.

### **Movie theaters**

The number of cinemas and cinematographic installations decreased considerably during the analyzed period, from 101 reported in 1990 only to 1 reported in 2019; the decrease is substantial, but this can be partly explained by the decommissioning of old technologies, the decommissioning of such units that have become non-functional (for example, those in rural cultural homes) or changes in the conditions for reporting to the National Statistics Institute. The number of seats in these units also decreased at the same time, from 6,060 seats reported in 1990 to 685 seats starting with 2017 (there is also a considerable increase in the quality of the seats/conditions between the two periods).

Even though the number of cinemas and film installations fell to 1% between 1990 and 2019 and the number of seats fell to 11% of the initial capacity, we note that the annual number of cinemas shows fell by only about a third, from 36,071 in 1990 to 13,032 in 2019. We also note that the annual number of spectators decreased from 2,430,000 in 1990 to 286,000 in 2019, the decrease (89%) being proportional to the capacity of cinemas. Although the use of this cultural resource has been significantly reduced, this can be partly explained by the development of new information technologies and specific cable or online television services or by the change in the measurement/reporting of these types of activities. The fact that the only locality in the county that benefits from this type of cultural services is the municipality of Oradea can be regarded as a limitation in the development of the cultural sector.

### **Entertainment institutions**

Unlike the first 2 types of cultural units analyzed (respectively libraries and cinemas), the number of institutions and companies of shows or concerts increased in the analyzed period from 6 to 8: the number of theatres increased from 2 to 3; the number of puppet and puppet art units (including theater sections) remained constant (2); the number of philharmonics and symphony orchestras remained constant (1); data for the popular orchestra have not been reported since 2006, but over time two other types of cultural units have emerged.

Although the number of cultural units has increased, the number of shows and concerts has decreased by almost a third, from 1,055 in 1990 to 712 in 2019. However, we note that this number of shows seems to have stabilized around 700 since 2015.

The number of seats in the performance and concert halls decreased marginally, from 1,344 in 2005 to 1,232 in 2019. The number of spectators and listeners at artistic performances decreased by almost two thirds in the analyzed period, from 292,967 spectators registered/reported in 1990 to 135,792 in 2019.

### **Museums**

The number of museums and public collections has varied considerably over the period under review, from 14 in 1990 to a minimum of 11 (over several periods, including in 2014) for it to

increase again in the last two years; in 2020, 20 such units were reported to the National Statistics Institute, of which 15 are considered to be main units.

According to the classification of museums by their importance at the territorial level, visitors have access to museums of regional, county and local importance, both in urban and rural areas, but the highest concentration can be seen in Oradea. Some relevant examples for each category are presented below.

Museums of regional importance, such as:

- The Museum of the Land of the Criş in Oradea, founded in 1971, is housed in a monumental architectural building, baroque palace, built in 1762 (arch. Anton Frantz Hillebrandt), the former headquarters of the Roman Catholic Episcopate until 1971. Today the museum has sections of: history, art, ethnography, natural sciences, subordinate memorial museums: "Iosif Vulcan" and "Ady Endre", restoration laboratories: painting, metal, textiles, ceramics, bone, leather and ethnographic objects.

Museums of county importance, such as:

- The "Ady Endre" Memorial Museum in Oradea inaugurated in 1955 is housed in the building of the former "Müller" café; the emphasis is on the presentation of the poet's life and activity, reconstructing, in the two side rooms, the atmosphere of the newsrooms and cafes of those times.
- The "Aurel Lazăr" Memorial Museum in Oradea, famous for the fact that here, on October 12, 1918, the text of the "Declaration of National Independence of the Romanians from Transylvania, Banat, Crişana and Maramureş" was written.
- The "Iosif Vulcan" Memorial Museum in Oradea was established in the house where Iosif Vulcan lived (1841 - 1907), Romanian publicist, cultural animator, founding director of "Familia" magazine, and includes autograph letters from Iosif Vulcan's collaborators, photocopies, dramatic works by Iosif Vulcan, materials illustrating the cultural life of Transylvania, antique furniture, etc.

Museums of local importance, such as:

- The Tinca Museum of Natural Sciences (Tinca, Tinca commune), founded in 1956, has materials from field research, carried out by its founder (Csák Coloman) in the Crişului Negru area. The collection is structured in two areas: geology and zoology.
- The Beiuş Municipal Museum in Beiuş, founded in 1959, is representative of the history and ethnography of the Beiuş-Vaşcău depression and the upper basin of the Crişul Negru. The museum currently has a department of ethnography and folk art.

A positive element in the cultural life of the county refers to the increasing number of visitors to museums and public collections, from 229,136 in 2005 to 603,304 in 2019. We also note the opening of new museums/collections in Remetea since 2018 and Valea Lui Mihai and Salacea since 2019. The number of

visitors has increased in recent years in the case of museums and public collections in almost every territorial administrative unit which has such facilities in the county, the only exception being Tinca where the number has remained constant around 120-130 visitors.

### Creative industries

According to the document White Paper on Cultural and Creative Industries in Romania (2016), the creative sectors are of three types: (a) Culture and arts - are characterized by non-industrial cultural and artistic activities; (b) Cultural sectors - these result in cultural expression, and (c) Creative sectors - sectors that are oriented towards the principle of functionality, but have a cultural dimension. The creative and cultural industries bring together multiple subdomains, presented below: Libraries and archives; Cultural heritage; Crafts and handicrafts; Performing arts; Architecture; Book and press; Visual arts; Audiovisual and multimedia; Advertising; IT, software and electronic games; Research and Development.

Within the RCIA project - Regional Creative Industries Alliance, a preliminary selection of creative industries was made, based on the relevance of NACE codes at regional level, taking into account the specificity of the economic activities they describe in relation to the cultural and creative component, but also the practice observed among other research endeavors. The table below details the NACE codes representative for Cultural and Creative Industries (CCI) and the sectors to which they belong.

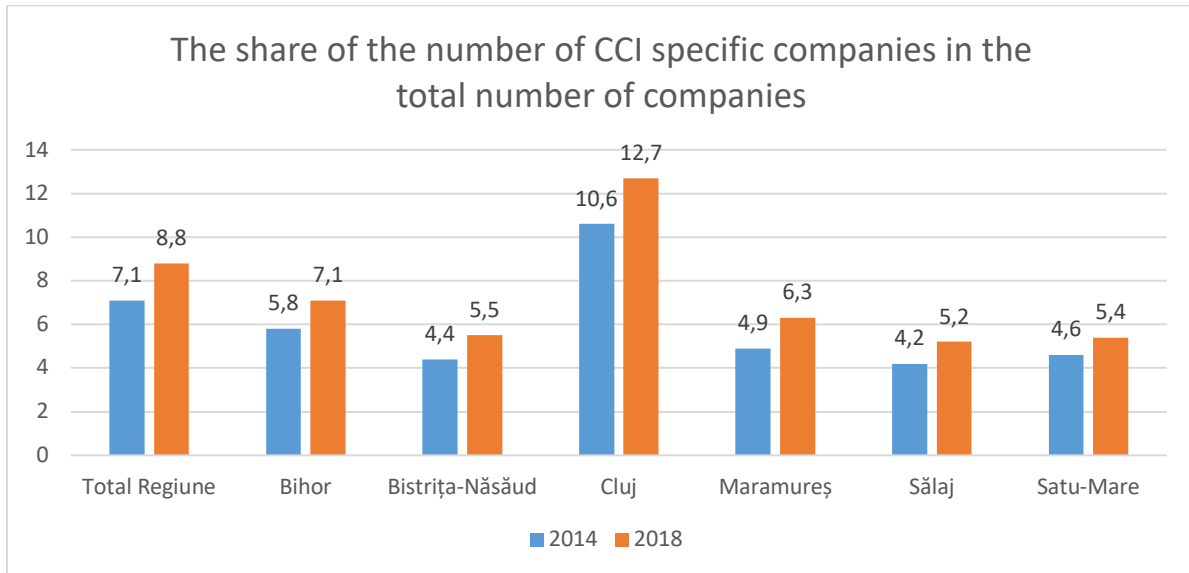
	CCI specific activities	NACE Codes
1	Archives and Libraries	9101
2	Books and Press	1811; 1812; 1813; 1814; 1820; 5811; 5812; 5813; 5814; 5819; 4761; 4762
3	Visual arts (fine arts, photography, design)	7410;7420; 8552
4	Performing arts (music, dance, theater, combined arts and other live performances)	7430; 9001; 9002;9003; 9004
5	Audiovisual and media (film, radio, television, video, phonograms, multimedia works)	2680; 4763; 5911; 5912; 5913; 5914; 5920; 6010; 6020; 6209; 6391; 7722
6	Software, IT, games	5821; 5829; 6201; 6202; 6311; 6312
7	Architecture	7111
8	Advertising	7311; 7312
9	Cultural heritage (museums, historical monuments, archeological sites, intangible heritage)	9102; 9103; 9104
10	Crafts	1629; 2313; 2341; 2349; 3212; 3213; 3220; 3240; 3299

**Table 19:** NACE Codes for Cultural and Creative Industries (CCI)

**Source:** Regional Alliance of Creative Industries, Analysis of Cultural and Creative Industries in the North-West Region, 2019, pp. 8-9

The percentage of Cultural and Creative Industries (CCI) specific companies in the total number of existing companies in Bihor County increased from 5.8% (925 companies) in 2014 to 7.1% (respectively 1,301 companies) in 2018 (see Figure 14); the increase in the number of companies with this specific in Bihor County was 40.6% from 2014 to 2018.

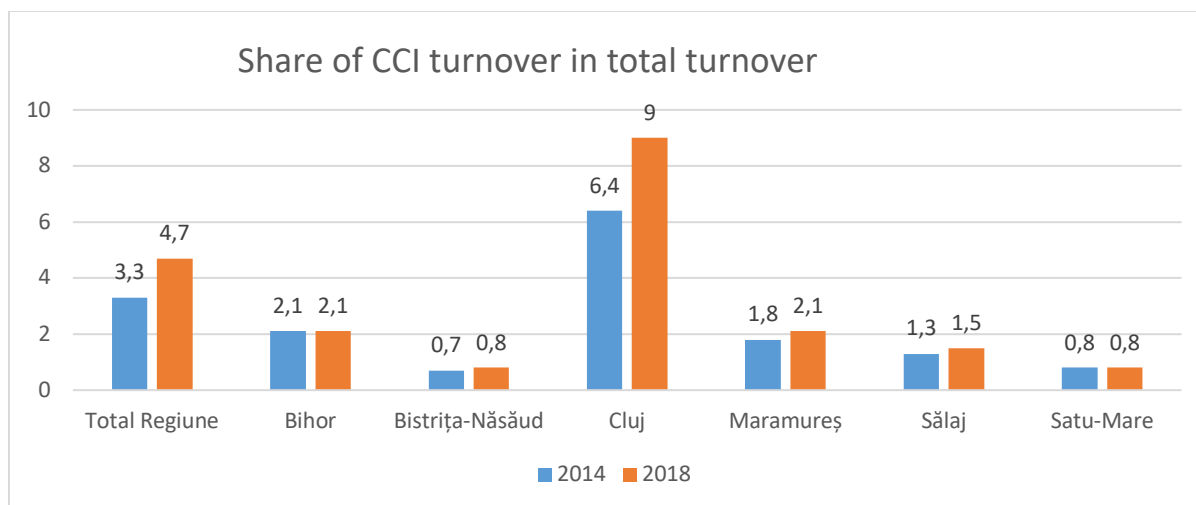
At the regional level, Bihor County is the second most important actor in terms of CCI specific companies in the total number of existing companies, following Cluj County.



**Figure 14:** The share of the number of CCI specific companies in the total number of companies, distribution by counties, 2014 and 2018

**Source:** Adapted from the Regional Alliance of Creative Industries, Analysis of Cultural and Creative Industries in the North-West Region, 2019, p. 16

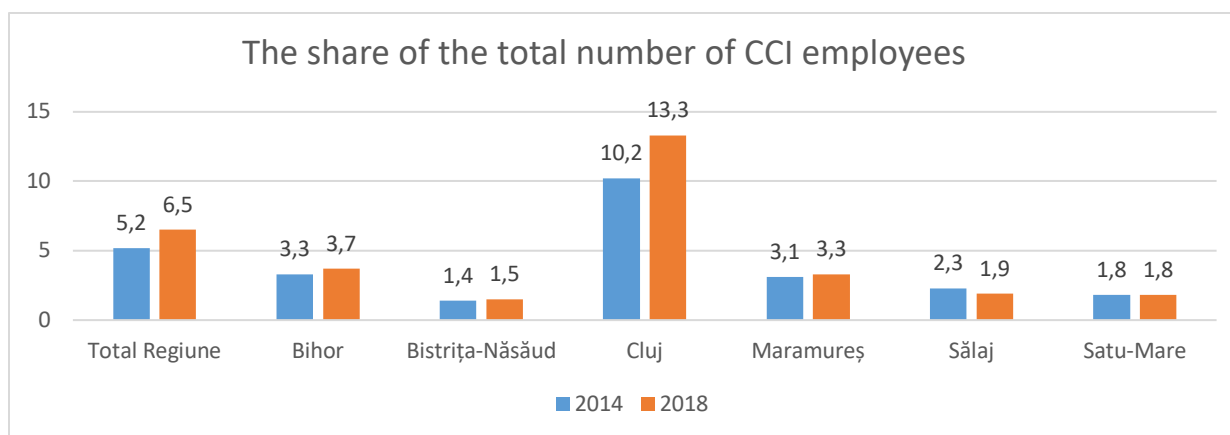
Compared to the total turnover, we note that the CCI have a very small share, of 2.1%, a share that remained constant between 2014 and 2018 (see Figure 15); even if the actual turnover of these companies increased by 29.7% in the analyzed period, the increase is identical to that of the total turnover at the county level. If in 2014, at regional level, Bihor County was the second most important actor from this perspective (again after Cluj County), we notice that in 2018 it is equal to Maramureș County.



**Figure 15:** The share of CCI turnover in total, distribution by counties, 2014 and 2018

**Source:** Adapted from the Regional Alliance of Creative Industries, Analysis of Cultural and Creative Industries in the North-West Region, 2019, p. 22

The share of the number of CCI employees in the total number of employees increased from 3.3% (4,042 employees) in 2014 to 3.7% (4,588 employees) in 2018 (see Figure 16). At the level of the North-West region, only in Cluj County there are more employees involved in CCI out of the total number of employees.



**Figure 16:** The share of the total number of CCI employees, by counties, 2014 and 2018

**Source:** Adapted from the Regional Alliance of Creative Industries, Analysis of Cultural and Creative Industries in the North-West Region, 2019, p. 28

### Local public spending on culture, recreation, religion

The expenses made by the Bihor County Council for cultural, recreational and religious activities varied in the analyzed period, from a minimum of 29,092,037 lei (or 12.04% of the total expenses) in 2010 to a maximum of 99,440,760 lei (or 23.86% of total expenditure) in 2020.

Local public expenditures for cultural, recreational and religious activities also varied when taking into account the amount allocated per inhabitant, this constantly increasing in the analyzed period, from a minimum of 46.56 lei/inhabitant in 2010 to 161.27 lei/inhabitant in 2020.

### Multiculturalism

The multicultural character of Bihor County is revealed, without any doubt, by the data from the 2002 and 2011 census: two thirds of the county's population is Romanian, a quarter of the population is Hungarian, about 6% part of the Roma ethnic group, but there are also representatives of other ethnic groups such as Germans, Ukrainians or Turks.

### Strategic perspectives and SWOT analysis

In order to complete the previous analysis of the cultural infrastructure, the opinion poll on the quality of life also referred to the actual use of these facilities by the inhabitants of Bihor County. The results of the opinion poll show that:

- 56% of the inhabitants of the county never went to the theater, while 33% of them went only 1-3 times a year;
- 47% of the inhabitants of the county never participated in concerts, while 40% of them went only 1-3 times a year;
- 63% of the inhabitants of the county never went to an art gallery, while 29% of them only went 1-3 times a year;
- 47% of the inhabitants of the county never went to a museum, while 43% of them only went 1-3 times a year;
- 64% of the inhabitants of the county never went to a library, while 22% of them only went 1-3 times a year;
- 35% of the inhabitants of the county never went to a bookstore, while 27% of them only went 1-3 times a year;
- 59% of the inhabitants of the county never went to a cinema, while 27% of them only went 1-3 times a year;
- 54% of the inhabitants of the county never went to an event organized within the house of culture, while 35% of them only went 1-3 times a year;
- 58% of the inhabitants of the county never went to another type of cultural event, while 29% of them only participated to such events 1-3 times a year;

The analysis of the data collected through the opinion poll indicates that 33% of the inhabitants of the county are satisfied or very satisfied with the cultural activities, 41% are dissatisfied or not at all satisfied with them, 23% are neither satisfied nor dissatisfied while 3 % of respondents did not respond.

Satisfaction towards cultural activities	Total	Oradea vs others		Are you living in the rural or urban area?	
		Oradea	The rest of the county	Urban	Rural
1 - not at all satisfied	27%	10%	36%	15%	39%
2	14%	9%	17%	12%	16%
3	23%	27%	21%	28%	18%
4	16%	25%	11%	21%	11%
5 – very satisfied	17%	23%	13%	20%	14%
I don't know / I don't answer	3%	5%	2%	5%	2%

**Table 20:** Satisfaction towards cultural activities

**Source:** Study on the Quality of Life in Bihor County, 2021

43% of the inhabitants of the county are satisfied or very satisfied with the leisure and recreational opportunities, 33% are dissatisfied or not at all satisfied with them, 22% are neither satisfied nor dissatisfied while 2% of the respondents did not answer.

Degree of satisfaction with leisure opportunities	Total	Oradea vs others		Are you living in the rural or urban area?	
		Oradea	The rest of the county	Urban	Rural
1 - not at all satisfied	17%	9%	21%	13%	21%
2	16%	8%	21%	10%	22%
3	22%	18%	24%	22%	22%
4	21%	31%	15%	26%	16%
5 - very satisfied	22%	32%	17%	27%	18%
I don't know / I don't answer	2%	3%	2%	3%	2%

**Table 21:** Degree of satisfaction with leisure opportunities

**Source:** Study on the Quality of Life in Bihor County, 2021

The analyses presented above help to identify some strategic perspectives/trends regarding the development of Bihor County:

- Decrease in the number of libraries, the number of volumes and the number of users/readers;
- Decrease in the number of cinemas, seats, shows and the number of spectators;
- Decrease in the number of shows and concerts, the number of seats in performance halls and concerts and the number of spectators and auditors at artistic performances;
- Increase in the number of museums and public collections, as well as the number of visitors;
- Bihor County is the second player/actor in the field of creative and cultural industries in the North-West region (after Cluj County) in terms of the number of companies with this specificity, turnover and number of employees;
- Border county with a strong multicultural character.

## SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>● Multicultural character of the county;</li> <li>● Developed Cultural and Creative Industries sector in terms of the number of companies, turnover and number of employees;</li> <li>● Diverse cultural heritage (general and built);</li> <li>● Positive evolution in the field of museums and the use of these resources;</li> <li>● Cultural and recreational activities offered by the private sector, non-governmental or religious organizations;</li> <li>● Rich and diverse natural heritage (thermal waters, karst relief, nature reservations);</li> <li>● Extensive network of tourist information centers;</li> </ul>	<ul style="list-style-type: none"> <li>● Negative developments related to certain cultural resources (libraries, cinemas, entertainment institutions) and their usage by the community;</li> <li>● Lack of centralization of information on cultural leisure opportunities/poor coordination of the actors involved;</li> <li>● Lack of a single site/information point (if it exists, it is not visible online);</li> <li>● Poor coverage of cultural and recreational services in rural areas;</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>● Potential for collaboration with actors from abroad/common events, especially considering that Bihor is a border county and its multicultural character;</li> <li>● Strengthening the collaboration with private actors in the field;</li> <li>● Potential for the increase of Cultural and Creative Industries, especially of the activities favored by the multicultural character and proximity to the border;</li> <li>● National and especially international promotion;</li> </ul>	<ul style="list-style-type: none"> <li>● The potential of Cluj County and especially of Cluj-Napoca municipality to coagulate/attract and capture resources and activities specific to the creative cultural industries;</li> <li>● Competition from outside the country;</li> <li>● The proximity of the border and the highway can be an advantage from an economic point of view (by reducing the time and cost of transport) but can be a threat to the local cultural market, the county residents having easy access to events outside the country.</li> </ul>

## Spatial planning, urban and community development

### Introduction

This section addresses several topics and sub-topics that fall within the scope of spatial or territorial planning. According to the team which implements this county development strategy, spatial or territorial planning is an extended and integrative concept, which also brings together concerns related to urban development/urbanism. In addition, this section addresses issues related to the urban-rural relationship and the problems of underdevelopment of the rural environment. According to a World Bank study, spatial planning has different meanings in different countries. For example, in some countries, spatial, territorial, and town planning mean the same thing, while in others they have completely different meanings. For example, in France, "aménagement du territoire" focuses on large-scale regional and national planning. In the Netherlands, the term "ruimtelijke ordering" refers to the management of

insufficient land resources. In the US, "planning" is largely associated with urban planning, and "territorial development" focuses on large-scale (regional, national) planning. In Slovenia, "spatial planning" refers primarily to zoning. The same study pertinently notes that understanding the spatial planning system in Romania is more difficult due to some confusion about terminology. Thus, while spatial planning would normally cover all levels of planning (national, regional and local), in official translations, spatial planning is often used to refer to the spatial planning of everything above the urban level<sup>28</sup>. Therefore, as mentioned earlier, in this section we use the term spatial planning to include both the concept of spatial planning and urbanism/urban development.

### The network of localities of Bihor County

#### **European Union strategic framework through which cities become partners in the European urban policy process**

The development of Romanian municipalities and cities must be understood and placed in the broader strategic context of the priorities and scenarios in the field of spatial and urban planning at the level of the European Union. For the last thirty years, the European Union has understood that Member States cannot be the only actors in planning urbanization and implementing policies that address urban areas. Over the years, the European Union has been able to adopt city policies, even in the absence of an explicit legal basis, since the launch of the urban pilot projects and the URBAN initiative in the 1990s<sup>29</sup>. Cohesion policy, the main European policy aimed at reducing disparities between European regions, has been the main driver of urban policies. In 2007, the Treaty of Lisbon introduced the objective of territorial cohesion, which formalized the EU's involvement in urban issues. The EU Urban Agenda, adopted in 2016 and also known as the Amsterdam Pact, was the last step in this long process<sup>30</sup>.

The urban agenda requires an integrated and coordinated approach to address the EU's urban dimension. It is a new multilevel (multilevel) working method that promotes cooperation between Member States, cities, the European Commission and other stakeholders, to stimulate growth, viability and innovation in European cities and to identify and successfully address social challenges. By focusing on concrete priority issues through dedicated partnerships, the Urban Agenda aims to improve the quality of life in urban areas. Based on the principles of subsidiarity and proportionality, the Agenda focuses on the three key pillars of EU policy-making: better regulation, funding and knowledge<sup>31</sup>.

The urban agenda was not just about creating a supranational mechanism for coordinating urban policies. It has also created the possibility for increased involvement of cities in the Member States in urban public policy processes. This is closely linked to the existing democratic deficit at EU level, in which the direct involvement of cities means that the EU can be closer to the needs of its citizens and can have a significant impact on their quality of life.

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<sup>28</sup>World Bank, Strengthening Spatial Planning Capacity. Prerequisite for sustainable urban development, available online at <https://documents1.worldbank.org/curated/en/511271468094454416/pdf/843220v10ROMAN0nning0Full0Report0RO.pdf>.

<sup>29</sup> M. Rotolo, The urban agenda for the EU: How cities got a seat at the table of policy-making, 2019, available online at <https://labgov.city/theurbanmedialab/the-urban-agenda-for-the-eu-how-cities-got-a-seat-at-the-table-of-policy-making/>.

<sup>30</sup> Ibidem

<sup>31</sup> Ibidem

Romania, during the 2019 Presidency of the Council, had an important contribution to the strengthening the European urban dimension. The Bucharest Declaration aims to connect the Urban Agenda with the EU Territorial Agenda (2030 horizon) and the Leipzig Charter (renewed in 2020).

Last but not least, cohesion policy for 2021-2027 also provides support for the Urban Agenda under the European Urban Initiative, which encourages cities to innovate, access knowledge, understand policy, support networking and strengthen capabilities. In fact, cohesion policy after 2020 will continue to support integrated territorial and local development strategies through various instruments and will empower urban authorities and territorial bodies to manage funds, while requiring strong local partnerships with relevant stakeholders. The urban dimension of cohesion policy will be strengthened, with 6% of the European Regional Development Fund being dedicated to sustainable urban development strategies<sup>32</sup>.

### **Spatial planning scenarios for European territory. Where are the cities of Bihor County located?**

At European level, there is talk in the context of territorial development and the connectivity of a polycentric Europe, which allows all categories of cities to develop and be integrated into the European urban network. Territorial Agenda 2030, under Objective 1: A Just Europe, which offers future prospects for all places and people, includes two sub-objectives aimed at balanced and polycentric territorial development, namely: 1a. Balanced Europe: Better balanced territorial development, using Europe's diversity and 1b. Functional regions: Local and regional development, fewer inequalities between places.

Both objectives suggest that the polarization between central Europe and its periphery, between capitals, metropolitan areas, cities, rural areas and areas with geographical and demographic specificities undermines a better balanced territorial development. In particular, small and medium-sized cities have an under-exploited potential to cushion polarization. They play a crucial role in economic development and social welfare at regional level, especially in terms of national and international accessibility and adequate access to services at local and regional level. Polycentric networks can also contribute to more sustainable transport, including the replacement of short-haul flights, where appropriate. Cities of all sizes are drivers of economic and social development and attractive places to live, work, visit and invest. Cooperation and networking within and between cities, towns and surrounding areas in the same functional region creates development prospects for all places. Such functional regions go beyond existing administrative boundaries, differ in their functional and interconnected nature, are extremely dynamic and can change over time.

### **Towards a polycentric development at the level of Bihor County. Urban-rural relationship management**

Romania is currently facing significant development problems that are due, among other things, to the existence of an unbalanced network of localities, characterized by: the lack of large secondary cities of over 1 million inhabitants; the preponderance of small towns, with less than 20,000 inhabitants, which represent over 80% of the cities in Romania; the existence of cities with less than 10,000 inhabitants, which do not meet much of the objective requirements for the urban environment and which have been

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<sup>32</sup> Ibidem

artificially promoted to the rank of urban community; the existence of rural communities that are more than 30 km from an urban center. All of this translates into a limited ability to polarize small urban centers, the isolation of rural communities that cannot connect to an urban center, and a significantly limited ability to be globally competitive in non-county cities which are not national growth poles.


Bihor is one of the six counties that together with the counties of Bistrița-Năsăud, Cluj, Maramureș, Satu Mare and Sălaj form the North-West region. Bihor County, at the level of 2020, includes a number of 101 administrative territorial units (ATUs), the largest in the North-West region, of which 4 municipalities, 6 cities and 91 communes. From the perspective of the degree of urbanization, Bihor County is similar to Cluj County. In this respect, the OECD classifies regions into three categories: predominantly rural, intermediate and predominantly urban. According to this methodology, Bihor County, along with Cluj County, is described as an intermediate region close to the city. The rest of the counties in the region fall into the predominantly rural (Bistrița-Năsăud, Maramureș and Sălaj) and predominantly rural categories close to the city (Satu Mare)<sup>33</sup>.

Referring to the municipalities and cities of Bihor County, it is important to analyze their positioning in the context of the North-West region and even in the national context. Within the Regional Development Plan of the North-West Region 2021-2027<sup>34</sup>, by applying the Reilly-Converse model, it was determined that there are:

- a city with complex services of regional importance - Cluj-Napoca - which generates dominant flows with a series of large and medium-sized cities, from the North-West development regions (Baia Mare, Zalău, Bistrița, Dej, Gherla, Turda), Center (Târgu Mureș) and West (Deva and Hunedoara). The polarization area of Cluj-Napoca is a regional one and includes extensive territories in the counties: Cluj, Sălaj, Maramureș, Bistrița-Năsăud, Mureș, Alba, Hunedoara. The municipality of Zalău is in a relationship of subordination to the municipality of Cluj-Napoca, which polarizes the entire region.
- a city with complex services of sub-regional importance - Oradea - connected by important flows of 4 large and medium-sized cities, two from the North-West Region (Satu Mare and Zalău), and the others from the West region (Arad and Timișoara, the last with status as a regional center, as well as Cluj-Napoca). The polarization area of Oradea municipality includes Bihor County, the northern part of Arad County, the southern part of Satu Mare County and the western part of Sălaj.
- 2 cities with mixed services, of sub-regional importance - Baia Mare and Satu Mare. Baia Mare is connected by a dominant flow to Cluj-Napoca, Satu Mare is interconnected with Oradea. Both cities have a relatively large polarization area. Thus, the municipality of Baia Mare polarizes, through local synapses, the entire surface of Maramureș County, the eastern part of Satu Mare County and the north of Sălaj County. The municipality of Satu Mare has a polarization area that is restricted to the area of the county of the same name.
- 4 cities, with mixed services, of county importance - Bistrița, Zalău, Turda and Sighetu-Marmației. The municipalities of Bistrița, Zalău and Turda are connected to the regional center

<sup>33</sup> North-West Region Development Plan 2021-2027, p. 21

<sup>34</sup> North -West Region Development Plan, 2021-2027, draft subject to public consultation (September 2020), pp. 21-22

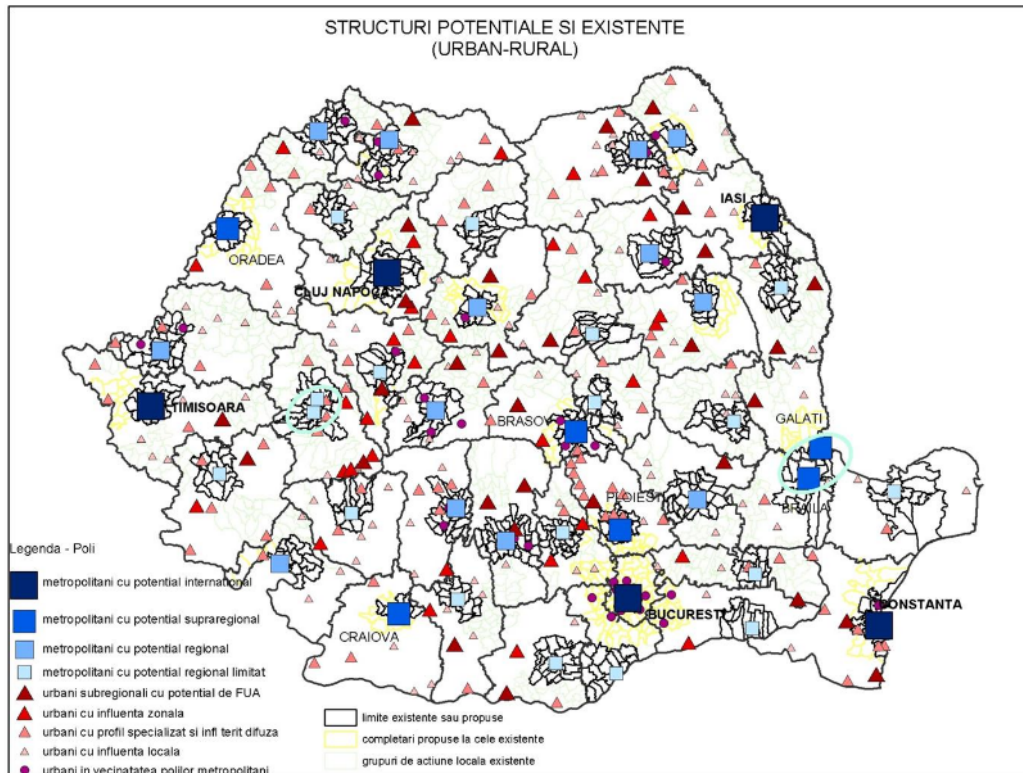


at the higher level - Cluj-Napoca, while Sighetu-Marmației with the sub-regional pole Baia Mare. The polarization areas of these urban centers are less extensive, being limited to the territory of the county they belong to. The only notable exception is the municipality of Turda, whose geographical positioning makes its influence dominant in the north of Alba County and in the west of Mureș County.

From a regional perspective, Oradea is the only city in Bihor County that is mentioned and for which flows have been identified according to the Reilly-Converse model. It should be noted that this model is theoretical, based on the rank of localities and the linear distance between them. However, the relationships between different areas are dynamic and certain changes, such as connectivity, can change the flows discussed above.

To see how we classify the rest of the cities in Bihor County, we can turn to other studies. Thus, according to the studies that were the basis for the implementation of the Romanian Territorial Development Strategy, at the level of Bihor County we have the following typology of cities (Figure 17): 1 metropolitan pole with supra-regional potential (Oradea); 1 urban pole with zonal influence (Salonta); 4 urban poles with specialized profile and diffuse influence (Beiuș, Marghita, Săcueni, Valea lui Mihai); 4 urban poles with local influence: (Aleșd, Nucet, Ștei, Vașcău).

According to Figure 18, some of the smaller cities in Bihor County are part of trans-county areas. Thus, Salonta is part of an urban area with potential in the process of consolidation, together with the cities of Jimbolia, Pecica, Sântana, Sânnicolau Mare in the counties of Arad and Timiș. On the other hand, the cities of Aleșd, Beiuș, Marghita, Săcueni are part of an area with an area of influence in regression together with the cities of Șimleul Silvaniei and Jibou in Sălaj County.



**Figure 17:** Typology of urban localities and potential polarization areas

**Source:** Romania's Territorial Development Strategy 2014, June 2014, p. 59

*\* Legend (from top to bottom main types of poles): metropolitan poles with international potential; metropolitan poles with supra-regional potential; metropolitan poles with regional potential; metropolitan poles with limited regional potential; sub-regional urban poles with FUA potential; urban poles with area influence; specialized urban poles with diffuse territorial influence; urban poles with local influence; urban poles in the vicinity of metropolitan poles*

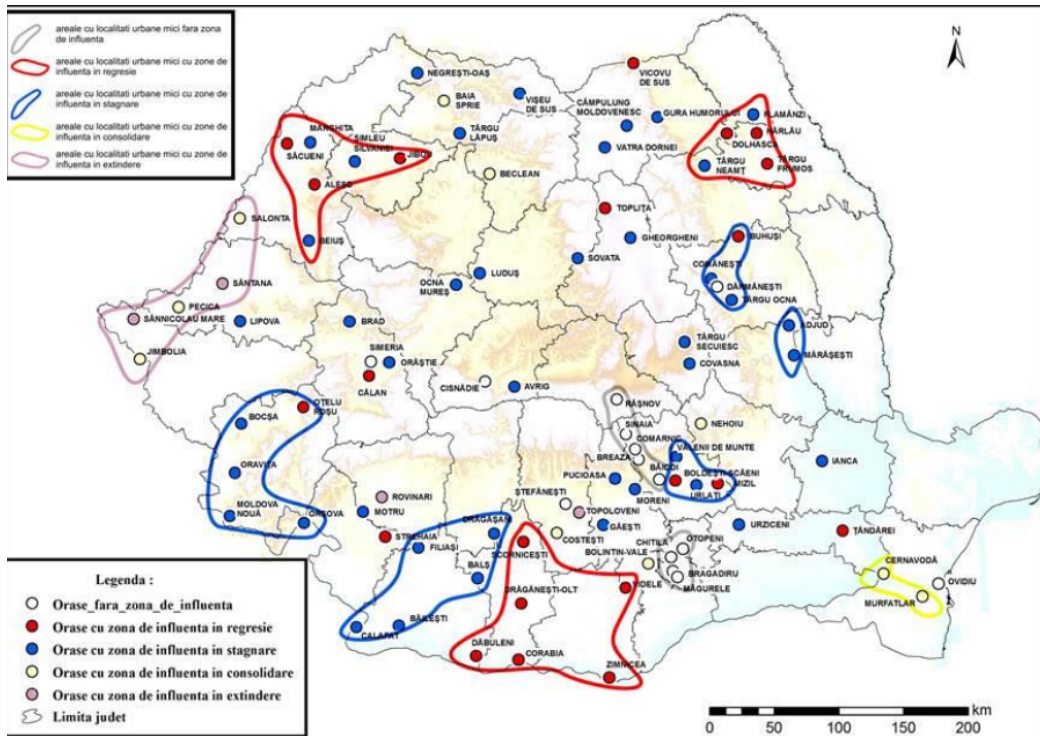
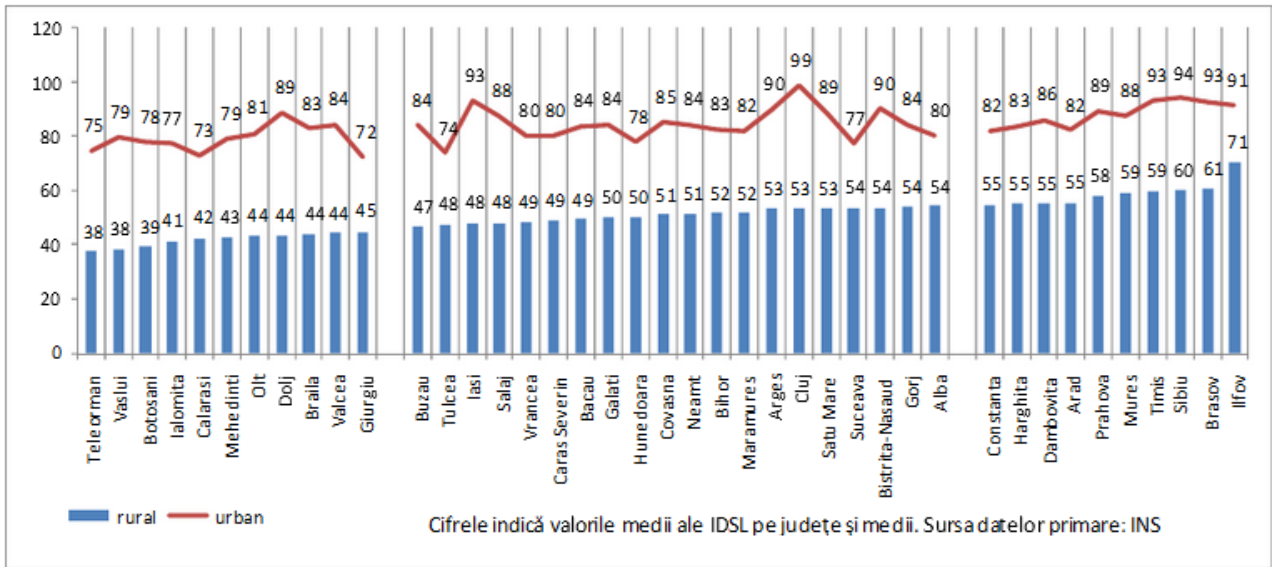


Figure 18: Typology of polarization areas for small towns

**Source:** Romania's Territorial Development Strategy 2014, June 2014, p. 57

*\* Legend (from top to bottom types of towns): towns without influence zones; town with an influence zone in regression; towns with influence zone in stagnation; towns with influence zone undergoing a consolidation process; towns with an expanding influence zone*

The differences in development between urban and rural areas should be mentioned in the context of the analysis of territorial development. They are common for the whole country and not only for Bihor County. A relatively low level of development for rural communities in the county (52, based on IDSL - Local Social Development Index, developed by sociologist D. Sandu), as well as a significant difference between rural and urban areas (83 also using IDSL). This translates into a limited ability of rural communities to connect to the city and take advantage of its polarizing force (see Figure 19). Combined with the low polarization force of some of the small towns in Bihor, we have an image of urban and rural communities that grow in isolation, without mutually benefiting from the links and interdependencies that can be created in the process of local and regional economic development.



**Figure 19:** Social development of counties by area of residence (urban versus rural)

**Source:** Sandu, D., 2010, Social disparities in regional development and policy in Romania, <http://documents.tips/documents/disparitati-sociale.html>

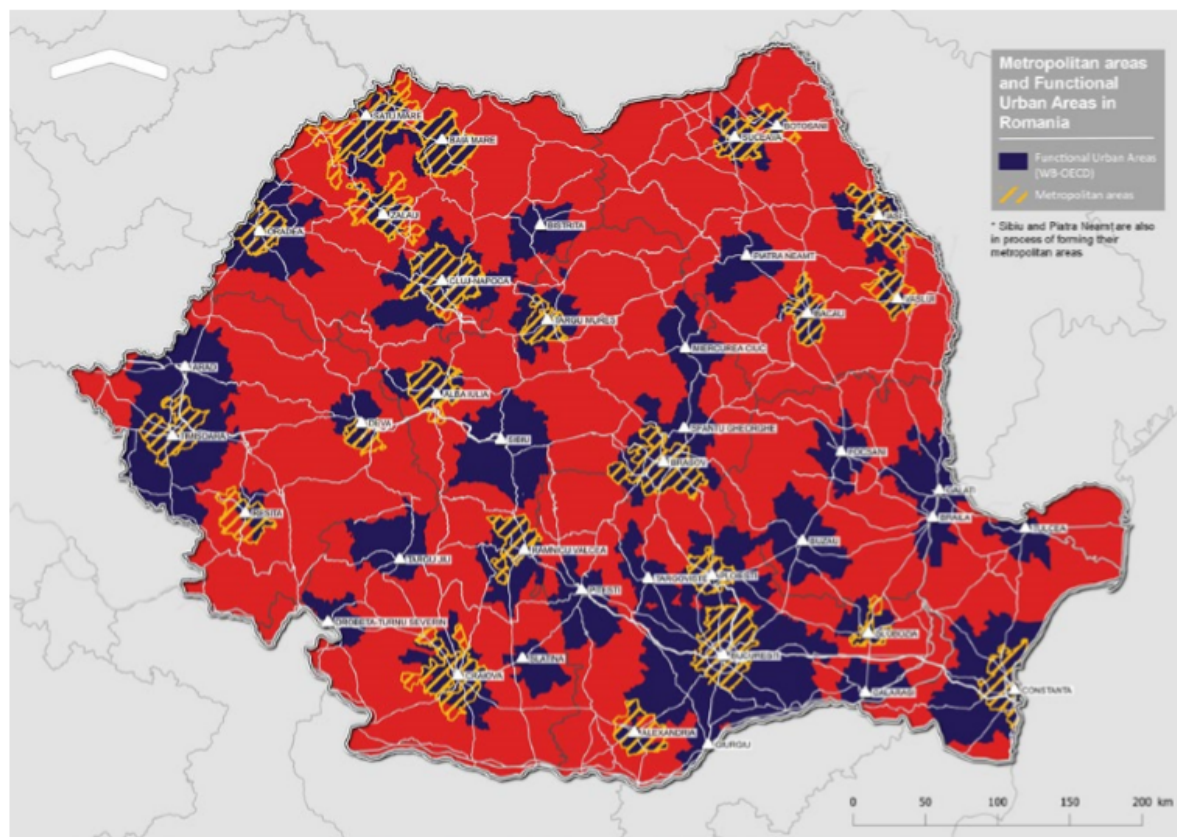
*\*Legend: Numbers indicate average values of the index at county level, separately for urban and rural communities. Source of primary data is National Institute for statistics (INS)*

### The metropolitan area and the functional urban area

The Oradea Metropolitan Area was created by associating the municipality of Oradea with the territorial-administrative units located in the proximity area, respectively the communes of Biharia, Borș, Cetariu, Nojorid, Oșorhei, Paleu, Sînmartin, Sîntandrei. Thus, the 9 founding localities located at the Western border of Romania established, by the decision of the general assembly of the associates of May 9, 2005, the first inter-community development association with legal personality in Romania, in a metropolitan area format. On July 31, 2007, Girișu de Criș commune joined the association, increasing the number of members to 10 (ten) administrative-territorial units. Subsequently, the commune of Toboliu separated from Girișu de Criș, becoming a separate territorial administrative unit, being also part of the association. As of June 2, 2010, the Oradea Metropolitan Area (OMA) has 12 members, the General Assembly of Associates unanimously approving by votes the expansion of the association by including Ineu commune as a full member.

In order to have a more realistic configuration of Oradea MA in the future, the concept of Functional Urban Area (FUA) must be considered. We also include below Figure 20, taken from the World Bank study, which illustrates the partial overlap between the territory of the MA and that of the FUA at the MA level in Romania. In the case of Oradea municipality, the WB analysis proposes a significantly higher number of communes in FUA than what currently exists in the Oradea MA. From the figure below, it is clear that there is a mismatch between the territorial area of the MA as it is currently configured and the FUA. The mismatch must be understood in the case of Oradea municipality in the sense of limited extent. It must be said that Oradea is in a better situation than most other

municipalities with a metropolitan area, where the FUA territory often does not perfectly encompass that of the MA.



**Figure 20:** Metropolitan areas and functional urban areas in Romania

**Source:** World Bank, Romania Catching Up Regions. Models of inter-jurisdictional cooperation, 2019, p. 131, <http://documents1.worldbank.org/curated/en/338051580282390068/pdf/Romania-Catching-Up-Regions-Interjurisdictional-Cooperation-Models.pdf>

Also, in the WB study from 2019<sup>35</sup>, good practices are identified that exist at the level of metropolitan areas in Romania. Oradea MA has several peculiarities, namely: Oradea MA as a joint association for specialized IDA, metropolitan transport, internalization of the technical apparatus, exchange of experience between Oradea MA members, active role in assuming responsibilities and forming partnerships, cross-border cooperation, use of legislation to streamline existing resources, funding application for ongoing projects, combining development with relevant and validated data, Oradea Metropolitan Area fund as an innovative financial instrument.

<sup>35</sup> World Bank, Romania Catching Up Regions. Models of inter-jurisdictional cooperation, 2019, pp. 86-91, online available at <http://documents1.worldbank.org/curated/en/338051580282390068/pdf/Romania-Catching-Up-Regions-Interjurisdictional-Cooperation-Models.pdf>

## County transport infrastructure. Connectivity and accessibility

When analyzing the positioning of Bihor County at European and national level, the concepts of accessibility and connectivity are crucial. There are many definitions of accessibility in the literature. Accessibility is seen as the ease with which activities can be accessed from a particular place, using transport modes. Accessibility in another approach is considered to be the number or quantity of available possibilities closer to the distance or time limit. Equipping the territory with elements of transport infrastructure is the premise for accessibility<sup>36</sup>.

From the perspective of accessibility, the positioning of Bihor County in the North-West region is not ideal. Among the development regions of Romania, the North-West region is characterized by a reduced accessibility and mobility, not being crossed by any of the 9 corridors of the basic TEN-T network. With regard to the TEN-T global network, an analysis of connectivity from a territorial perspective takes into account the stated purpose of the agreement between the EC, the Council and the European Parliament on the trans-European transport network, gradually, by 2050, European citizens and businesses should be no more than 30 minutes away from the global TEN-T network. If the analysis takes into account only the road infrastructure (the only one that currently provides adequate services) then Bihor County is within this area with most of its territory. The exception is the Carei area (Satu Mare County) - Valea lui Mihai (Bihor County) which is outside the access area, but is located less than 25 km from Corridor V, the M3 motorway in Hungary which is completed. We also mention here that Bihor County has an airport, namely the one in Oradea, included in the TEN-T network. In Romania, due to the lack of investments in rail transport, the analysis of connectivity to the priority axis TEN-T 22 railway is not considered significant, this mode of transport being used in an insignificant share compared to road and air transport<sup>37</sup>. Bihor County and Oradea also have the advantage of being located on the western border with Hungary compared to other communities in the North-West region.

At the level of the North-West region, the network of expressways and highways is still deficient, which leads to the diversion of traffic to other regions and prevents the proper development of the economy of Bihor County. One of the solutions to this problem is the construction of the A3 motorway. At the beginning of 2021 only a part (60.48 km) of the A3 Transylvania highway (Borş-Oradea-Zalău-Cluj-Napoca-Turda-Braşov) is executed and is open for traffic, following that 5.35 km (Suplacu de Barcău-Borsch) to be put into use in the near future. It should be mentioned that other investments are needed to modernize other roads, especially to facilitate a fast connection with other significant poles in the area: Timisoara and Sibiu. Also, the problem remains to ensure the connection on national and communal roads from this highway to the other directions: north (to Satu Mare and Maramureş counties, ie. DN 19 Oradea - Satu Mare - Sighetu Marmăţiei); northwest (to Satu Mare county, ie. DJ 191 Marghita - border of Satu Mare county); south (to Arad County, ie. DN79 Oradea-Arad, DJ 792A Tinca-Leş) and southeast (to Alba - Arad - Cluj counties, ie. DN75 Lunca - Câmpeni - Turda, DN76 Deva-Oradea, DJ 767 Saturday - Dobreşti - Vârciorog

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<sup>36</sup> Different definitions from the literature cited in Benedek et al., 2013, The regional dimension of society, ethnocultural diversity and administrative-territorial organization in Romania, <http://www.ispmn.gov.ro/uploads/ISPMNN%20WP%2051+08-nov.pdf>

<sup>37</sup> North-West Region Regional Development Plan 2021-2027, p. 69

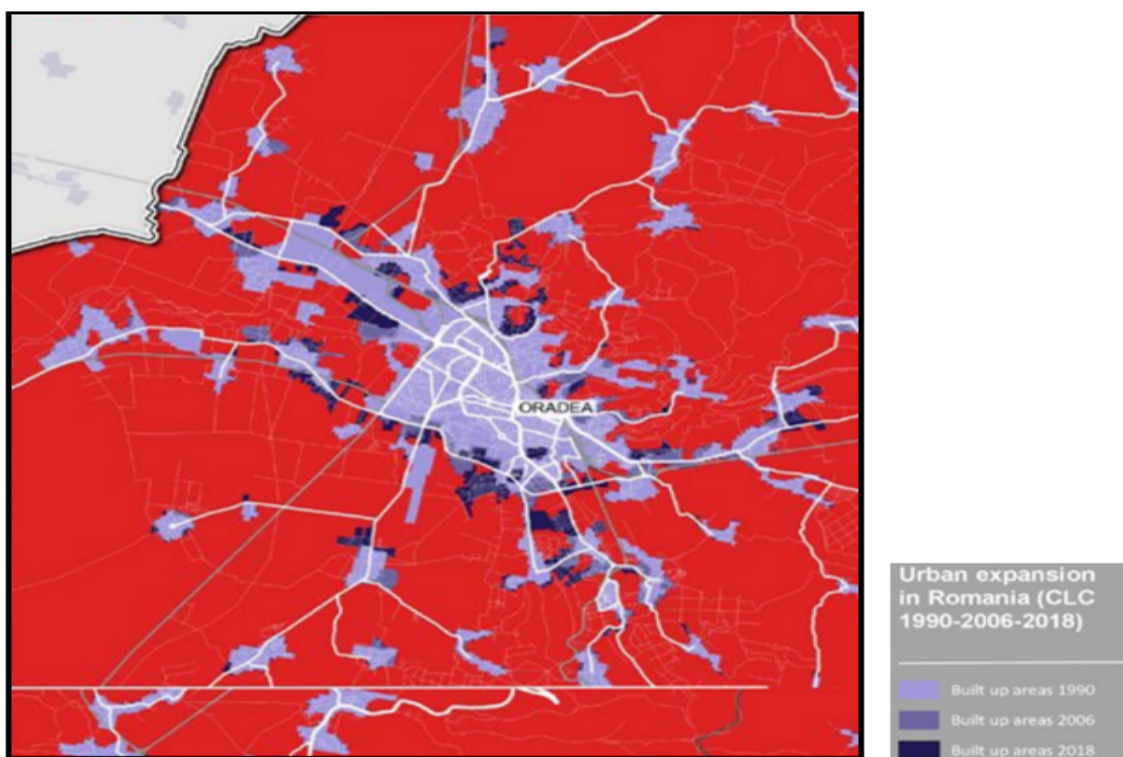
- Tileagd). In addition, the county road system, which could compensate for this lack, is insufficiently modernized.

### Urban sprawl and housing

The way in which the surface included in the built-up areas of the localities evolves is also significant for the analysis of the development potential of Bihor County. The urban area needs to be expanded to take into account both the requirements for residential development and especially those for new industrial and commercial investment. After 1990, many localities, especially in the category of small and medium-sized towns, unjustifiably expanded the area of the built-up area, often in conditions of stagnation or population decline and a reduction in industrial activity. Unjustified growth in urban areas, in the absence of real objectives, can put increased pressure on local authorities to provide utilities and infrastructure over a larger area. Compared to the national level, Bihor County falls into the category of counties that have experienced, at least for some communities, relatively significant increases in the urban area of localities, especially in the northeastern part of the county. For the urban environment (municipalities and cities), the communities are divided into 3 distinct categories depending on the approach they have implemented regarding the urban expansion: category A, which includes 5 municipalities and cities (Aleşd, Oradea, Salonta, Săcuieni and Ştei), had a prudent approach, with an increase between 0% - 25%; category B, with 3 communities (Beiuş, Marghita, Valea lui Mihai) all have an increase between 50% - 100%; category C, communities with a permissive approach, with an increase between 200% - 400% (Nucet and Vaşcău). Of course, this expansion must be correlated with the demographic evolution and that of the local economy. It is interesting to note that municipalities and cities with good and very good economic development were rather cautious with the expansion of the suburbs - Beiuş, Ştei, Valea lui Mihai while Vaşcău, with the lowest level of economic development, has the highest growth of the built-up area. In terms of population, all municipalities and cities have lost population, regardless of the level of economic development.

Urban sprawl refers to the process of spatially expanding the city to the periphery and the surrounding urban communities. Urban sprawl can take place in conditions of economic and population growth or, on the contrary, of economic and demographic contraction (any combination of demographic and economic evolution is possible). Of course, the most dramatic situation is that of a city losing population at the same time as its spatial expansion, which in this situation is not justified by pressure from economic and/or demographic growth. From a demographic point of view, Oradea has a population loss of approx. 3% in the period 2009-2020 (we took into account the population by residence on January 1). At the same time, the 4 communes where the suburbanization phenomenon is more pronounced - Oşorhei, Paleu, Sânmartin and Sântandrei, had increases between 19% (Oşorhei) and 80% (Paleu). It is clear that in the conditions in which we have a demographic contraction at the level of Oradea municipality and at the level of the county as a whole, these rural communities are attractive for those who are looking to locate in the peri-urban environment.

Figure 21 illustrates the evolution in temporal profile of the urban sprawl phenomenon for Oradea municipality. It can be seen that the period 1990-2006 is not marked by such a significant expansion as that of the period 2006-2018.



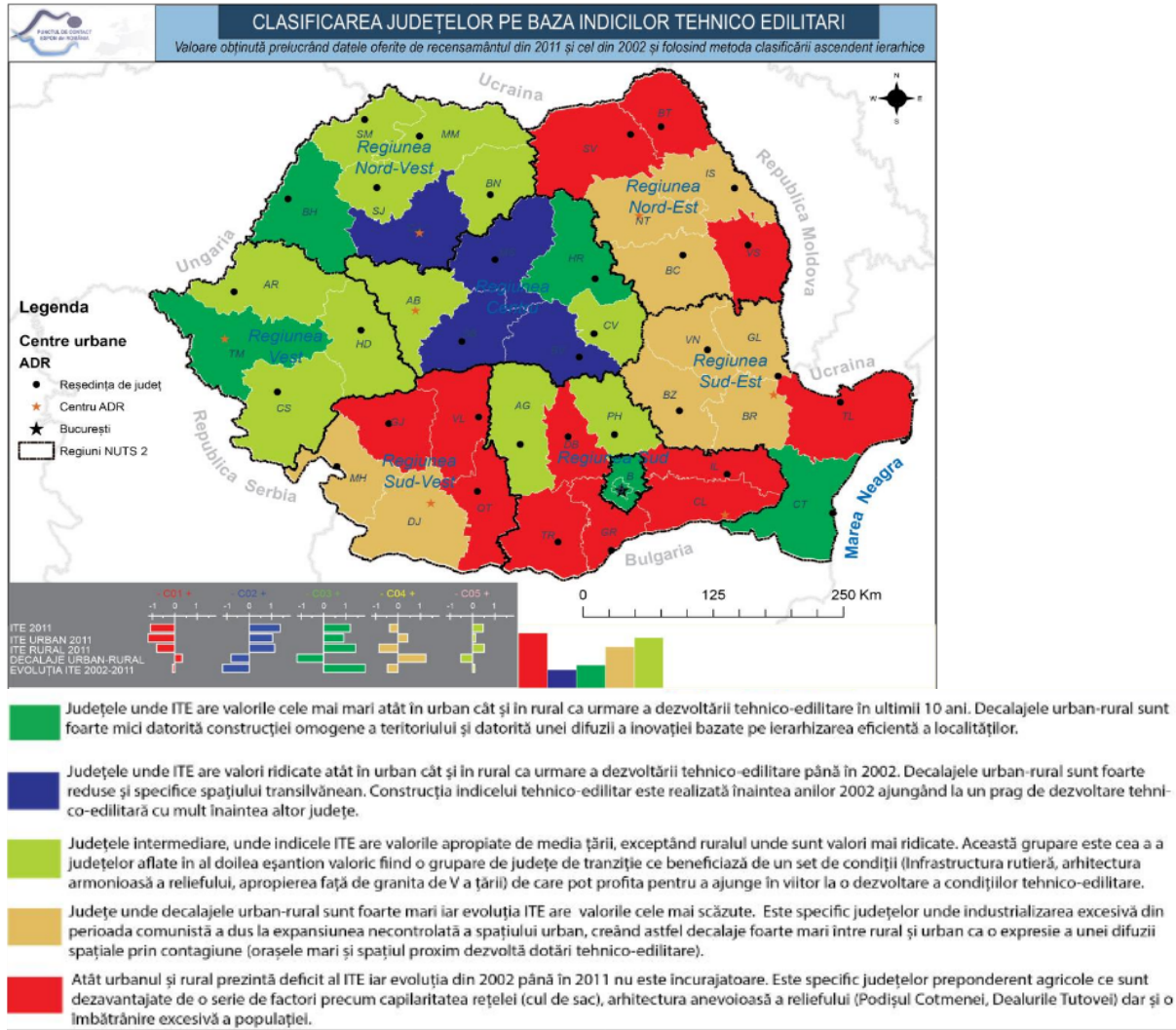
**Figure 21:** The process of urban expansion in Oradea

**Source:** World Bank, Romania Catching Up Regions. Models of inter-jurisdictional cooperation, 2019, p. 139, <http://documents1.worldbank.org/curated/en/338051580282390068/pdf/Romania-Catching-Up-Regions-Interjurisdictional-Cooperation-Models.pdf>

Although the phenomenon of urban sprawl is more visible in the case of large cities, even small cities are not exempt from this phenomenon. In a 2010 study, Suditu et al. presented the municipalities and cities in Romania that at that time were already affected by urban sprawl. At the level of Bihor County, 8 out of the 9 municipalities and cities, other than Oradea, were facing this phenomenon.

### Urban infrastructure

A well-developed urban infrastructure and access to public utilities are a precondition for a high quality of life and a satisfaction of the citizens with the local public administration. At the level of the counties in Romania, the Index of technical-urban endowments (ITE) was calculated, which examines both the actual endowment from the urban point of view of the counties and the urban-rural differences. Regarding the urban endowment of the localities in the county, Bihor is in the category of the most developed counties from the point of view of ITE, the index having extremely high values for both urban and rural (Figure 22). It must be said that Bihor County is the only county in the North-West region that has this competitive advantage. In the western part of Romania, only Timiș County is still found in terms of ITE value in the same category as Bihor. However, the data on which this Index is based are older and sometimes the existence of infrastructure of a certain type does not mean that the inhabitants are connected and use it.



**Figure 22:** Index of technical and municipal endowments by counties

**Source:** Romania's Territorial Development Strategy, 2016, p. 4

\* Legend (from top to bottom categories of counties by ITE):

Counties where ITE has the highest values both in urban and rural communities as a result of investments in the last ten years. Urban rural differences are very small due to the homogenous building of the territory and due to a diffusion of innovation based on the efficient ranking of localities.

Counties where ITE has high values both in urban and rural communities as a result of investments until 2002.

Urban rural differences are very small and specific for Transylvania. This communities have reached a high level of endowment before 2002, being at the forefront of this process.

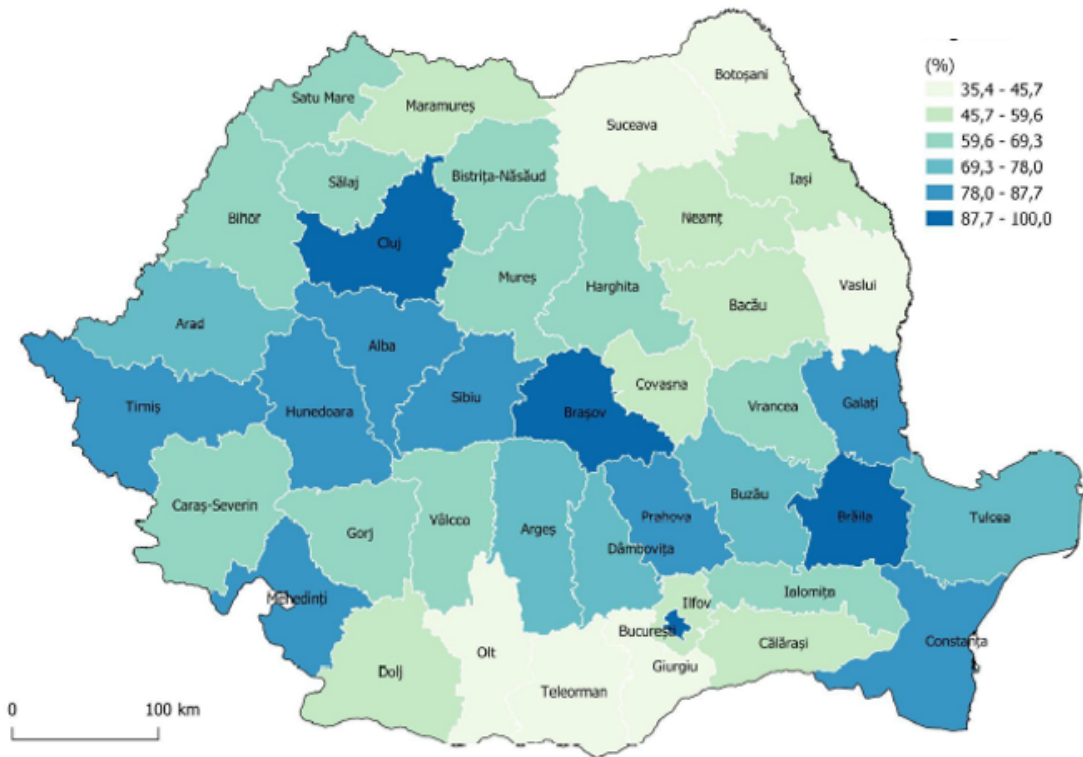
Counties where ITE has values close to the national average, with the exception of rural communities where values are higher. These counties fall within an intermediary category characterized by certain conditions (road infrastructure, proximity to the Western border, harmonious landscape, etc.) which in the future can help them further develop territorial endowment.

Counties where urban-rural differences are very high and ITE has the lowest values. It is specific for counties which underwent forced industrialization during the communist period. Excessive industrialization has led to the

*uncontrolled expansion of urban space, thus leading to urban rural differences as an expression of spatial diffusion through contagion (big cities and surrounding areas have good ITE).*

*Both urban and rural communities have low ITE and the progress from 2002 until 2011 is not promising. It is specific to counties which are predominantly based on agriculture, which are at a disadvantage due to certain factors such as the capillarity of the network, difficult landscape, and the aging of population.*

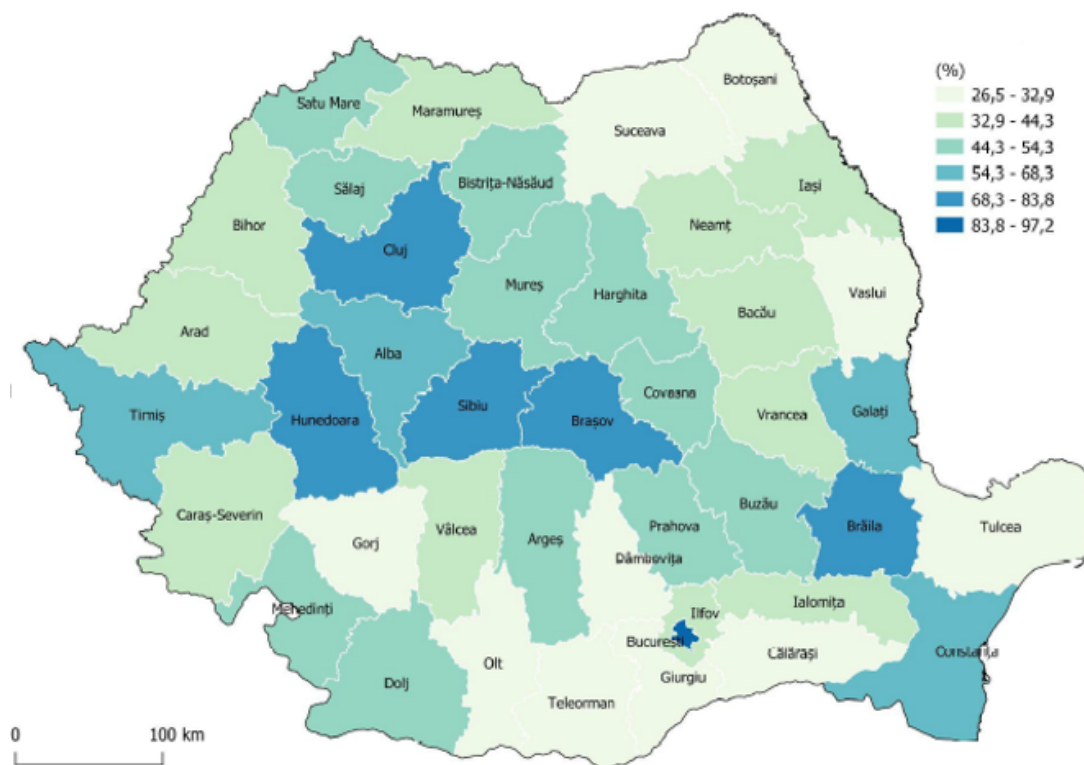
There are few studies and data on the number of inhabitants with access to water networks. The 2021 MDLAP study on territorial disparities includes information in this regard. The indicator is calculated as a share of the population connected to the public water supply system of the total resident population. The public water supply system refers to the public centralized distribution network operated by units specialized in water capture, treatment and distribution. Figure 23 below compares the situation by counties. Among the counties of the North-West region, Bihor is classified in the category 59.6% -69.3%, a placement similar to Bistrița-Năsăud, Satu Mare, Sălaj.



**Figure 23:** Population connected to the centralized drinking water supply system 2019 (%) at county level

**Source:** MDLPA, Territorial Disparities in Romania, Substantiation Study, 2021, p. 33

The number of inhabitants with access to the sewerage network can be deduced from the same MDLAP study from 2021 previously cited regarding territorial disparities. Figure 24 below compares the situation by counties. Among the counties of the North-West region, Bihor occupies the same position as Maramureș, with a share between 32.9% - 44.3%.



**Figure 24:** Population connected to the centralized sewerage system and sewage treatment plants 2019 (%) at county level

**Source:** MDLPA, Territorial Disparities in Romania, Substantiation Study, 2021, p. 34

### Strategic perspectives and SWOT analysis

#### SWOT analysis on spatial planning, urban and community development

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Bihor County presents itself at first sight as a well-developed county - 10 municipalities and cities, with an urbanization index slightly below the national and regional average.</li> <li>• According to the OECD methodology, Bihor County, together with Cluj County, is described as an intermediate region close to the city, in the context in which the rest of the counties in the region have a predominantly rural and/or isolated character.</li> <li>• Oradea is a city with complex services of sub-regional importance, connected in turn by important flows of 4 large and medium-sized cities, two in the North-West Region (Satu Mare and Zalău), and the others in the West region (Arad and Timisoara).</li> <li>• The polarization area of Oradea municipality</li> </ul>	<ul style="list-style-type: none"> <li>• Small size of municipalities and cities - 6 municipalities and cities have between 10,000-20,000 inhabitants, while 3 have less than 10,000.</li> <li>• The size influences the financial self-sustainability, the ability to provide services and make investments, as well as partly the polarizing force.</li> <li>• With the exception of Oradea and Salonta, all cities in the county are part of stagnant or declining areas.</li> <li>• The municipality of Oradea is not part of the dominant flows of the municipality of Cluj-Napoca.</li> <li>• The existence in the southern part of the county of an area devoid of cities and which is not well served.</li> <li>• Significant discrepancies in development between Oradea and the rest of the municipalities and</li> </ul>

<p>transcends the territory of Bihor County, including the northern part of Arad County, the southern part of Satu Mare County and the western part of Sălaj.</p> <ul style="list-style-type: none"> <li>● The metropolitan area is well established, an example of good practice in metropolitan governance at the national level.</li> <li>● Compared to the global TEN-T network, especially on road infrastructure, Bihor County is within this area with most of its territory; the exception is the Carei - Valea lui Mihai area, which is outside the access area, but is located less than 25 km from the V corridor, the M3 motorway in Hungary (completed).</li> <li>● Bihor County has the longest road network in the N-V region and a network density higher than the national and regional average.</li> <li>● Regarding the bypasses, the projects for Aleşd and Beiuş are included in the POIM, Aleşd having an excellent prioritization score.</li> <li>● Although the railway infrastructure is deficient, Bihor County is still the best positioned in the North-West region (density of railway lines) and Oradea the best-positioned railway junction in the North-West of the country.</li> <li>● The county has experienced a significant expansion of the urban territory, which has not always been correlated with population growth or economic development. This phenomenon is more accentuated in the eastern half of the county</li> <li>● Growth rate of the number of dwellings for the period 2009-2019 is higher than the previous decade.</li> <li>● Increased living area/capita, one city below the standard of 14 m<sup>2</sup>/capita.</li> <li>● In the case of Oradea - over 85% of the inhabitants are satisfied with the condition of the buildings.</li> <li>● County with a higher value of ITE (Index of Technical Endowments, the only one in the N-V region with this performance; small urban-rural gaps.</li> <li>● Significant investments in the last 10 years in municipal utilities system.</li> <li>● The length of the natural gas distribution network and the consumption of the economic agents increased even if the number of serviced localities remained constant over the period 2009-2019.</li> <li>● For Beiuş - heating with geothermal energy, the cheapest gigacalorie in the country.</li> <li>● Drinking water supply network - 88.11% of localities have access to the drinking water</li> </ul>	<p>cities but also between urban and rural</p> <ul style="list-style-type: none"> <li>● Failure to merge localities at the level of the metropolitan area - Oradea and Sânmartin.</li> <li>● Bihor County, similar to the North-West region, is not crossed by any of the 9 corridors in the basic TEN-T network.</li> <li>● Lack of highways, modernization and investments are needed on national roads to connect to the highway, county roads are modernized in a reduced percentage</li> <li>● In the mountainous areas the density of the road network is low, and the roads passing through this area are insufficiently modernized, the traffic on these roads being very difficult.</li> <li>● The situation of the bypasses has some deficiencies: Oradea - incomplete belt and small towns - Salonta or Valea lui Mihai do not have ring roads but are crossed by heavy traffic.</li> <li>● Oradea International Airport is included in the global TEN-T network, but with few international flights.</li> <li>● Suburbanization / urban dispersion phenomenon - problematic in the case of Oradea municipality, causing negative effects for the environment, budgetary pressures aimed at expanding utility networks, congested traffic, etc.</li> <li>● Permissive approaches to urban growth, especially in communities facing declining economies and declining populations.</li> <li>● The natural gas networks cover only 18.81% of the total localities (5 municipalities and cities + 14 rural localities).</li> <li>● Contraction of the central heating system - currently only exists in Oradea, Beiuş and Sânmartin.</li> <li>● Sewerage networks cover only 43.56% of the total localities in the county (44 communities).</li> <li>● Increasing the simple length of the sewerage network well below the national and regional average.</li> <li>● The area in the center of the county is not covered by the sewerage network.</li> </ul>
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<p>distribution network.</p> <ul style="list-style-type: none"> <li>● Increase of over 50% of the simple length of the water supply network, over the period 2009-2019, mainly due to investments in rural areas.</li> <li>● 120% increase in the number of communities with sewerage network in the period 2009-2019.</li> <li>● Bihor County had the first inter-county cooperation agreement in Romania after 1990.</li> <li>● Existence of an Integrated Development Strategy of the Țara de Piatră Microregion and of a financing project in order to implement it.</li> </ul>	
<p><b>Opportunities</b></p>	<p><b>Threats</b></p>
<ul style="list-style-type: none"> <li>● European context conducive to sustainable urban development, cities in the Member States become partners in the urban policy process at European and national level (under way)</li> <li>● The EU's 2030 Territorial Agenda focuses on a fair Europe that offers prospects for the future for all communities (regardless of size) and all individuals; optimistic outlook including for less developed counties and with certain territorial cleavages.</li> <li>● Realization at the same time of several strategic planning documents aiming at territorial/spatial planning and urban development - PATJ Bihor, Development Strategy of Oradea MA.</li> <li>● Location of Bihor County near the border with Hungary, which offers increased opportunities to connect with Western Europe.</li> <li>● There are already mechanisms for inter-jurisdictional cooperation at the level of Oradea MA that could be scaled up in the future at the county level as well.</li> <li>● The construction of the A3 highway is a solution to increase the county's connectivity; also, connectivity can be increased by modernizing other roads, especially to facilitate a fast connection with other significant poles in the area: Timișoara and Sibiu, and ensuring the connection on national and communal roads from this highway to other directions.</li> <li>● Non-reimbursable financing programs for integrated territorial investments (ITI), including for ITI Țara de Piatră.</li> <li>● Inter-county cooperation programs and projects.</li> </ul>	<ul style="list-style-type: none"> <li>● Lack of capacity at local and county level to capitalize on opportunities arising from the urban dimension of cohesion policy</li> <li>● Impossibility to identify and implement development strategies for small towns with less than 10,000 inhabitants, whose economic and demographic decline will intensify</li> <li>● Increasing the disparities between Oradea and the rest of the municipalities and cities but also between urban and rural areas. Excessive polarization of development in several centers, without an interconnection with the rest of the communities in the county.</li> <li>● Increasing the degree of isolation of communes in the south of the county.</li> <li>● The network of highways and highways is still deficient, which leads to the diversion of traffic to other regions and prevents the proper development of the economy of Bihor County.</li> <li>● Major delays in the completion of the A3 motorway.</li> <li>● Lack of investments in the modernization of county and communal roads.</li> <li>● Lack of national investments in railway infrastructure.</li> </ul>

## Conclusions and strategic perspectives on spatial planning, urban and community development in Bihor County

- The cities of Bihor County favored in the European context by a spatial planning scenario that emphasizes polycentric development, small towns, urban-rural connections and intra-regional connections.

- Bihor County presents itself at first sight as a well-urbanized county - 10 municipalities and cities, with an urbanization index slightly below the national and regional average.
- However, 6 municipalities and cities have between 10,000-20,000 inhabitants, while 3 have less than 10,000.
- Size influences financial self-sustainability, the ability to provide services and make investments, and the polarizing force.
- With the exception of Oradea and Salonta, all the cities in the county are part of the stagnant or declining areas.
- EU Territorial Agenda 2030 - Scenario C - favors small towns and less developed regions and a mosaic network of urban and rural areas that would respond to climate and energy challenges and promote small and medium-sized towns as centers of resilient regions; The cities of Bihor County - included in this scenario C, without being mentioned in particular.
- According to the OECD methodology, Bihor County, together with Cluj County, is described as an intermediate region close to the city.
- By applying the Reilly-Converse model, the only urban center that stands out is Oradea
- The following conclusions for the city of Oradea:
  - It is not part of the dominant flows of Cluj-Napoca municipality;
  - It is a city with complex services of sub-regional importance, connected in turn by important flows of 4 large and medium-sized cities, two in the North-West Region (Satu Mare and Zalău), and the others in the West region (Arad and Timișoara);
  - The polarization area of Oradea municipality includes Bihor County, the northern part of Arad County, the southern part of Satu Mare County and the western part of Sălaj;
  - The other cities are too small to play a role in a regional perspective.
- At the county level there are: 1 metropolitan pole with supra-regional potential (Oradea), 1 urban pole with zonal influence (Salonta), 4 urban poles with specialized profile and diffuse influence (Beiuș, Marghita, Săcueni, Valea lui Mihai) and 4 urban poles with local influence: (Aleșd, Nucet, Ștei, Vașcău).
- Regarding the trans-county areas, Salonta is part of an urban area with potential in the process of consolidation + Jimbolia, Pecica, Sântana, Sânnicolau Mare from Arad and Timiș County; Aleșd, Beiuș, Marghita, Săcueni are part of an area with an area of influence in regression + Șimleul Silvaniei and Jibou from Sălaj County.
- Taking into account the experience and good practices developed in the inter-county cooperation of Bihor County, as well as the interest of neighboring counties and/or those in the region in solving common problems, the potential for inter-county collaboration and partnership is high and must be capitalized.
- At the county level, there are large development discrepancies between urban and rural.
- The Oradea Metropolitan Area is the first metropolitan area in Romania and is an example of good practice at the national level.
- Failure of the locality merger - Oradea and Sânmartin;
- MA total coverage in FUA territory, but FUA is much wider.
- Bihor County, similar to the N-V region, is not crossed by any of the 9 corridors in the basic TEN-T network.

- Compared to the global TEN-T network, especially on road infrastructure, Bihor County is within this area with most of its territory; The exception is the Carei - Valea lui Mihai area, which is outside the access area, but is served less than 25 km by the V corridor, the M3 motorway in Hungary (completed).
- Lack of highways, modernizations and necessary investments on national roads for connection to the highway, county roads modernized in a reduced percentage.
- Oradea International Airport included in the global TEN-T network, but with few international flights.
- Poor railway infrastructure, however Bihor County is the best positioned in the North-West region (density of railway lines) and Oradea the best positioned railway junction in the northwest of the country.
- The network of highways and highways is still deficient, which leads to the diversion of traffic to other regions and impedes the proper development of the economy of Bihor County.
- Construction of the A3 motorway - solution + modernization of other roads, especially to facilitate a fast connection with other significant poles in the area: Timișoara and Sibiu + ensuring the connection on national and communal roads from this highway to the other directions.
- The county road system, which could compensate for this lack, is insufficiently modernized.
- Bihor County has the longest road network in the North-West region and a network density higher than the national and regional average.
- In mountainous areas the density of the road network is low, and the roads passing through this area are insufficiently modernized, the traffic on these roads being very difficult; negative impact on tourism.
- There are a number of shortcomings in the situation of bypasses:
  - Oradea - incomplete bel/ringroad ;
  - Small towns - Salonta or Valea lui Mihai do not have belts/ringroads but are crossed by heavy traffic;
  - Projects for Aleșd and Beiuș caught in POIM.
- Multi-jurisdictional strategic projects for Oradea MA are all related to infrastructure and connectivity, there being a difference from the rest of the county seat municipalities.
- At the county level there are different approaches in terms of urban growth: mainly increases between 10% -50%, while in the northeast there are increases of up to 500%.
- There is no correlation between urban growth and demographic and economic indicators.
- Suburbanization is problematic in the case of Oradea municipality.
- The living area has increased in most municipalities and cities.
- The extension to the periphery is not as strong as in the case of Cluj and Zalău.
- Oradea has a population loss of approx. 2% in the period 2009-2020.
- At the same time, the suburbanization phenomenon is more pronounced in 4 communes - Oșorhei, Paleu, Sânmartin and Sânanđrei, had increases between 19% (Oșorhei) and 80% (Paleu).
- The growth rate of the number of dwellings 2009-2019 is higher than the previous decade.

- The number of dwellings has increased, especially in communities with a cautious approach to urban sprawl.
- There are 3 groups of cities in terms of growth no. of houses:
- 3 municipalities and cities with growth between 0% -3% (Salonta, Săcuieni, Vașcău);
- 4 municipalities and cities with growth between 4% -10% (Oradea, Marghita, Ștei, Valea lui Mihai);
- 3 municipalities and cities (Aleșd, Beiuș, Nucet) with growth over 10%
- The living area/capita has increased, with only one city being below the 14 m2 standard.
- In Oradea, over 85% of the inhabitants are satisfied with the condition of the buildings.
- Bihor has a higher value of the Index of Technical Endowments (ITE), the only one in the North-West region with this performance, there are small gaps of ITE between urban and rural.
- Significant investments have been made in the last 10 years in technical and municipal networks.
- Sewerage networks are less developed compared to the national and regional average.
- Although the access to facilities is relatively evenly distributed in the territory, the central area of the county seems more problematic.
- The natural gas networks cover only 18.81% of the total localities (5 municipalities and cities + 14 rural places)
- The length of the natural gas network and the consumption of economic agents increased even if no. of localities remained constant in the period 2009-2019.
- The localities that have access to the natural gas network are located mainly in the north and in the west of the county.
- The public service of thermal energy supply in centralized system is made in Oradea municipality, Beiuș municipality and Sânmartin commune.
- Beiuș has the cheapest gigacalorie in the country.
- 88.11% of the county localities have access to the drinking water distribution network.
- There was an increase of over 50% in the simple length of the network, in the period 2009-2019, mainly due to investments in rural areas
- The sewerage networks cover only 43.56% of the total localities in the county (44 communities), although there is an increase of 120% in the period 2009-2019, the increase in the simple length of the network is well below the national and regional average.
- The area in the center of the county is not covered by the sewerage network.

## Rural development

### The population of the communes from Bihor county

In January 2021, 49.17% of the population of Bihor County was listed as having a home in rural areas, compared to 50.99% in 1992. So, even if it decreased slightly, almost half of the county's population lives in rural areas. On the other hand, although the population of the county decreased by 6.11% between 1992 and 2021, in rural areas, the decrease was 9.48%, while in urban areas it was only 2.61%.

Currently (2021), there are 91 communes in Bihor County. However, this value was reached due to the separation of some communes from others, a phenomenon produced mainly in 2003. The table below shows the situation of the communes which and from which they were detached and the year in which the detachment took place.

Established commune	The commune from which it broke away	Year of detachment
Gepiu	Cefa	2003
Paleu	Cetariu	2008
Roşiori	Diosig	2003
Sânnicolau Român	Cefa	2003
Tămăşeu	Biharia	2003
Toboliu	Girişu de Criş	2008

**Table 22:** Communes in Bihor County established by the administrative-territorial reorganization in the period 2003-2008

In the case of these communes, the evolution/change of the population size in 2021 was reported in the first year after the 2004 or 2009 detachment.

In 67 communes, the population decreased between 1992 and 2021 and only increased in 24 communes. The table below shows the ranking (top 20) of the communes in Bihor County in terms of population decline and growth. In general, the communes in which the population has grown are those in the vicinity/proximity of Oradea (Oradea Metropolitan Area and Oradea Functional Urban Area). These include the communes of Sântandrei and Paleu, whose population more than doubled during the analyzed period.

The communes in Bihor County where the population decreased the most between 1992 and 2021						The communes in Bihor County where the population increased the most between 1992 and 2021					
Commune	1992	2004	2009	2021	Modification 1992-2021	Commune	1992	2004	2009	2021	Modification 1992-2021
Căpâlna	2,353	1,812	1,680	1,351	-42.6%	Sântandrei	3,502	3,817	4,182	7,728	120.7%
Criştioru de Jos	2,045	1,650	1,510	1,222	-40.2%	Paleu	:	1,605	1,833	3,444	114.6%
Derna	3,856	3,184	2,985	2,441	-36.7%	Sânmărtin	7,540	7,924	9,086	12,450	65.1%
Brusturi	5,357	4,336	3,975	3,394	-36.6%	Nojorid	4,386	4,375	4,692	6,467	47.4%
Şinteu	1,689	1,328	1,217	1,081	-36.0%	Gepiu	:	1,410	1,667	1,992	41.3%
Cărpinet	2,636	2,166	2,022	1,738	-34.1%	Oşorhei	5,264	5,587	6,142	7,415	40.9%
Pomezueu	3,914	3,324	3,076	2,583	-34.0%	Ineu	3,709	4,010	4,365	5,097	37.4%
Sârbi	3,481	2,881	2,738	2,331	-33.0%	Borş	3,452	3,379	3,736	4,360	26.3%
Uileacu de Beiuş	2,841	2,473	2,310	1,926	-32.2%	Biharia	5,920	3,892	4,083	4,659	19.7%
Şoimi	3,440	2,932	2,730	2,406	-30.1%	Sânnicolau Român	:	2,079	2,184	2,354	13.2%

Vârciorog	2,714	2,321	2,158	1,926	-29.0%	Tămășeu	:	1,870	2,035	2,065	10.4%
Lazuri de Beiuș	2,172	1,805	1,708	1,544	-28.9%	Toboliu	:	:	1,959	2,115	8.0%
Bratca	6,520	5,504	5,198	4,637	-28.9%	Girișu de Criș	5,296	5,169	3,691	3,938	6.7%
Sâmbăta	1,785	1,546	1,452	1,279	-28.3%	Lugașu de Jos	3,459	3,417	3,537	3,685	6.5%
Spinuș	1,578	1,290	1,231	1,133	-28.2%	Sălard	4,267	4,196	4,345	4,507	5.6%
Bulz	2,751	2,410	2,247	2,028	-26.3%	Lăzăreni	3,216	2,973	3,011	3,365	4.6%
Răbăgani	2,622	2,293	2,135	1,942	-25.9%	Diosig	9,903	6,893	7,078	7,122	3.3%
Lunca	3,519	3,128	2,984	2,611	-25.8%	Tinca	8,043	7,932	8,124	8,268	2.8%
Șuncuiuș	4,053	3,610	3,367	3,015	-25.6%	Roșiori	:	2,872	3,091	2,927	1.9%
Ceica	4,556	3,987	3,825	3,398	-25.4%	Cetriu	4,128	2,096	2,117	2,125	1.4%

**Table 23:** Ranking the evolution of the population of communes in Bihor County in the period 1992 – 2021

Source: NIS

### The level of development of the Bihor communes

Regarding the urban-rural relationship in Bihor County, it is necessary to mention the development differences between these two areas, a similar situation in the whole country and not only in Bihor County. Rural communities in Bihor have a relatively low level of development (52. based on LSDI - Local Social Development Index, developed by sociologist D. Sandu). This relatively low level of community development contributes to a significant difference between rural and urban areas (83 also using LSDI). This translates into a limited ability of rural communities to connect to the city and take advantage of its polarizing force, combined with the low polarization force of some of the small towns in Bihor, we have an image of urban and rural communities that grow in isolation. Without mutually benefiting from the links and interdependencies that can be created in the process of local and regional economic development.

Although the statistics indicate a strong correlation between economic growth and a high degree of urbanization. sustainable development is based on achieving a balance between urban and rural environment, but also between the conservation of rural economic space and its modernization.

A well-known measure for estimating the level of local development is the Local Human Development Index (IDUL). Developed by sociologist Dumitru Sandu, the index measures the total capital of localities, from the perspective of dimensions: human. health. vital and material. Basically, the index is composed of indicators related to education. economic performance and health.

Low values of the index can be assimilated to a "community poverty", but the IDUL does not only make a simple aggregation of consumption or income indices at individual or household level; the deficit component of access to public goods is much more present in the index.

The county rural registers the lowest average values in the region of 49.90 (IDUL 2018, weighted average with the number of inhabitants), the scale being from 1 to 100 (Timiș 61, Arad 54.5, Hunedoara 48). The table below showing the situation at the level of each of the communes of Bihor County.

Communes	IDUL2002	IDUL2011	IDUL2018	IDUL difference 2018 - 2011	Communes	IDUL2002	IDUL2011	IDUL2018	IDUL difference 2018 - 2011
Abram	24.5	23.8	52.6	28.8	Lăzăreni	14.8	17.5	42.4	24.9
Abrămuț	23.7	24.8	44.5	19.7	Lugașu de Jos	25.0	26.2	46.1	19.9
Aștileu	32.1	33.5	49.6	16.1	Lunca	38.5	42.1	58.9	16.8
Aușeu	29.0	30.7	52.1	21.4	Mădăraș	30.8	29.4	57.4	28
Avram Iancu	29.8	27.7	52.5	24.8	Măgești	26.7	32.2	47.5	15.3
Balc	22.5	22.9	46.2	23.3	Nojorid	28.9	33.0	59.2	26.2
Batăr	14.2	22.6	44.1	21.5	Olcea	31.7	29.9	45.5	15.6
Biharia	28.7	35.6	64.5	28.9	Oșorhei	31.0	38.6	54.6	16
Boianu Mare	25.1	24.0	45.4	21.4	Paleu	-	40.3	62.9	22.6
Borod	24.4	24.1	47.7	23.6	Pietroasa	27.7	30.9	48.1	17.2
Borș	33.1	42.6	74.4	31.8	Pocola	31.4	40.2	53.5	13.3
Bratca	25.5	25.9	44.3	18.4	Pomezzeu	24.8	28.5	49.6	21.1
Brusturi	20.3	25.3	44.0	18.7	Popești	26.3	27.0	47.8	20.8
Budureasa	21.2	25.0	52.2	27.2	Răbăgani	31.1	25.0	50.6	25.6
Buduslău	15.6	19.5	45.9	26.4	Remetea	26.7	29.2	51.6	22.4
Bulz	27.8	27.4	52.9	25.5	Rieni	31.1	36.8	55.0	18.2
Buntești	36.8	37.6	52.7	15.1	Roșia	26.3	25.8	45.7	19.9
Căbești	28.2	27.4	49.0	21.6	Roșiori	-	18.1	48.0	29.9
Căpâlna	28.0	22.8	53.8	31	Săcădat	20.4	25.1	54.7	29.6
Cărpinet	32.3	36.3	59.2	22.9	Sălacea	22.1	24.0	49.8	25.8
Cefa	22.8	26.8	48.1	21.3	Sălard	23.3	25.5	54.2	28.7
Ceica	33.5	27.6	44.1	16.5	Sâmbăta	28.9	28.0	47.0	19
Cetariu	19.5	24.7	49.3	24.6	Sâniob	24.0	20.8	46.2	25.4
Cherechiu	14.3	15.2	37.4	22.2	Sânmartin	35.5	43.0	66.3	23.3
Chișlaz	25.3	27.5	47.5	20	Sânicolau Român	-	24.1	51.1	27
Ciumeghiu	19.5	20.7	43.6	22.9	Sântandrei	34.4	48.8	75.8	27
Câmpani	36.4	38.0	55.7	17.7	Sârbi	21.9	26.9	48.3	21.4
Cociuba Mare	25.4	26.3	52.3	26	Spinuș	21.7	20.9	48.0	27.1
Copăcel	21.7	24.3	46.8	22.5	Suplacu de Barcău	30.9	33.2	59.3	26.1
Criștioru de Jos	28.1	30.9	52.2	21.3	Șimian	15.8	15.8	44.7	28.9
Curățele	33.4	38.6	54.0	15.4	Șinteu	20.9	26.6	35.2	8.6
Curtuișeni	21.8	17.3	50.3	33	Șoimi	23.3	24.1	38.9	14.8
Derna	20.5	18.9	42.0	23.1	Șuncuiuș	27.1	29.2	44.1	14.9
Diosig	18.9	17.6	43.7	26.1	Tarcea	21.6	21.6	44.6	23
Dobrești	22.9	26.5	42.0	15.5	Tămășeu	-	20.5	55.7	35.2
Drăgănești	33.9	42.1	59.4	17.3	Tărcaia	34.4	34.0	53.6	19.6
Drăgești	16.3	18.9	32.4	13.5	Tăuteu	25.8	26.1	51.8	25.7
Finiș	29.9	28.6	47.6	19	Tileagd	26.3	28.5	47.2	18.7

Communes	IDUL2002	IDUL2011	IDUL2018	IDUL difference 2018 - 2011	Communes	IDUL2002	IDUL2011	IDUL2018	IDUL difference 2018 - 2011
Gepiu	-	25.5	52.6	27.1	Tinca	23.7	25.8	47.0	21.2
Girişu de Criş	22.9	28.6	50.1	21.5	Toboliu	-	-	45.4	
Hidişelu de Sus	23.2	30.6	48.7	18.1	Tulca	24.9	25.3	51.6	26.3
Holod	21.6	18.7	45.3	26.6	Țețchea	24.5	25.8	49.0	23.2
Husașău de Tinca	18.3	18.3	43.5	25.2	Uileacu de Beiuș	29.7	32.7	53.6	20.9
Ineu	19.9	19.7	43.4	23.7	Vadu Crișului	28.7	31.9	53.1	21.2
Lazuri de Beiuș	33.2	36.4	50.8	14.4	Viișoara	22.3	28.2	44.5	16.3
					Vârciorog	20.4	16.3	45.0	28.7

**Table 24:** IDUL values of the communes from Bihor County

**Data source** – citadini.ro database

Only 14 communes had in 2018 values of the index higher and equal to 55 (level below which the area is considered poor/in the table above are marked only the highest values at the level of 2018), but we notice an increase in index values compared to previous years. It should be noted that very small localities (less than a thousand inhabitants) were not included in this database, as some of the calculation indicators are very unstable in their case. and the methodology for calculating the index has changed in the case of the 2018 values.

### The technical-urban equipment of the Bihor communes

Regarding the urban endowment of the localities in the Bihor County, belongs to the category of the most developed counties from the point of view of the technical-urban index (ITE), the index having high values, both for urban and rural areas. However, the technical and urban infrastructure is deficient, especially in rural areas, in terms of natural gas and district heating networks. The natural gas networks cover only 18.81% of the total localities in the county, 5 of the municipalities and cities have a natural gas network and in rural areas 14 localities. In terms of territory, district heating networks cover only 2.97% of the total localities in the county (3 localities, 2 urban and one rural). Only 20% of municipalities and cities have a district heating network.

At the level of Bihor County, 86.8% of the communes have access to the drinking water distribution network. registering an ascending trend in terms of the number of localities with access to the drinking water network from 2009 until now (an increase with communes in 2019 compared to 2009).

In terms of territory, sewerage networks cover only 37.4% of all communes in the county.

Only 14 of the 91 communes (i.e., 15% of the total) had introduced the natural gas network in 2019. In 2009, the number of communes that had introduced the natural gas network was 12. Thus, in the last 11 years the natural gas network of was extended in/with 2 communes.

*Social services and social assistance in rural Bihor*

At the county level, according to DSP Bihor, there are 34 permanent centers in the county, of which 23 are in rural areas. There are also homes for the elderly in rural areas.

Regarding the family support allowances, which were granted to single-parent families, if in 2011 for example, for every child in the urban area there were about 2 children in rural areas who benefited from this form of support, in 2018 for each child in the environment urban were 6 children assisted through the allowance for family support in rural areas.

### Economic density and entrepreneurship in rural Bihor

The analysis of the entrepreneurial density (number of existing companies/1000 inhabitants) reveals that the cities of the county (Săcuieni, Nucet, Vașcău) have lower values of the indicator than many of the rural communities of Bihor, especially some of the Oradea Metropolitan Area. In the period 2006-2018, the growth rates of the number of local companies in areas where the stock was significant were impressive: Paleu - increase four times, Sântandrei – tripling, Borș, Nojorid and Sânmartin – doubling, while in Ștei, Nucet and Aleșd the number of companies has decreased.

### Occupancy rate of the population in rural Bihor

The rural environment in Bihor County registers the highest employment rate (123 employees/1000 inhabitants in the period 2006 - 2018), being by far on the first place among the counties of the region. It is interesting that although it registered the highest number of employees before the economic crisis, the rural environment in Bihor County was not severely affected by the economic crisis in Romania at the end of 2008, although there is a decrease in the number of employees/1000 inhabitants in 2009 and 2010, to resume its growth starting with 2011. Registering the highest degree of employment before the crisis and being very little affected by the crisis (in its first two years), the rural area in Bihor County registers increases of the number of employees compared to the period of the economic crisis (+14 employees/1000 inhabitants).

### Tourism in Bihor communes

Regarding the tourist accommodation capacity and the tourist accommodation capacity in operation, there are spectacular percentage increases in the case of the communes of Curățele, Nojorid, Sânanđrei, Hidișelu de Sus, Pietroasa and Vadu Crișului. The other communes registered modest increases, and some registered decreases (some even significant). Sânmartin commune registered a spectacular increase in absolute numbers. The positive evolution of these indicators is given by a substantial increase in capacity in structures such as agritourism pensions. For example, the accommodation capacity in agritourism pensions has increased by over 1,800% in Sânmartin commune. Thus, there is a specialization in the field of agrotourism in the communes of Bihor County.

Also, in terms of tourism, the evolution of tourist arrivals and overnight stays in the tourist reception structures is not a uniform one in the Bihor rural area. A small number of communes in the county registered considerable increases, namely Hidișelu de Sus, Nojorid, Roșia, Vadu Crișului and Pietroasa (716%), most registering modest increases, while in some communes (Ținca, Șoimi, Sântandrei and Pocola), the number of arrivals and overnight stays decreased by 100% during the monitored period.

## Local action groups from Bihor County

Four Local Action Groups (LAGs) are based in Bihor County. one of which also includes urban ATUs. LAGs are partnerships set up in a rural area (usually) that bring together representatives of the public (ATU), private and civil society sectors in that territory (from one or more counties) in order to implement rural development at the level of that territory, LAGs are set up in the form of associations.

In the previous multi-annual programming exercise (2014-2020), Associations/LAGs developed and implemented integrated rural local development strategies. aiming at the sustainable development of communities through participatory community processes and contributing to increasing the quality of local governance, promoting partnerships and cooperation between community actors, including public-private partnerships.

LAG	Covered territories
Bihor Local Action Group Association near the border with Hungary	Communes: Curtuișeni, Șimian, Tarcea, Cherechiu, Buduslău, Abrămuț, Diosig, Ciuhoi, Chișlaz, Tăuteu, Roșiori, Sălard, Tămășeu, Biharia, Cetariu, Paleu, Borș. Orașe: Săcuieni;
“Valea Crișurilor LAG Association”	Communes: Copăcel, Drăgești, Hidișelu de Sus, Ineu, Lăzăreni, Lugașu de Jos, Oșorhei, Săcădat, Tileagd, Vârciorog;
Euro-Crișana LAG Association	Communes: Avram – Iancu, Batăr, Ciumeghiu, Cociuba Mare, Mădăras, Olcea, Tinca, Tulca
Muntele Șes Bihor Local Action Group	Communes: Spinuș, Derna, Suplacu de Barcău, Popești

**Table 25:** LAGs based in Bihor County

**Source:** LAG websites

Three other LAGs are associations that include communes or cities in Bihor Count, but which are based in other counties (Satu Mare, Sălaj, Alba).

LAG	Covered territories
Satu Mare Association “South - West Local Action Group”	Communes: Andrid, Berveni, Cămin, Căpleni, Căuaș, Cehal, Ciumești, Foieni, Petrești, Pir, Pișcolt, Sanislău, Santău, Săcășeni, Săuca, Tiream, Urziceni, Sălacea, Bihor County, Orașe: Tășnad
Association “GAL POARTA TRANSILVANIEI”	Communes: Borod, Bulz (Bihor County), Ciucea, Negreni, Poieni (Cluj County), Almașu, Bănișor, Cizer, Fildu de Jos, Horoatu Crasnei, Plopiș, Sâg (Sălaj County);
“Valea Crasnei și Barcăului” Local Action Group Association	Communes: Balc (Bihor County) Agraș, Boghiș, Camăr, Carastelec, Crasna, Halmășd, Măeriște, Meseșenii de jos, Nușfalău, Petricei, Valcău de jos, Varșolț (Săla County)
Arieșul Mare LAG Association	Communes: Albac, Gârda de Sus, Horea, Poiana Vadului, Scărișoara, Vadu Moților, Arieșeni (Alba County), orașul Nucet (Bihor County);

**Table 26:** LAGs which are based outside the territory of Bihor County

**Source:** LAG websites

Thus, the territory of Bihor County covers a total of 6 LAGs. of which four are based in Sălaj and three in other neighboring counties. Their activity contributes significantly to the change of local planning and action, respectively to the sustainable development of the covered rural areas.

### Bihor agricultural cooperatives

In 2020, 44 agricultural cooperatives were operational in Bihor County, of which 16 were 1st degree cooperatives and 28 2nd degree cooperatives. Grade 1 agricultural cooperatives represent legal entities consisting of natural persons, authorized natural persons, individual enterprises and/or family businesses. Grade 2 agricultural cooperatives are legal persons consisting of legal persons and/or natural persons, authorized natural persons, sole proprietorships and family businesses.

From the perspective of the main object of activity (NACE code) of agricultural cooperatives, most (5) are in the field of wholesale of fruit and vegetables. There are two cooperatives in the following areas: cultivation of cereals (excluding rice), legumes and oilseeds; pig breeding; wholesale of unprocessed grain, seeds, feed and tobacco; wholesale of dairy products, eggs, edible oils and fats. There is an agricultural cooperative in the following areas: poultry farming; raising other animals; mixed farm activities (crop cultivation combined with animal husbandry); ancillary activities for crop production; ancillary activities for animal husbandry; meat processing and preservation; wholesale of live animals; non-specialized wholesale trade; other professional. scientific and technical activities.

According to the analyzed documents. out of the total number of agricultural cooperatives, only 10 of them registered a net profit in 2020, and 8 declared records of net loss.

### Rural development in Bihor county - SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>● The economic growth rate of the communes neighboring Oradea, but also of other communes (those from Oradea MA and FUA);</li> <li>● The value of the technical-municipal index (ITE) is among the highest in the country;</li> <li>● Significant share (86.8%) of communes where there is a drinking water network;</li> <li>● The highest number of employees/1000 inhabitants in rural areas in the North-West Region;</li> <li>● The existence of 4 LAGs with headquarters in the county and other 4 LAGs that include localities on the territory of the county. but with headquarters in other counties;</li> <li>● Significant increase in the level of local development (IDUL) and consequently. of the indicators of quality of life in some communes;</li> <li>● Existence of agricultural production cooperatives;</li> </ul>	<ul style="list-style-type: none"> <li>● Accelerated rate of population decline and aging in rural areas;</li> <li>● Migration of young people;</li> <li>● Coverage with gas networks.</li> <li>● Poor/non-existent technical-municipal infrastructure in most communes;</li> <li>● Insufficient health services, poor quality and difficult to access for most of the rural population in the county;</li> <li>● Poor quality of educational services (preschool and pre-university) in most communes;</li> <li>● Lack of experience, specialization and inability to cooperate of agricultural producers/poor professionalization of agricultural producers;</li> <li>● Inability to adapt to globalization;</li> </ul>

Opportunities	Threats
<ul style="list-style-type: none"> <li>● Connectivity of some of the communes on important roads (European roads, the future highway);</li> <li>● European and government grants;</li> </ul>	<ul style="list-style-type: none"> <li>● High income levels in large urban centers (which causes young people to emigrate);</li> <li>● Higher quality of life in large urban centers;</li> <li>● Globalization;</li> </ul>

### Conclusions and strategic perspectives on rural development in Bihor County

- Most communes in Bihor County are in an accelerated process of depopulation and population aging, with the exception of only 24 communes out of 91, most located in MA Oradea or FUA Oradea;
- The local economy of some of the communes is on a significant growth trend, a phenomenon signaled by the increase of the entrepreneurial density, of the turnover and employees of the active units, of the number of established companies. of the increase of accommodation capacity and number of tourists etc.
- The low level of development of rural Bihor is also revealed by the Local Human Development Index (IDUL). However. the significant increases of the IDUL values for 2018 should be noted, compared to 2011 in the case of some communes such as Tămășeu, Borș, Curtușeni, Căpâlna.
- The existence of LAGs and agricultural production cooperatives is the sign of the beginning of a process of revitalization of rural development in the county, a process that is difficult and involves a change of mentality, respectively the need for partnership and collaboration, consultation, transparency, professionalism and entrepreneurial capacity of the rural population.

### Quality of environmental factors

Globally, the last decades have led to a growing interest in the quality of the urban environment, and especially in the influence that the quality of environmental factors has on the quality of life and urban sustainability. Understanding this phenomenon can contribute to shaping better urban public policies as well as more effective urban planning and design. In this chapter, several environmental factors are explored, with an impact on the quality of life in Bihor County. It was insisted on those aspects that are relevant from the perspective of the action of the county level. Topics on protected natural areas, climate change and energy efficiency are also addressed.

#### Green spaces

Well-maintained green spaces play an indisputable role in promoting the health of the urban population. They provide opportunities to encourage a more active lifestyle and respond primarily to human needs for recreation and leisure. Urban green spaces have a special importance from an aesthetic point of view, attenuating the impression of rigidity and aridity of the built environment, and through the value of their landscape arrangement. green spaces give identity to human settlements. Finally, green spaces act as a protective curtain against winds and against the spread of elements in industrial areas.

The evolution of green spaces in the urban localities of the county in the period 2015-2019 indicates a concern for their growth especially at the county seat, Oradea, and a stagnation in the small urban (provided that the data from INS does not reflect the real situation).

Landscaped landscaping related to street alignments, banks, parks, squares, owners' associations and the Real Estate Heritage Directorate	534.08 ha
Green spaces related to cemeteries	87.00 ha
Undeveloped/degraded spaces	41.92 ha

**Table 27:** The situation of the green space surfaces in the urban localities of Bihor County in the period 2016-2019 (average)

**Source:** NIS. for Oradea the data 2016-2019 come from Bihor Environmental Agency annual reports

Regarding the inventory of green spaces, there is, after 2008, the obligation for municipalities to draw up registers of green spaces. Thus, in accordance with the provisions of par. (1) of article 18 of Law no. 24/2007 on the regulation and administration of green spaces in urban areas, the local public administration authorities have the obligation to keep records of green spaces on the territory of their administrative units and for this purpose set up local registers of green spaces.

The surface of green spaces reveals for the municipality of Oradea, in 2019, an area per capita of 29.96m<sup>2</sup> located above the minimum imposed value of 26 m<sup>2</sup>/capita. In the other cities of the county there are values below the minimum value imposed in Beiuș, Marghita, Aleșd, Săcueni, Ștei and Valea lui Mihai, and values above the minimum value imposed in Salonta, Nucet and Vașcău.

Cities	Population by residence on July 1, 2019	The surface of green spaces arranged in 2019 (m <sup>2</sup> )	Area of green spaces/inhabitant in 2019 (m <sup>2</sup> /loc)
Oradea	221,301	6,630,000	29.96
Beiuș	11,053	70,000	6.33
Marghita	17,648	280,000	15.87
Salonta	18,840	540,000	28.67
Aleșd	11,210	150,000	13.38
Nucet	2,074	140,000	67.5
Săcueni	12,604	200,000	15.87
Ștei	7,078	170,000	24.02
Valea lui Mihai	10,810	250,000	23.13
Vașcău	2,279	100,000	43.88

**Table 28:** The surface of green spaces/inhabitant in 2019, in the urban localities of the county

**Source:** Oradea City Hall

Referring to the indicator of 26 m<sup>2</sup>/inhabitant, the city of Oradea achieves the required indicator. In the other cities in the county there are values lower than the minimum value imposed in six cities: Beiuș, Marghita, Aleșd, Săcueni, Ștei and Valea lui Mihai, and values above the minimum value imposed in three cities: Salonta, Nucet and Vașcău.

## Protected natural areas

According to Law no. 5 of March 6, 2000 (\* updated \*) regarding the approval of the National Spatial Planning Plan - Section III - protected areas, in Bihor County there are 107 protected natural areas, as follows:

- 2 natural parks - Apuseni Natural Park and Cefa Natural Park;
- 66 Nature Reserves and Monuments - including the Intermittent Spring from Călugări, Crișului Repede Gorge, Gălășeni Cave, Crișului Negru Gorge at Borz, Oșorhei Narcissus Forest, Goroniște Daffodil Glade, Iadeha Valley with Syringa Lake Cicoș, Gruicul Pietrii. Tortoniene limestones from Tășad, Lentila 204 Brusturi – Cornet, Fossil place from Corniț; Ponor Ciurului Cave, Iz buc Ciurului Cave, Chișcău Bears Cave, Vântului Cave, Micula's Cave, Toplița Cave, Piatra Ponorului Cave, Molhașul Mare de la Izbuce, Smeilor Cave from Onceas ; Osoiu Cave, \*Water Valley Cave from Leșului Valley, Meziad Cave, Vacii Cave, Gruiețului Cave, Igrîța Cave, Farcu Cave, Karst Complex from Ponorului Valley, System karst Deer Cave - Cow Avenue;
- 29 sites of community importance (SCI), including Betfia, Câmpia Careiului, Crișul Negru, Crișul Repede upstream of Oradea, Defileul Crișului Negru, Defileul Crișului Repede - Pădurea Craiului, Diosig, Lacul Pețea, Lunca Inferiore a Crișea Rep from Alparea, Goroniște Forest, Vașcău Plateau Săcueni, Tășad, Valea Cepelor, Valea Iadului, Muntele Șes;
- 8 special avifauna protection areas (SPA) - Crișului Alb and Crișului Negru Plain, Câmpia, Câmpia Nirului - Valea Ierului, Lunca Barcăului, Muntii Apuseni – Vlădeasa, Pescăria Cefa - Pădurea Rădvani, Valea Alceului, Defileul C The accumulation lakes on Crișul Repede.

These protected natural areas are under the administration of the National Agency for Protected Natural Areas (NAPNA).

The Apuseni Natural Park, the Natura 2000 sites and the protected natural areas of national interest that overlap with it, are under the administration of RNP-Romsilva Apuseni Natural Park Administration.

The protected natural areas of community interest ROSCI0002 Apuseni and ROSPA0081 Apuseni - Vlădeasa Mountains mostly overlap with each other, as well as with Apuseni Natural Park, and ROSCI0016 Buteasa is fully included in ROSPA0081 Apuseni Mountains – Vlădeasa, being located outside the Apuseni Natural Park and a ROSCI0002 Apuseni.

Of the 105 protected natural areas in the county, 48 have a management plan, 78 of the 101 administrative-territorial units in the county intersect with protected natural areas. The total area of protected natural areas in Bihor County is 310,832.89 ha. which represents 41.2% of the total area of the county (Figure 25). The significant share of these protected natural areas, their diversity and uniqueness represent an invaluable resource for Bihor County, both from the perspective of the protected/conserved natural environment and from the perspective of sustainable tourism development and sustainable development.



**Figure 25: Territory of protected natural areas in Bihor County**  
**Source: NAPNA**

## Air quality and pollution

Air pollution is caused by the release of foreign gases, vapors, droplets and particles or excessive amounts of normal constituents into the atmosphere, such as carbon dioxide and suspended dust produced by the burning of fossil fuels. Air pollution mainly occurs in urban areas and has three main components: industrial waste gases, vehicle exhaust gases and residential heating systems. Concentrations of air pollutants depend not only on the quantities emitted, but also on the ability of the atmosphere to absorb or disperse them. being heavily conditioned by meteorological and topographical factors. The location of human settlements is also of paramount importance.

The automatic air quality monitoring network consists of four fixed stations, three of which are located in Oradea and one in Țețchea, as follows:

- BH1 station (urban station) - located in the inner courtyard of Bihor Environmental Protection agency, 25/A Dacia Blvd., with the following monitored parameters: CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> (nephelometric and gravimetric), BTX (benzene, toluene, xylene). weather parameters;
- BH2 station (industrial station) - located in the courtyard of the General School of the Bishopric of Bihor, Str. Matei Corvin no.106/A, with the following monitored parameters: CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, PM<sub>10</sub> (nephelometric and gravimetric), weather parameters;
- BH3 station (traffic station) - located in the Nufărul neighborhood, near McDonalds-drive with the following monitored parameters: CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, PM<sub>10</sub> (nephelometric), BTX (benzene, toluene, xylene). parameters meteo;
- BH4 station (industrial station) - located in Țețchea locality with the following monitored parameters: CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, PM<sub>10</sub> (nephelometric and gravimetric), weather parameters.

The table below shows the evolution of the annual data captures at the four fixed stations in the county.

Monitoring station	Pollutant	Annual data capture-2017%	Annual data capture-2018%	Annual data capture-2019 %	Annual data capture-2020%	Annual data capture-2021%
BH1	SO2	77.11	88.47	62.74	94.08	94.76
	NO2	85.44	94.65	94.52	76.00	86.46
	NOx	85.44	94.91	94.52	76.14	86.46
	NO	85.44	94.91	94.52	-	-
	CO	93.48	95.88	96.16	53.51	94.33
	O3	84.36	73.67	68.49	47.99	94.04
	Benzen	92.42	97.52	46.58	100	96.36
	PM10 nefelometric	93.61	88.22	82.74	89.07	94.74
	PM10 gravimetric	55.50	70.89	80.82	92.90	100.00
	PM2,5 gravimetric	31.24	36.98	8.22	59.29	79.18
BH2	SO2	93.01	93.41	70.96	31.75	81.75
	NO2	86.97	93.62	60.27	26.82	91.22
	NOx	86.97	93.58	60.27	26.84	91.61
	NO	86.97	93.58	60.27	-	-
	CO	78.81	94.28	70.68	28.06	91.47
	O3	91.16	95.8	73.96	32.01	90.76
	PM10 nefelometric	94.89	91.77	72.05	36.34	92.89
	PM10 gravimetric	-	-	63.56	13.93	94.25
BH3	SO2	94.92	94.12	96.16	87.17	86.45
	NO2	76.82	94.1	61.64	82.40	87.10
	NOx	76.82	94.11	61.64	82.41	87.10
	NO	76.82	90.01	61.64	-	-
	CO	97.79	94.05	87.12	78.06	89.61
	O3	94.54	93.21	90.68	72.73	90.26
	Benzen	95.99	92.43	88.77	88.89	91.43
	PM10 nefelometric	80.65	96.63	98.89	96.17	94.58
BH4	SO2	-	85.76	98.36	79.47	92.58
	NO2	-	85.75	96.44	93.70	79.53
	NOx	-	85.53	96.44	93.70	79.53
	NO	-	85.76	96.44	-	-
	CO	-	93.90	98.08	82.17	91.64
	PM10 nefelometric	-	93.49	79.18	43.17	83.80
BH5	O3	-	-	-	-	30.30

**Table 29:** Data captures in the period 2017-2019 in Bihor County from monitoring stations

**Source:** data processing provided by Bihor Environmental Protection Agency

At the level of 2020, according to the Integrated Strategy for Urban Development of Oradea Municipality and Oradea Metropolitan Area, the main pollutants monitored by 3 stations - BH 1, BH 2, BH3, were:

Sulfur dioxide (SO<sub>2</sub>), Nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), carbon monoxide (CO), benzene (C<sub>6</sub>H<sub>6</sub>), particulate matter PM<sub>10</sub> and PM<sub>2.5</sub>, and heavy metals: lead (Pb), cadmium (Cd), nickel (Ni), arsenic (AS). Of these, in 2020, only PM<sub>10</sub> pollutants exceeded the normal values allowed.

The air condition is good, but the data collection system should be much more efficient. Road transport and home heating, as well as energy production systems have the greatest contribution to air pollution.

### Water pollution

Water is an essential constituent of living matter, having a special role in the development of all vital processes in the body. Water has multiple uses. The minimum amount of water required per day per person is 50 liters, estimated only for: ensuring the physiological need (2.5 l/person/day), individual hygiene and food preparation. The optimal amount of water recommended by the WHO for individual needs is 100 l/person/day.

Drinking water quality is monitored by the producer, distributor and the public health authority.

The Bihor Public Health Directorate has responsibilities in the protection of public health in relation to water hygiene, carrying out activities in this regard through the public health surveillance department and the public health control service. The quality of drinking water is regulated by the provisions of the Drinking Water Law no. 458/2002 (amended and supplemented by Law no. 311/2004, Government Ordinance no. 11/2010, Government Ordinance no. 1/2011). Law no. Regulation (EC) No 458/2002 transposes Directive 98/83 / EC on the quality of water intended for human consumption into national law.

### Drinking water

Starting with 2019, Bihor Public Health Directorate has established for Oradea 2 large ZAPs (drinking water supply area), one for each bank of the river Crisul Repede, which is the water source of Oradea, so that at the county level in Bihor there are 12 large ZAPs and not 14 as many as they were until the end of 2018.

The research on the quality of drinking water provided by the central supply systems indicates that out of the total of 828 samples taken, a number of 503 samples (60.75%) were unsuitable from a physico-chemical and/or microbiological point of view, with 13.7 % less than in 2018.

19,238 laboratory analyses, 14,747 physico-chemical analyzes and 4,491 microbiological analyses were performed for the analysis of water quality.

Laboratory results indicated 1766 inadequate analyses (9.18% of total analyses performed):

- 893 physico-chemical (6.06% of the total physico-chemical analyses performed)
- 873 microbiological (19.44% of the total microbiological analyses performed)

Most non-compliant samples in 2019 were recorded, similar to the previous year, by the free residual chlorine indicator parameter (22.22% of the total water samples collected), 7.4% less than in 2018.

The comparison of the results of laboratory tests obtained in 2019 with those obtained in 2018 shows an increase in the frequency of non-compliant samples for the following physico-chemical indicators: arsenic,

manganese, sulfates and aluminum, the other physico-chemical parameters recording relatively constant decreases or trends in sample frequency non-compliant.

In 2019, in Bihor County, there were a number of 91 water installations that chlorinated drinking water (belonging to 56 producers). The effectiveness of water disinfection was verified by taking 526 water samples from treatment plants that have a disinfection stage (with chlorine gas or sodium hypochlorite) and the following conclusions can be mentioned:

- a number of 184 samples were non-compliant. representing 34.98% of the total chlorinated water samples taken (9.43% less than in the previous year);
- due to the non-compliance of the free residual chlorine parameter, 27.18% of the total chlorinated water samples taken (143 samples) had the value of free residual chlorine below 0.1 mg/l and 7.79% of the total free chlorine samples chlorinated water samples (41 samples) had a value above the allowable value (0.5 mg/l).

Urban wastewater treatment is an indicator that quantifies the level of connection of the population to the systems of collection and treatment of wastewater. At the same time, the indicator illustrates the effectiveness of policies to reduce discharges of nutrients and organic substances, as well as the stage of implementation of the Wastewater Treatment Directives. At the county level, there is a decrease in the percentage of population connected to sewage treatment systems and an increase in the population connected to sewage systems without treatment. This is due to the increasing pace of network expansion, especially in rural areas.

Sewerage and water treatment systems / Year	2014	2015	2016	2017	2018	2019
City treatment plants (per no. inhabitants)	224,815	228,694	237,464	239,333	241,704	244,091
Urban wastewater treatment plants with primary treatment plants (per no. inhabitants)	18,095	18,622	24,056	19,736	12,398	13,389
Urban wastewater treatment plants with secondary treatment plants (per no. inhabitants)	15,658	16,038	19,508	9,644	8,230	8,311
Urban wastewater treatment plants with tertiary treatment plants (per no. inhabitants)	191,062	194,034	193,900	209,953	221,076	222,391
Sewerage systems (per no. inhabitants)	235,735	234,896	252,420	255,213	261,913	268,945
Sewage treatment systems (per no. inhabitants)	224,815	228,694	237,464	239,333	241,704	244,091
Sewage-free systems (per no. inhabitants)	10,920	6,202	14,956	15,880	20,209	24,854
City treatment plants (%)	<b>100%</b>					
Urban wastewater treatment plants with primary treatment plants (%)	8.05%	8.14%	10.13%	8.25%	5.13%	5.49%
Urban wastewater treatment plants with secondary treatment plants (%)	6.96%	7.01%	8.22%	4.03%	3.40%	3.40%
Urban wastewater treatment plants with tertiary treatment plants (%)	84.99%	84.84%	81.65%	87.72%	91.47%	91.11%

**Table 30:** Population connected to sewage and wastewater treatment systems in Bihor County (number of inhabitants and percentages)

**Source:** NIS data

The monitoring of the water quality distributed to the population is done according to the normative provisions, 74.16% of the total samples taken from the central systems and 66.28% of the total samples taken from artesian wells and public wells complied with the minimum quality requirements.

### Soil/land pollution

Soil is the place where all pollutants, air dust, toxic gases transformed by rain into the atmosphere meet, so the soil is most exposed to the negative effects of these substances. Infiltration water impregnates the soil with pollutants dragging it deep, polluted rivers infect flooded or irrigated areas, almost all solid residues are deposited by agglomeration or accidentally dumped on the ground. Soil pollution is closely linked to the pollution of the atmosphere and hydrosphere, due to the natural circulation of matter in the ecosphere.

The management of contaminated sites aims to mitigate any suspected or proven adverse effects of environmental degradation and to reduce potential threats to human health, water bodies, soil, habitats, food and biodiversity. Emissions of hazardous substances from local sources can have profound consequences for soil and water quality. especially groundwater.

Nr. Crt.	Land groups affected by degradation processes (ha)	Affected surface
1	Lands with surface erosion	64,314
2	Deep erosion lands (streams, gullies, ravines)	2,501
3	Lands affected by landslides (collapses, landslides)	149
4	Sandy terrain exposed to erosion by water and wind	4,483
5	Land with agglomerations of gravel, boulders, rubble, rocks	5,743
6	Soils with permanent excess moisture and swamps	1,554
7	Saline and acid soils	391,371
8	Land polluted with petroleum and/or noxious chemicals	105
9	Land occupied by mining dumps. industrial and/or household waste	355
10	Unproductive land (from map area: 442650 ha)	4,732
11	Lands with damaged or destroyed biocenoses	1,930
TOTAL ha		477,237

**Table 31:** The main soil quality restrictions in Bihor County (ha)

**Source:** Bihor Environmental Protection Agency, 2019 Report

The management of contaminated sites aims to assess the negative effects caused by local sources and to take measures to meet environmental standards in accordance with applicable legal requirements. The indicator shows progress in the management of contaminated sites and restrictions on land/surface/groundwater use. It also shows the expenditures made by the public and private sectors for remediation.

Pollution caused by industrial activities (extractive processing) occurred on a total area of 673.5 ha. through:

- mining operations -5 ha;
- gravel pits -92 ha;
- quarries -15 ha;
- dumps and warehouses -287 ha;
- oil residues -105 ha;
- tailings dump -119.52 ha;

A special problem is the contaminated sites in Derna and Suplacul de Barcău, where the companies that manage them are insolvent.

According to the Action Plan included in the National Strategy and the National Action Plan for the Management of Contaminated Sites in Romania, the lists of contaminated / potentially contaminated sites have been approved by the Government Decision no. 685/2015. They are made available to interested persons in accordance with the provisions of Law no. 52/2003 on decision-making transparency in public administration, insofar as the information contained in them are entirely public. According to Annex III to this decision, Bihor County registers 67 potentially contaminated sites and 17 contaminated sites. The division of the contaminated sites into two categories, namely: potentially contaminated sites and contaminated site, was made on the basis of the information available in the factsheets for each site. Information on potentially contaminated sites is only a description of previous activities, without any on-site investigations. as required by applicable environmental legislation.

### **Use and consumption of fertilizers in agriculture**

The gross nutrient balance indicates the links between the use of agricultural nutrients, changes in the quality of environmental factors and the sustainable use of nutrient resources in the soil. A persistent surplus of nutrients indicates the emergence of environmental problems, a persistent deficit indicates the emergence of problems regarding the sustainability of agriculture. In terms of environmental impact, the main determinant is the absolute size of the nutrient surplus/deficit, depending on local agricultural practices. nutrient management and agro-ecological conditions.

The consumption of chemical fertilizers is, on average, 400 Kg/ha. in the period 2015-2019 but differs depending on the category of land and crops. Consumption of natural fertilizers is approx. 5 to/ha/year compared to arable land and pastures but taking into account the fact that natural fertilizers are applied on a plot every four years. it results in an amount of 20 to/ha per plot.

### **Organic farming**

Organic farming has a major contribution to the sustainable development of agriculture, to the growth of economic activities and contributes substantially to the conservation of the environment. Organic farming is an agricultural method that aims to produce food using natural substances and processes. During the production period, the use of genetically modified organisms (GMOs and their derivatives), synthetic fertilizers and pesticides, growth stimulants and regulators, hormones, antibiotics, etc., is prohibited.

In 2019, at the level of Bihor County, the number of operators registered in organic farming increased by 30 compared to 2015, as can be seen in the following table:

Year	2015	2016	2017	2018	2019
Number of operators	226	230	238	245	256

**Table 32:** The dynamics of the operators in ecological agriculture, at the level of Bihor County (no.)

**Source:** Bihor Agricultural Directorate

### Land use

How land use changes over time gives us important insights into the impact of anthropogenic activities on the environment - for example, the expansion of construction in agricultural and semi-agricultural areas leads to fragmentation of natural habitats for many species. According to the data and information collected from the INS website: TEMPO-Online database, Agriculture field, AGR101B matrix - Land area by use for the years 2014 and 2019, below are the changes registered in land cover/use at county level.

Land area (ha)	2014			2019			
	ha	%	%	ha	%	%	
<b>Total</b>	754,427		100%	748,278		100%	↘
<b>Agricultural</b>	487,072	<b>100%</b>	64.56%	490,374	<b>100%</b>	65.53%	↗
<b>Arable</b>	308,819	<b>63.40%</b>		318,171	<b>64.88%</b>		↗
<b>Grassland</b>	130,964	<b>26.89%</b>		121,493	<b>24.78%</b>		↘
<b>Meadow</b>	41,245	<b>8.47%</b>		42,737	<b>8.72%</b>		↗
<b>Vineyards</b>	2,222	<b>0.46%</b>		2,607	<b>0.53%</b>		↗
<b>Orchards and nurseries</b>	3,822	<b>0.78%</b>		5,366	<b>1.09%</b>		↗
<b>Total non-agricultural land</b>	267,355	<b>100%</b>	35.44%	257,904	<b>100%</b>	34.47%	↘
<b>Forests and other forest vegetation</b>	198,373	<b>74.20%</b>		196,225	<b>76.08%</b>		↗
<b>Waters. puddles</b>	13,636	<b>5.10%</b>		11,851	<b>4.60%</b>		↘
<b>Build land</b>	32,207	<b>12.05%</b>		26,539	<b>10.29%</b>		↘
<b>Communications and railways</b>	14,276	<b>5.34%</b>		13,355	<b>5.18%</b>		↘
<b>Degraded and unproductive land</b>	8,863	<b>3.32%</b>		9,934	<b>3.85%</b>		↗

**Table 33:** Land area by use (comparison 2014-2019) (ha and percentages)

**Source:** NIS and Bihor Environmental Protection Agency data

The agricultural area of Bihor County increased in the period 2014-2019 by 3302 ha (0.68%). The most important increases were registered in the categories of arable land, vineyards and orchards and hayfields, and the decreases in pastures. These variations indicate the orientation of some investors towards fruit-growing activities but also the anthropic pressure on the pastures seen as opportunities for real estate developments.

### Waste collection. storage and recycling system

Waste is a significant part of a community's impact on the environment, accurately reflecting consumption patterns - with the well-being of communities, the amount of waste usually increases.

The way in which waste management is carried out – collection, storage, is also directly related to how sustainable a certain community aims to develop.

According to Bihor Environmental Protection Agency, at the county level there are 4 authorized compliant landfills and 8 mixed non-compliant municipal landfills. They have an environmental agreement for greening and post-closure monitoring for 30 years and are included in the SMID Bihor project, financed by SOP Environment priority axis 2- POIM; initiated by the Bihor County Council which is also the beneficiary of the integrated waste management system for Bihor County-SMID.

There are 3 hazardous waste dumps in Bihor County:

1. SNP Petrom cell Abrămuț-oil extraction sludge;
2. SNP Petrom cell Parc 30 Suplacu de Barcău-oil extraction sludge;
3. SNP Petrom Cell no. 1 and Cell no. 2 Suplacu de Barcău-oil extraction sludge.

In Oradea and in the county, there are also registered 8 hazardous industrial waste landfills that have not initiated the closure and post-closure monitoring procedures for 30 years. Five of them are from oil refineries. with storage stopped on 31 December 2006 and are in various stages of management, with some operators going bankrupt.

In Bihor County were made (after the ecological landfill of partially stabilized hazardous waste from Suplacu de Barcău belonging to OMV Petrom Crișana Banat Production Area) and 3 bioremediation stations, treatment plants for reuse of drilling mud, other types of treatment and recovery of crude oil content as a pollutant.

Bihor County has partnered with the other 101 territorial administrative units in the county in the Intercommunity Development Association "Ecolect Group", which aims to reorganize, regulate, operate, monitor and jointly manage the sanitation service based on the Strategy for the development of the service sanitation developed at the level of the entire county, one of the attributions of the association being the realization of the development strategy of the sanitation service. Bihor County, based on the provisions of the statutory documents and the association agreement, promoted the project "Integrated Waste Management System in Bihor County" (SMID), a project funded from two sources: Environment Sectoral Operational Program 2007-2013 and Large Infrastructure Operational Program 2014 - 2020. The implementation of the system is provided by ADI Ecolect Group.

SMID provided for the division of the county into seven zones, each of which was served by an operator.

Within SMID, three new separately collected recyclable waste sorting stations have been set up in Beiuș, Marghita and Salonta, a mechanical-biological treatment plant (TMB) for residual waste in Oradea. In the sorting stations, the waste that the people of Bihor did not collect properly is separated, while the TMB station will recover the residual waste by transforming it into industrial compost.

SMID also provided for the closure of the eight non-compliant landfills in Bihor County.

SMID also involves the provision of equipment necessary for the selective collection of waste, namely 5.000 bins with a capacity of 120 l for the collection of biodegradable waste, 3.400 containers with a capacity of 1.1 m<sup>3</sup>. 20.000 household composters, four containers with capacity of 24 m<sup>3</sup>. A prescontainer with a capacity of 15 m<sup>3</sup>. six containers with a capacity of 30 m<sup>3</sup>, a tug truck, six crushers for waste from gardens and parks, 160 waste collection bins with a capacity of 770 l.

Six months after the implementation of the Integrated Waste Management System (Bihor County Council 06.05.2021), the degree of selective waste collection in the county varies. In zone 1B it reached a degree of selective collection of 20%, zone 2 - 23.54%, zone 3 - 33.93%, zone 4 - 29.61%, zone 5 - 26.44%, and zone 6 - 37.66%. The same document also states that the county is after 6 months at an average of about 30% in terms of the degree of collection. In the urban area it is collected on five fractions (paper/cardboard, plastic/aluminum, glass, residual waste and bio-waste), and in the rural area there are four fractions (paper/cardboard, plastic/aluminum, glass and residual waste).<sup>38</sup>

Another important project at the county level was proposed by Ecolect Association for Intercommunity Development in partnership with the Bihor County Council and aims to create an application for waste management. This application contains information on the correct sorting of waste, the timing of their collection by area, information on collection centers and points, as well as the ability to report waste illegally stored in the public space<sup>39</sup>.

### Noise pollution

Both worldwide and in Europe noise pollution is a worrying phenomenon as noise from traffic industry and leisure activities affects an increasing number of people. It is estimated that almost 70 million Europeans are exposed daily to noise levels in excess of 55 decibels. In cities, these noises come mainly from road traffic. In addition, about 50 million people living in urban areas are affected by traffic noise at night, with 20 million of them suffering from health problems. Harmful effects on human health of noise pollution include: increased blood pressure or myocardial infarction (prolonged exposure), sleep deprivation (if it is night), tinnitus. mental problems and stress. decreased performance at work. and in children it can have negative consequences on school activity. Noise also has detrimental effects on wild flora and fauna. Although some creatures have the ability to adapt to urban environments, noise pollution may cause some of them to leave their habitats in which they usually breed and feed<sup>40</sup>.

In the period 2016-2018. the City Hall of Oradea carried out the Service Contract regarding the acquisition of the restoration/revision services "Noise map for the city of Oradea". no.83571/23.03.2016 concluded with S.C.ENVIRO CONSULT SRL Bucharest.

<sup>38</sup> <https://www.cjbihor.ro/gradul-de-colectare-selectiva-a-deseurilor-in-judetul-bihor-a-ajuns-la-30/>

<sup>39</sup> <https://www.cjbihor.ro/aplicatie-integrata-pentru-gestionarea-deseurilor-din-judetul-bihor/>

<sup>40</sup> European Commission, *Noise Pollution in the EU*, [http://ec.europa.eu/environment/basics/health-wellbeing/noise/index\\_ro.htm](http://ec.europa.eu/environment/basics/health-wellbeing/noise/index_ro.htm).

In 2017, this contract included the restoration/revision of the Noise Maps. These were handed over to the Bihor Environmental Protection Agency and were approved by the Local Council of Oradea Municipality with HCL no. 640/2017.

During 2018. HCL no. 667/2018 approved the Action Plan for managing the problems and effects caused by noise in Oradea.

The results obtained after making the noise map show that the only factor with overtaking is road traffic.

The traffic arteries for which overtaking is registered, for road traffic, in LZSN mode (traffic noise during the day) regime are: Densușianu street, Calea Borșului, Podului street, Matei Corvin street.

In LN mode (traffic noise during night), there are overtaking for road traffic on the traffic arteries: Densușianu street, Calea Borșului street, Podului street, Matei Corvin street, Calea Aradului, Ogorului street, Calea Clujului street, Făcliei street (from the intersection with Codrilor to the intersection of Pod Mareșal C-tin Prezan).

From the analysis of the obtained results, it is observed that there are a number of 3051 people exposed to noise levels above the limit of 70 dB for the Lzsn indicator, respectively 5900 people exposed to a level of over 60 dB for the Night indicator.

In the period 2015-2019, the number of exceedances of the noise level in the industrial area, at the pedestrian crossings, inside the agri-food market, in the 3 parks in Oradea and on the category I streets decreased. The number of exceedances of the noise level increased to 2nd and 3rd category streets.

### Environmental risks

Among the risks associated with local development in Bihor County there are geomorphological and flood risks.

#### **The risk of flooding**

Flooding is the temporary covering of land with water from the overflow of watercourses, heavy rains or sudden melting of snow, accidents in hydrotechnical constructions (rupture) and whose magnitude, intensity and duration have a significant negative impact on human health, environment, cultural heritage and economic activity. The effects of the floods in our country are reported through the Synthesis Reports prepared by the County Committees for Emergency Situations.

Administratively, the space managed by the A.B.A. Crisuri includes the territory of 6 counties, respectively: Hunedoara (6.3%), Arad (29%), Bihor (50.8%), Cluj (5.1%), Sălaj (3%) and Satu Mare (5.8%). In terms of development regions, this area includes territories belonging to 2 development regions: 33.7% of the Western Development Region and 66.3% of the North-Western Development Region. The total population is about 835.420 inhabitants, of which 357745 inhabitants in urban areas and 478,675 inhabitants in rural areas. The most important human settlements are: the municipalities of Oradea, Brad, Beiuș, Salonta, and the cities of Huedin, Ștei, Tășnad, Chișineu-Criș, Ineu, Sântana.

## Risk of landslides

Bihor County has areas affected by landslides, but also areas prone to their occurrence. The cause of landslides is related to both natural processes and anthropogenic activities. Following the maps of the average hazard coefficient, especially the areas corresponding to a high probability of landslides, in correlation with those characterized by a medium-high probability of triggering the phenomenon, we find the following their spread:

- in the north of the county, on the territory of Simian, Valea lui Mihai and Curtuișeni communes;
- in the west of the county, in the commune of Diosig;
- two thirds of the city of Săcueni are covered by areas with a high probability of landslides;
- in the south of Cherechiu, Tarcea and Salacea communes;
- the territory of the communes Buduslău, Abrămuț, Abram, Viișoara, Boianu Mare in the northeast of the county;
- Marghita municipality is covered from north to south, on more than two thirds of its surface by an area with a high probability of landslides;
- in the north of the localities Derna, Popești, Suplacu de Barcău, Balc and the south of the communes Chislaz, Tauteu;
- in the north of Roșiori, Sălard, Ciuhoi localities;
- in Tamașeu and Borș;
- the entire surface of Biharia locality located in the west of the county. except for the center occupied by an area with medium-low probability;
- in the localities of Cetariu, Paleu, Sârbi and Spinus, located in the northwestern third of the county;
- in the western half of Brusturi locality, in the northern half of Tileagd and Ineu communes;
- the central part of Lugașu de Jos and a small part of the west of Aleșd;
- in the west and southeast of Aușeu commune and in the eastern extremity of the county, in Borod commune;
- in the north of Vadu Crișului, Măgești and Aștileu communes and in Țețchea commune;
- at Vârciorog, Copăcel, Oșorhei and Săcădat, located east of Oradea;
- in the municipality of Oradea, there are areas of appreciable size, with high probability of landslides, east of Crișul Mic and on the right side of Crișul Repede, west of Oradea, in the south and west of the locality;
- in the western extremity of the county, on the territory of Ghirișu de Criș and Sântandrei communes;
- at Sânicolau Roman, Cefa, Mădăraș, Tulca, Gepiu, located in the south-western extremity of the county;
- on the territory of Sîntandrei commune, located west of Oradea municipality;
- on the whole territory of Nojorid, Sânmartin, Hidișelul de Sus, Husasău de Tinca, Lăzăreni, Holod and Ceica communes;
- in the north of Șuncuiuș and Bratca communes, in Bulz commune, located on the eastern branch of the county, in Roșia and Căbești localities;

- in the north-western half of Dobrești, Pomezou, Remetea, Curatele, Câmpani localities, the central part of Buntești locality and the south-western extremity of Budureasa, Pietroasa, Nucet, Cristioru de Jos communes, on the eastern branch of the county;
- in the central-eastern part of Vașcău city and of the communes Cărpinet, Lunca, Rieni, Lazuri de Beiuș, Tărtăcaia, as well as in the northern part of Finiș locality;
- in Beiuș municipality, Strei town, Drăgănești and Lunca communes, located in the upper basin of Crișul Negru;
- in the northern third and the southern half of Răbăgani commune, located in the central-southern part of the county and north of Răbăgani, in Sâmbăta locality;
- in the northern half of the communes of Pocola, Uileacul de Beiuș and Șoimi, in the center, west, south and east of Olcea commune;
- on the territory of the commune Cociuba Mare and east of Cociuba Mare, in Căpâlna commune.

The localities that were affected by the landslides in the county, in the period 2001-2009 are: Aleșd; Balcony; Bratca commune; Beznea village; Aleșd-Șimleu; Drăgănești commune; Tășad village; Sârbi commune; Burzuc village; Aleșd-Șinteu; Abram commune; Dijir village; Holod commune; Pietroasa commune; Chiscau village; Remetea commune; Meziad village; Popești commune; Tăuteu commune; Borod commune; Aleșd - Black Forest; Pietroasa commune; Chiscau village; Holod commune; Lupoiaia village.

### Risk of earthquakes

For Bihor County, the zoning maps from code P.100-1/2006 indicate the acceleration of 0.08 g and the corner period of 0.7s. broadly equivalent to grade VII MSK.

Seismic risk can only be reduced if the vulnerability of buildings can be reduced, the seismic hazard and the exposure of the built bottom cannot be modified by humans.

### Climatic changes

**Climate change** is a global phenomenon that greatly affects urban life. Rising global temperatures are raising sea levels, increasing the number of extreme weather events, such as floods, droughts and storms, and exacerbating the spread of tropical diseases. All this has a costly impact on basic city services, infrastructure, housing, livelihoods and human health. At the same time, cities are also making a significant contribution to climate change, as urban activities are major sources of greenhouse gas emissions. Estimates suggest that cities are responsible for 75% of global CO<sub>2</sub> emissions, with transport and buildings being among the largest contributors. Only through a coordinated approach and actions at the global, regional, national and local levels can success be achieved. It is therefore essential that cities become an integral part of the solution to combating climate change. Many cities act consistently through the use of renewable energy sources, cleaner production techniques and regulations or incentives to limit industrial emissions. Reducing

emissions will also reduce local pollution from industry and transport, thus improving urban air quality and the health of the city's residents.<sup>41</sup>

Below we find a forecast for 2070 on the evolution of the climate in Bihor County, if the current patterns of consumption and production are maintained in the current parameters. The data presented is based exclusively on a Nat Geo application available at <https://www.nationalgeographic.com/magazine/graphics/see-how-your-citys-climate-might-change-by-2070-feature>. The application estimates major trends/evolutions and focuses on the urban environment (county seat municipality). Although there will be clear differences, especially on the action/intervention side of the local authorities in Bihor County regarding climate change, we will find these general trends throughout the county.

Oradea, Romania and the entire county of Bihor are located in a continental climate zone, without dry season and hot summer. Continental climates - usually far away or otherwise protected from the effects of the oceans - are generally found inland, in the middle of large continents. Regions near the oceans tend to have moderate temperature variations from nearby water; the continental areas face large seasonal variations, as well as shifts from one extreme event to another each season. Hot seasons and days can get very hot, and cold ones can get very cold. Here, rainfall occurs fairly constantly throughout the year - there is no pronounced wet or dry season. This area has warm summers, with temperatures averaging no more than 22 ° C at any time of the year, as well as distinct seasons. Precipitation falls throughout the year, in the form of snow in winter and rain at other times of the year. Eastern Europe and much of the northeastern United States currently fall into this category. By the end of the century, conditions in Oradea, Romania will probably change so much that this territory will be in a new climatic zone: an arid, cold steppe zone. Arid climates are exactly as their name suggests - dry. In these areas, rain and snow fall to the ground, but they evaporate or are used quickly and almost entirely by plants. In conclusion, less water enters than it leaves. This drought defines the entire experience of these regions, which can vary greatly in temperature. Steppes are what result when a desert receives enough water for plants to grow more abundantly. Today, these regions are covered by flowing meadows, such as the tall grasslands of North America or the high fields of Mongolia. In cold steppes, the average temperature drops below freezing for at least one month each year. These areas tend to be found further north. Vegetation covers more land than in desert areas, but the dry climate does not provide enough water for trees or large woody plants to survive. Less water enters than leaves. This drought defines the entire experience of these regions, which can vary greatly in temperature. Steppes are what result when a desert receives enough water for plants to grow more abundantly. Today, these regions are covered by flowing meadows, such as the tall grasslands of North America or the high fields of Mongolia. In cold steppes, the average temperature drops below freezing for at least one month each year. These areas tend to be found further north. Vegetation covers more land than in desert areas, but the dry climate does not provide enough water for trees or large woody plants to survive.

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<sup>41</sup> <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/cities-and-climate-change><https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/cities-and-climate-change>

## Air temperature

The maximum temperatures in Oradea and Bihor County will increase both in winter and in summer. Thus, if at present in winter we have the maximum interval from -3C to + 3C, in 2070 this interval will be from + 2C to + 7C. In summer we currently have the maximum range + 14C to + 27C which will change from + 20C to + 33C. Global air temperatures have already risen by about 1 ° C in the last century due to man-made climate change. They will grow much more as the climate continues to change. But heating will not feel the same everywhere. Some cities will heat up significantly; others will heat up only slightly. In some areas, winters will warm up faster than summers. Elsewhere, warm and extreme temperatures will become even warmer, while the averages remain the same. Elsewhere, the snow can turn to rain. Even small increases in average temperatures can have major effects on water resources, agriculture, infrastructure and more.

## Extreme heat waves

In Oradea, the number of days per year with a temperature above 35 ° C will increase (from 0.3 at present to 26 in 2070). Extreme heat events are also expected to increase in many parts of the world. Already, the hottest heat waves on the planet exceed 49 ° C. But extremes of heat can be just as deadly in parts of the world that are less accustomed to hot weather. For example, more than 1,400 people died in France during the European heat wave of 2019, when temperatures rose to unprecedented highs.

## Rainfall

Precipitation in Oradea and Bihor County will increase in winter (from 135 mm to 153 mm) but will decrease in summer (from 199 mm to 155 mm). Rainfall patterns around the globe are also expected to change. In some areas, snow can turn to rain. In other areas, there may be less rainfall or at different times of the year. Elsewhere, the rains are expected to intensify. But almost everywhere, the oscillations between wet and dry become more extreme, causing both stronger floods and stronger droughts. This will make water, a precious resource, more difficult to manage. Some parts of the world, however, may feel smaller changes.

## Vulnerability and capacity for action

Estimating the vulnerability of a community or territory to environmental phenomena is extremely important. Oradea and the surrounding areas are at medium risk of climate change. It is expected to have a higher exposure to physical change, but the population of the city and the county is less susceptible to the impact of such changes. Romania is less able to adapt to climate change than other countries. Climate change will exacerbate many of the challenges facing cities today. Already, urban areas are under stress due to climate-influenced risks, such as rising seas, wildfires, storms, extreme heat waves, disease, weakened heat infrastructure. Many cities with fewer resources feel the effects of climate change more acutely than rich ones. These differences in the resilience of some communities and territories may persist in the future.

There are generally two types of answers to climate problems. Reactive responses, when the focus is on solving the problems caused by climate change. Adaptation to climate change is thus defined as "the

process of adapting to the current or expected climate and its effects". We do everything we can to live with and minimize the destruction and suffering that comes from climate change. The second, proactive approach assumes that responsible actors will address the root cause of the problem rather than just its effects.<sup>42</sup>.

### Energy efficiency

Reducing energy consumption and increasing energy efficiency are important goals for the European Union, which promotes the principle of "energy efficiency first". Since 2008, the European Commission has been working to launch the Covenant of Mayors, in support of all efforts by local authorities to implement sustainable energy policies. The signatories of the Covenant of Mayors have pledged to implement the Sustainable Energy Plan by 2020, which will mitigate climate change by reducing fossil fuel consumption. It should be noted that this voluntary instrument has proved extremely useful in Romania, where many cities have joined and prepared energy efficiency plans, even in the absence of an obligation under national law. In the case of Bihor County, the county seat municipality has signed this agreement, and Oradea MA and Aleşd have energy efficiency plans.

In line with the European Parliament's resolution of 15 January 2020 on the European Environment Pact, policy measures and actions were presented, such as<sup>43</sup>:

- Measures to counter climate change and environmental challenges, to limit global warming to 1.5 °C and to reduce massive biodiversity loss;
- Transition measures to climate-neutral societies by 2050;
- Climate legislation, aimed at achieving a net level of greenhouse gas (GHG) emissions of 0 by 2050, taking into account the introduction of intermediate targets for 2030 and 2040;
- Increasing the share of energy from renewable sources and phasing out fossil fuels;
- Measures to revise the TEN-E guidelines before adopting the following list of projects of common interest (CIPs) in order to align the legislative framework with the priority of smart grids and not to remain tied to high carbon investments;
- Sustainable and smart mobility measures, all modes of transport (road, rail, air and sea) will have to contribute to the decarbonisation of the transport sector in line with the goal of achieving a climate-neutral economy, by supporting and applying the principle of "The polluter pays".

Renewable energy sources (solar, geothermal, wind, hydro, ocean energy, biomass and biofuels) are alternative sources of fossil fuels in order to reduce greenhouse gas emissions, diversify energy supply and reduce dependence on volatile and uncertain fuel markets (oil and gas). The European Commission has taken steps to prepare the framework for the implementation of energy efficiency policies for the period after 2020, in order to clarify the regime for investors in the next period. Decarbonisation projects for the energy sector have been set out in the roadmap, with the aim of reaching a proportion of renewable energy of at least 55% by 2030.

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<sup>42</sup> Ibidem.

<sup>43</sup> Ibidem

At the level of local communities that carry out energy efficiency plans, the first step is to carry out diagnostic analyzes by sectors on energy consumption. The following sectors are generally considered:

- municipal buildings, equipment/facilities;
- tertiary buildings, equipment/facilities;
- housing;
- municipal public lighting;
- municipal transport (own fleet);
- public transport;
- private and commercial transport

There are no data for the entire Bihor County, but both PAED (Action Plan for Sustainable Energy) of Oradea MA and other county seat municipalities (e.g. Alba Iulia) identify the building sector, especially residential ones, as the largest consumer of energy, followed by private and commercial transport sector. These three sectors, as correctly noted in the SEAP MA Oradea, are not under the direct control of local, metropolitan or county authorities who can intervene and influence the situation only through indirect regulatory and promotion/awareness measures, leading to changes in behavior and consumption at the level of the inhabitants.

A particularly important issue related to energy efficiency concerns buildings, especially in urban areas. Buildings generate 28% of global energy-related greenhouse gas emissions. In large cities, the share is even higher: emissions from buildings in London, Tokyo and New York, respectively, account for 76%, 71% and 67% of total emissions. In addition, global energy-related emissions from the construction sector have increased by 25% between 2000 and 2017, and the energy intensity of buildings needs to be reduced by 30% by 2030 to align with the Paris Agreement<sup>44</sup>.

Improving the energy efficiency of buildings can substantially reduce energy consumption and CO<sub>2</sub> emissions, while stimulating job creation and making energy more accessible to households. In the EU, for example, two-thirds of residential buildings were built before 1980 and a quarter were built before 1945. Such buildings tend to perform poorly in terms of energy efficiency and represent a unique opportunity for drastic reduction in energy consumption<sup>45</sup>. We encounter a similar situation in the urban environment of Bihor County. Some municipalities and cities have implemented end-of-life building block projects, but overall, many buildings are old and energy-inefficient. This is especially the case in small urban areas, where investment in the energy rehabilitation of buildings has been lower.

Given the location of buildings in cities, they are key players in promoting the energy efficiency of buildings. Local authorities have a unique ability to drive innovative approaches and technologies and to take into account local context-specific elements. Cities can take the lead in this sector. The Bihor County Council, similar to other county authorities, can assume a coordinating and facilitating role in this field. Thus, Bihor County Council can provide technical expertise to support local authorities in the process of collecting data on energy efficiency of buildings and the development

<sup>44</sup> <https://www.oecd.org/cfe/cities/energy-efficiency-cities.htm>

<sup>45</sup> Ibidem

of self-assessment tools so that local decision makers can develop effective policies and strategies for energy efficiency. It can also use partnerships with county or similar authorities in other countries to provide good practice models.

Regarding the thermal agent consumed, again there are no data at county level. In PAED MA Oradea it is observed that:

- Thermal energy is the main source of energy, so 34% of total energy consumption is used mainly for heating living spaces;
- Electricity accounts for about 24% of total energy consumption and this share is expected to increase, especially for tertiary air conditioning and mobility electrification;
- Natural gas has the lowest share, respectively 16% of total energy consumption, and is expected to decrease in the next period, by implementing solutions for obtaining energy from renewable sources.

As a priority of action in PAED MA Oradea, it is identified the promotion of projects for the production of energy (especially electricity) necessary for consumption, by using local renewable energy sources. In the analysis of the transport sector, according to the same planning document, the major share of the private and commercial transport sub-sector (94%) and therefore the urgency of strategic intervention measures in streamlining urban traffic, but also in reducing the share of individual road transport with development of sustainable mobility – walking, cycling - leading directly to an increase in the quality of life in urban areas.

### Strategic perspectives and SWOT analysis

#### SWOT Analysis for Environment

Strong points	Weak points
<ul style="list-style-type: none"> <li>- Area, diversity, uniqueness and large number of protected natural areas;</li> <li>- Air quality is good and improving, with occasional dust exceedances (PM10), and the data collection system is much more efficient;</li> <li>- Oradea and three cities: Salonta, Nucet and Vașcău exceed the indicator of 26 sqm of green space/inhabitant;</li> <li>- The monitoring of the water quality distributed to the population is done according to the normative provisions;</li> <li>- At urban level. the percentages of the population connected to urban treatment plants with tertiary treatment stage are higher than those of the NW Region;</li> <li>- There can be a decrease of 26% of the total area of soils affected by degradation factors in 2019 compared to 2015;</li> <li>- The agricultural area of Bihor County increased in the period 2014-2019 by 3302 ha (0.68%). The most important increases were registered in the categories of arable land, vineyards and orchards</li> </ul>	<ul style="list-style-type: none"> <li>- Road transportation and home heating, as well as energy production systems have the greatest contribution to air pollution;</li> <li>- Strictly referring to the 26sqm indicator of green space/inhabitant, in some cities in the county there are values lower than the minimum imposed;</li> <li>- Significant percentage of centralized water sources that did not meet the minimum quality requirements;</li> <li>- Decrease in the percentage of the population connected to sewage treatment systems and an increase in the population connected to sewage systems without treatment;</li> <li>- The percentage of the population connected to sewage systems with treatment is lower than the average of the NW Region, and that of the population connected to sewage systems without treatment is higher than the regional average;</li> <li>- At urban level, the percentages of the population connected to urban treatment plants with the primary treatment stage are higher than those of</li> </ul>

<ul style="list-style-type: none"> <li>- and hayfields;</li> <li>- In the period 2015-2019, the number of exceedances of the noise level in the industrial area. at the pedestrian crossings, inside the agri-food market, in the 3 parks in Oradea and on the category I streets decreased;</li> <li>- Existence of an integrated waste management system and closure of non-compliant landfills; significant investments and compliance with certain European targets;</li> <li>- The waste is collected in four fractions, the non-selectively collected waste is not sorted for the recovery of recyclable waste. there is an adequate sorting station;</li> </ul>	<ul style="list-style-type: none"> <li>- the NW Region;</li> <li>- The area of pastures decreased by 2.11% during 2014-2019;</li> <li>- The number of exceedances of the noise level has increased at the streets of category II and III;</li> <li>- Large areas affected by pollution from mining and drilling works (over 600 ha. of which over 200 ha of oil residues and tailings dumps);</li> <li>- Bihor county registers 67 potentially contaminated sites and 17 contaminated sites;</li> <li>- In Bihor County there are 3 landfills of hazardous waste that come from oil exploitation and eight landfills of hazardous industrial waste that have not initiated the closure and post-closure monitoring procedures for 30 years.</li> </ul>
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Opportunities	Threats
<ul style="list-style-type: none"> <li>- The existence on the outskirts of cities of green areas that can be used to improve air quality but also for recreation;</li> <li>- Investments from European funds to increase the energy efficiency of buildings (limiting air pollution due to individual thermal power plants, especially dust emissions);</li> <li>- Reducing noise pollution in road traffic areas by modernizing road infrastructure;</li> <li>- Mandatory future noise maps for all cities - better planning for expansion and development based on sources of noise pollution;</li> <li>- Existence of a Flood Risk Management Plan - Areas with a potentially significant flood risk in the A.B.A. Crisps; project implemented to make flood risk maps;</li> <li>- Non-reimbursable funding programs aimed at increasing energy efficiency, reducing pollution and adapting to climate change.</li> </ul>	<ul style="list-style-type: none"> <li>- The general trend of increasing the pressure of residential expansion on green spaces;</li> <li>- Air pollution, especially with dust, may increase with the abandonment of the central heating system;</li> <li>- Existence of inaccurate/incomplete data on air quality;</li> <li>- Old data and based on the statements of the economic agents regarding the contamination of some sites; high costs of conducting environmental assessments for potentially polluted sites;</li> <li>- The cumbersome development of government programs on water management;</li> <li>- Data collection and non-systematic reporting by decentralized institutions or national companies.</li> </ul>

## Conclusions and strategic perspectives regarding the environmental factors

- Protected natural areas, diversity and uniqueness are one of the most important resources of Bihor County, both from the perspective of the protected/conserved natural environment. and from the perspective of sustainable tourism development and sustainable development;
- At the level of Bihor County there is a functional and well-organized waste management system. There are 6 waste collection areas equipped with transfer and sorting stations. landfill. composting station;
- Improving air quality must be achieved by upgrading traditional energy production systems, by stimulating the use of alternative energy sources and by modernizing road transportation;
- The refurbishment of traditional energy production systems as well as the use of alternative energy sources should be encouraged;
- It is necessary to stimulate the replacement of the heating of rural households with modernized stoves that use pellets as fuel and have high combustion efficiencies and low pollutant emissions and the use of alternative energy sources;
- The production of electricity must be stimulated by the partial replacement of fossil fuels with alternative sources: wind energy, energy produced in the fields of photovoltaic panels, etc.;
- There is a need for economic-financial mechanisms that allow the replacement of industrial installations with a significant polluting effect on the environment with less polluting ones;
- The air quality control system at county level needs to be further developed;
- Urban green spaces need to be improved to reach and exceed the 26 sq m green space/inhabitant indicator; Also, these spaces must be adapted to the specific needs and a record of the green spaces must be made through dedicated registers. in all urban localities;
- A system for controlling the quality of water from centralized water sources must be maintained in order to comply with the minimum quality standards;
- The share of the population connected to sewage treatment systems and wastewater treatment in higher levels of treatment, both at urban and rural level. must be increased;
- Water must be used efficiently and conserved by rehabilitating water transmission and distribution facilities and by technological changes: promoting technologies with low water consumption;
- It is necessary to apply the principles of integrated water management for quantity, quality and healthy ecosystems;
- Noise pollution must be reduced, especially in urban areas by optimizing traffic. Improving the collection of data on noise pollution at county level. especially along major transport routes;
- Selective waste collection systems need to be improved and the recovery rate of reusable waste at county level needs to be increased;
- Measures must be established and implemented to maintain cleanliness in the riverbeds, in the area of access roads to them, on the banks and in recreation areas;
- Local flood protection works are needed for localities and socio-economic structures instead of large-scale flood protection works;
- Flood risk management plans need to be regularly reviewed and, if necessary, updated, taking into account the possible effects of climate change on the occurrence of floods;

- It is a priority to promote projects for the production of energy (especially electricity) needed for consumption, by using local renewable energy sources;
- In the case of the transport sector, given the major share of the private and commercial transport sub-sector (94%) and it is urgent to take strategic measures to intervene in streamlining urban traffic, but also in reducing the share of individual car transport with increased development of sustainable mobility – walking, using bicycles.

## E-governance and information and communication technology (ICT)

### The ICT sector in Bihor county's economy

The ICT sector in the county is one with a low importance in the local economy (just over 1.7% of the turnover is made by companies in these fields), but which may increase in importance in the next few years. If we look at the numbers related to the ICT sector in Bihor County, we see a steady increase in turnover and profit generated by activities in this field, but this increase is smaller than we would expect, compared to the growth of this economic sector at national level (6.7% of GDP in the third quarter of 2021, according to INS). Also, the number of employees and companies in the field has been growing slowly in recent years. The incomes made by these employees are also relatively low, compared to the national average (ICT employees have an average income of only 51% of the national average).

### Analysis of the digitalization situation at the level of Bihor County Council

In July 2021, in the IT and GIS Department of the county council, 4 people are employed, of which 2 are responsible for the GIS system. The main services that are offered to the citizens are those in the field of urbanism (for the approximately 30 ATUs that did not hire an architect). Currently, these documents cannot be sent through a dedicated platform or online forms; there is a project underway that will allow this in the future. The documents required for the issuance of these documents can also be submitted online (by email), approximately 10% of citizens choosing this option.

The institution's website is the most used interface by citizens and companies in the digital interaction with the county council. The design of the site has been changed since March 1<sup>st</sup>, 2021. The new site (<https://www.cjbihor.ro/>) is much more pleasant in terms of design. Unlike the old website, the current one is completely secure, with a valid security certificate. There are a small number of wrong links (33 out of 2000, or 1.67%). As digital services, there is the official local monitor and a platform for county public transport which, although it has some problems, is functional.

Regarding the online services offered by Bihor County Council, they are divided into two: those present on the web page of the county council and those present on the electronic services platform, accessible at: <https://portal.cjbihor.ro>. At this moment (January 2022) the online services offered are minimal: the electronic services platform is out of date and does not contain the noted information or transactional services. It's not very clear how online Citizen Information Services works, many of the menu entries lead to outdated pages. The online registry instead seems functional. Also, at the level of the County Council, the lists with the town planning certificates and the issued construction/demolition permits are updated. The current state of the platform is an incipient one in terms of front-office services, but it also contains

a part of the back-office (a document management system, for example) whose implementation is more advanced.

There are three e-government projects in the strategic plan that were to be completed by 2020: A.4121, A.4122, A.4123. Also, several projects are in different stages of elaboration or submission. The most important of these aims is to build a county `data center`, which, in addition to storing data from these institutions, to interconnect databases in local public institutions and provide, on this informational support, sophisticated transactional services.

### ICT education in Bihor

At the level of the entire county, approximately 17% of high school students are enrolled in classes specializing in Computer Science or Mathematics-Computer Science. Within the University of Oradea there is a department of Computers and Information Technology, part of the Faculty of Electrical Engineering and Information Technology. In terms of equipping high schools with computer labs and computers, national high schools and colleges are close to the national average.

### Digital infrastructure in Bihor

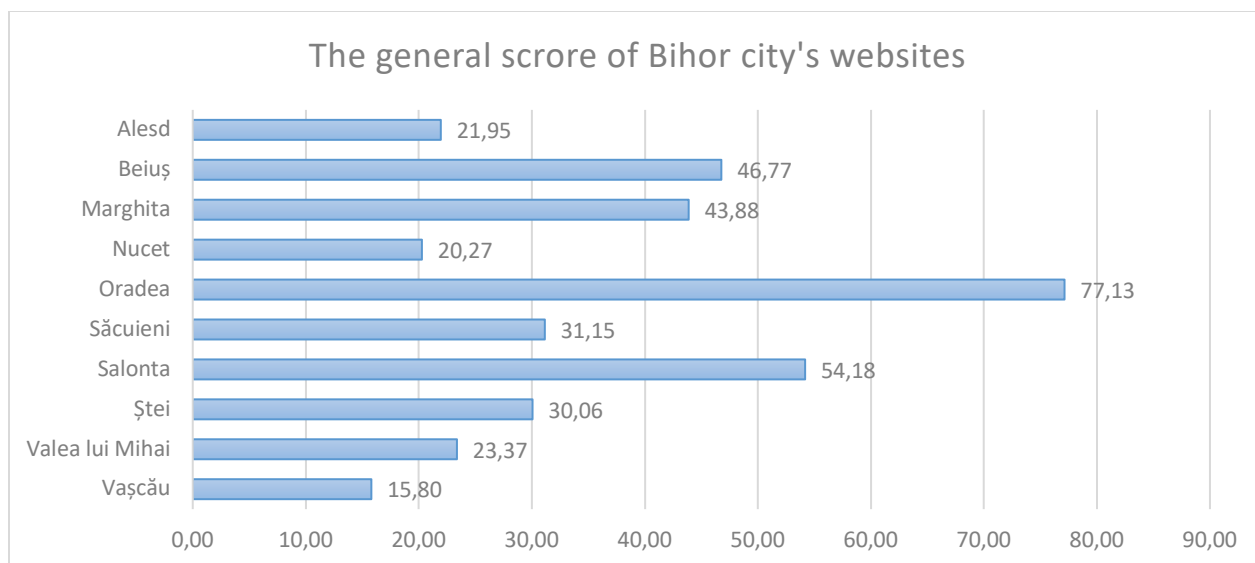
Regarding the speed of internet connections, both fixed and mobile, the data provided by ANCOM<sup>46</sup> shows that the data infrastructure is among the top 10 counties in the country. The figures regarding the average speed of fixed (162.2 Mb/s) and mobile (24.97 Mb/s) connections show that the county is above the national average (149Mb/s, respectively 24.8 Mb/s). The research on quality of life conducted in February 2021 shows that 90% of households in the county have permanent internet access (fixed, mobile or both). Currently, for online payments, especially taxes, the town halls of Derna, Lugașu de Jos, Marghita, Oradea, Sântandrei, the Bihor Territorial Labor Inspectorate and ANAF are enrolled in ghiseul.ro.

### E-governance in Bihor county

In order to evaluate the priority that the town halls in the county give to e-government, an analysis of the sites of the 10 cities and municipalities was carried out.

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<sup>46</sup> Report on the quality of the internet access service for 2019, [https://www.ancom.ro/uploads/links\\_files/Raport\\_calitate\\_internet\\_2019.pdf](https://www.ancom.ro/uploads/links_files/Raport_calitate_internet_2019.pdf)



**Figure 26:** The score of the website of each city in the county (out of 100)

**Source:** own analysis

The evaluation of the implementation stage of e-government from the front-office perspective is divided into 5 distinct categories, each with a separate score and a different weight in the final score (each category has a possible maximum of 100 points, as well as the final score). The evaluation index contains 47 indicators, and the five categories are: security and data protection (15% of the final score), ergonomics and usability (15%), content (25%), online services (25%) and citizen participation and involvement (20%).

Not surprisingly, the website of Oradea has the highest score (over 77 points, out of a maximum of 100, 5th place nationally). Three other websites reach a score of about 50 points (Salonta, Beiuș and Marghita). The other sites analyzed get poor scores.

### **Security and data protection of citizens**

In this category, none of the analyzed town halls in the county fully complied with the basic rules regarding data security and protection. The "Terms and Conditions" for using the websites are also missing. We have looked in this category if the visitors of the site are warned about the use of cookies and how they can be activated and deactivated, the existence of a clearer detail of the data that is collected, if the pages of the site have a valid security certificate.

### **Ergonomics**

This category assesses the ease with which the site can be used by visitors, the quality of the design, the consistent and correct use of fonts and colors, a well-designed and intuitive navigation scheme, and the frequency and timeliness of the information on the website, Oradea, Valea lui Mihai and Salonta stand out in this category, which have a good or very good ergonomics. As for the other sites, their ergonomics have serious shortcomings, which can lead to problems finding information or accessing services, even when they are available.

### **Citizen participation and involvement**

In this category, we followed the ways in which citizens can get in touch with institutions and officials from different departments, the tools offered, the opportunities to comment or participate

in public debates on various topics, the existence of accounts on social networks, surveys or audio-video recordings. As for the ways in which the citizens of Bihor's cities can contact the mayor's office, things could be improved. The only town hall of those analyzed that obtains a good score in this category is Oradea (87), otherwise all town halls have a score lower than 35. 7 of the 10 town halls have active accounts on social networks (Marghita, Valea lui Mihai, Vașcău do not have such accounts).

### Content

In this category we followed the amount and diversity of information that can be found on the websites of the institutions. Some of them are required by various laws (No. 544/2001, No. 52/2003, No. 161/2003, No. 286/2006), others were considered useful for citizens. For example, we checked the site for location information and working hours with the public. contact information for major departments, minutes or reports of local council meetings, budget information, information about local councilors (who I am, resume, information contact, activity), community development strategies or plans, downloadable or online forms, wealth statements, public procurement information. Again, apart from the Oradea City Hall website, the scores did not exceed 50 points, which shows that there are many things that can be improved.

### Online services

This category is dedicated to the transactional services offered by the town halls of the 10 cities. We followed indicators such as: online payment of taxes and fees, submission of notifications and complaints (on the site or through dedicated applications), online registration, the possibility of submitting applications for information of public interest online, or the existence of mobile applications.

In terms of online services, Bihor city halls offer citizens very different experiences. If Oradea gets the maximum score here, and Salonta, Marghita and Beiuș have one half compared to Oradea, the other sites do not actually offer online services to the people of Bihor. This is probably due to a lack of the necessary resources (human, financial, expertise) to design and implement them.

## Strategic perspectives and SWOT analysis

### SWOT analysis

Strong points	Weak points
<ul style="list-style-type: none"> <li>• several cities have e-government services implemented, accessible and used citizens;</li> <li>• the vast majority of the inhabitants of the county have access to the internet;</li> <li>• the County Council is aware of the need for a robust data infrastructure on which to build interconnected digital services;</li> <li>• an internal document management system is used in some of the town halls in the county, implemented with the help of a project of the CJ;</li> <li>• the technical equipment (especially hardware) is adequate;</li> <li>• the speed of the internet connection is above the national or regional average.</li> </ul>	<ul style="list-style-type: none"> <li>• most cities (except the town halls of Oradea and Salonta) are not notable for their online presence;</li> <li>• ICT departments in institutions are understaffed;</li> <li>• the interoperability of existing applications is limited;</li> <li>• there are no open data sets available to citizens or businesses (congruent with the Open Data movement);</li> <li>• there is currently no plan based on a clear vision for the implementation of e-government, and this leads to a lack of adaptation of existing procedures for their online transition;</li> <li>• lack of services to citizens based on the GIS system;</li> <li>• there is no platform for submitting documents online at the Bihor County Council, even after the pandemic period started last year;</li> <li>• the development of the ICT sector in the county lags behind the national average.</li> </ul>

Opportunities	Threats
<ul style="list-style-type: none"> <li>• the possibility of extending the partnership between the educational environment, the companies in the field and the local administration;</li> <li>• using the pandemic period to increase the number of online services available and increase citizens' confidence in them and, implicitly, their use;</li> <li>• the possibility of accessing European funds for the development and implementation of e-government services (one of the most important programs in the new funding period is Digital Europe);</li> <li>• the experience of more advanced cities in implementing e-government (especially Oradea) that can help with the offer of digital services throughout the county;</li> <li>• Internet access from mobile devices is growing sharply, which may provide an opportunity to create online services from the beginning with mobile access as default. facilitating their adoption;</li> <li>• 17% of high school students pursue ICT specializations.</li> </ul>	<ul style="list-style-type: none"> <li>• current legislation not adapted to the rapid development of digital services;</li> <li>• existing financial problems at the local government level, especially if economic growth will not be sustained or funds will be directed to other priorities (eg. health);</li> <li>• resistance to change from civil servants;</li> <li>• lack of interest in a transparent and traceable public administration process;</li> <li>• lack of correlation of the introduction of e-government with the efficiency and adaptation of public administration (especially in terms of internal procedures);</li> <li>• security of e-government applications and collected data;</li> <li>• inefficient communication process in explaining these new services and the transformations expected within the local administration.</li> </ul>

## Conclusions and strategic perspectives for the IT sector and the implementation of e-government and digital transformation

E-government advancements should play an important role in developing administrative capacity (especially in terms of online services and the use of databases to structure available information). especially given the relatively high degree of connectivity, almost universal Internet access for citizens in urban areas and migration to mobile access. To do this, we list some of the directions for action in this area:

- A more developed GIS system at county level, which would offer transactional digital services to citizens and companies;
- Universalization of the use of the document management system within all the town halls in the county;
- Interconnection of all applications and databases, initially within the county council, and then between institutions in different municipalities;
- Regular collection and analysis of data related to the use of online services offered to citizens and companies and the degree of user satisfaction;
- Carrying out a consistent marketing campaign, meant to increase the degree of adoption and use of existing services;
- Increasing the level of digital competence of public servants, with a focus on understanding the process of digital transformation;
- Implementing participatory tools;
- Creating a single sign-on system for citizens and companies, and its gradual extension throughout the county.

Another beneficial measure, not only in the implementation of e-government, but also in the context of supporting the ICT sector, would be to facilitate access to open data sets. which would not only improve

the transparency of the administrative act, but could provide raw materials for ICT companies from the county for building interesting and useful applications, especially in the context in which the city could become a regional and national pioneer in this field.

## The economy of Bihor County

This chapter aims to focus on the analysis of developments in the local economy. The analysis aims to substantiate the strategic decision-making process regarding the local economic development, using the comparative interpretation of the values of some sets of indicators.

\* The analysis of the local economy uses data sets with multiple origins: Eurostat data, data from the National Institute of Statistics (INS) and data from the balance sheets of economic agents, provided by the National Office of the Trade Register, based on information from the balance sheets submitted by economic agents at the Ministry of Finance (ANAF). The latter data set refers exclusively to the activity of local companies.

### Regional context

#### Gross domestic product (GDP)

The regional Gross Domestic Product, expressed in absolute values and amounting to almost 25 billion euros, places the North-West Region, for the first time, starting from 2018, as the second in the order of contribution to the formation of national GDP (12.2%), at a significant distance from Bucharest-Ilfov (27%), given that the regional territory (which represents over 14% of the national one) hosts 13% of the total population.

Regional GDP/capita stood at 32% of the EU average in 2018, placing the region among those with low incomes.

In terms of purchasing power parity (PPP), at the level of 2018, the region sits in terms of GDP/capita at over 60% of the EU average, significantly higher compared to the previous indicator.

	2009	2011	2013	2015	2016	2017	2018
<b>EU28</b>	24,500	26,200	26,800	29,100	29,300	30,100	31,000
<b>Romania</b>	6,100	6,500	7,200	8,100	8,600	9,600	10,500
<b>North-West</b>	5,300	5,300	6,200	7,100	7,800	8,900	9,800
<b>Center</b>	5,600	5,800	6,700	7,500	8,200	9,100	9,900
<b>North-East</b>	3,600	3,600	4,500	4,900	5,300	6,000	6,600
<b>South-East</b>	4,700	5,200	6,400	6,900	7,200	7,900	8,700
<b>South - Muntenia</b>	5,000	5,300	5,700	6,400	6,900	7,400	8,100
<b>București - Ilfov</b>	13,700	15,500	17,000	19,500	20,200	22,200	24,200
<b>South-West Oltenia</b>	4,400	4,400	5,300	5,800	6,200	7,100	7,900
<b>West</b>	6,400	6,800	7,500	8,400	9,200	9,900	10,800

**Table 34:** The evolution of regional GDP, euro/capita

**Source:** Eurostat

The evolution of GDP/capita in the North-West Region is a significant one, registering, together with the South-East Region, the strongest advance - an increase of 85% compared to 2009, given that the national average increased by 72% and the rate growth rate in the EU is 27%.

#### *County GDP*

In the formation of the regional GDP, Bihor contributes with almost a fifth, the second most important among the counties of the region, after Cluj, whose economic output is double.

The share of county in the regional GDP has decreased over time (-3%), due, in particular, to the significant evolution of the Cluj economy, which, based on its structure and resources, seems to be better adapted to economic realities after the economic crisis from the period 2008-2012.

The county GDP/capita in 2018 had a value of 8,400 euros, a value identical to that recorded in Sălaj and higher than the other counties in the region, except for Cluj.

	2009	2011	2013	2015	2016	2017	2018
<b>North-West</b>	5,300	5,300	6,200	7,100	7,800	8,900	9,800
<b>Bihor</b>	5,400	5,000	5,500	6,400	6,900	7,700	8,400
<b>Bistrița-Năsăud</b>	4,700	4,600	5,200	5,900	6,400	7,000	7,400
<b>Cluj</b>	7,400	7,600	9,000	10,000	11,400	13,400	14,300
<b>Maramureș</b>	4,000	4,100	4,800	5,800	6,000	6,800	7,400
<b>Satu Mare</b>	4,200	4,300	5,200	5,700	6,100	7,100	7,600
<b>Sălaj</b>	4,500	4,400	5,500	6,200	6,600	7,700	8,400
<b>Arad</b>	5,900	6,400	7,200	8,100	8,800	9,800	10,600
<b>Timiș</b>	8,500	9,500	9,700	10,900	11,700	12,200	13,400
<b>Hajdú-Bihar</b>	6,900	7,700	7,400	8,100	8,100	9,200	9,800
<b>Szabolcs-Szatmár-Bereg</b>	5,000	5,600	5,700	6,400	6,600	7,100	7,700
<b>Békés</b>	5,300	6,000	6,100	6,900	7,200	7,700	8,200

**Table 35:** The evolution of GDP/county capita

**Source:** Eurostat

The county's GDP growth rate is the lowest in the North-West Region, being approximately equal to that of Timiș County, in the West Region, but the gross values of the two counties are significantly different.

Compared to other neighboring counties (Timiș, Arad, Hajdú-Bihar), the values of GDP/capita of Bihor are smaller. With the exception of Hajdú-Bihar (megye) county, Bihor surpasses the other border counties as output/inhabitant - Békés and Szabolcs-Szatmár-Bereg.

In terms of purchasing power parity, Bihor GDP measured in PPS (Purchasing power standard)/inhabitant is 4% higher than that of Hajdú-Bihar, 34% higher than that of Szabolcs-Szatmár-Bereg county and 24% higher than Békés County. Growth rates 2009-2017 are also higher.

### Gross value added (GVA)

The dynamics of GVA at county level was an ascending one after the economic crisis, which was felt more strongly at the level of 2011. The values at the level of 2017 exceeded those of 2008, but the growth rates are low compared to the counties considered competitive in terms of attracting economic resources (human resources, investments, and entrepreneurs).

At European level (the level of NUTS 3 units), Bihor, but also most of the counties in the region are in the fifth with the lowest level of gross value added.

The GVA generated by the Bihor economy is half that of the economies of Cluj and Timiș counties, but higher than in some counties such as Arad and other counties in the region.

The GVA structure did not undergo major changes in the period 2008-2017, the most important components remaining the same: Industry and Commerce, Transport, HoReCA and IT.

Although the basis has remained the same, we identify a trend of timid tertiarization, with increasing importance of public and cultural services (administration, education, health, culture and recreation), but also the share of other services, to the detriment of the construction sectors (whose GVA has decreased half) and agriculture.



**Figure 27:** The structure of county GVA, 2017

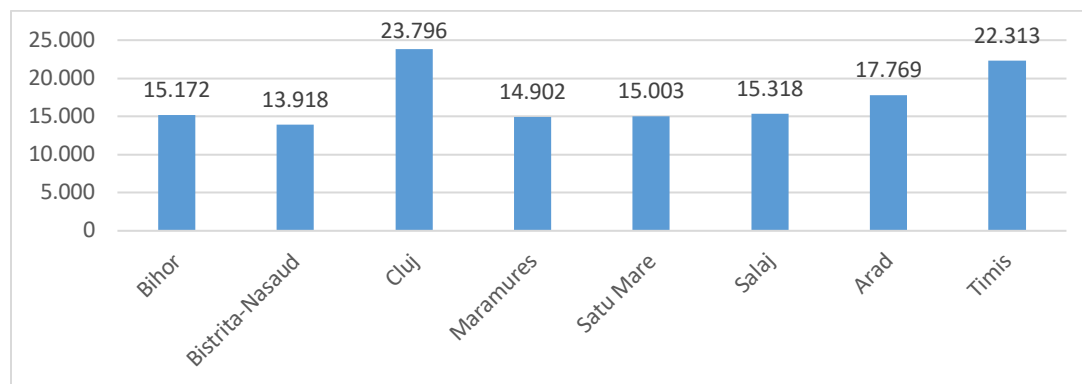
**Source:** Eurostat

From a digital economy perspective, the importance of the IT sector in GVA is low (2%), its value being the second at regional level (in this respect Cluj has values over 17 times higher, which shows differences within regional economic structure).

### County context

#### Labor productivity

Labor productivity increased by 22% compared to 2008, being over 50% higher than in 2011-2012, when the shock of the economic crisis was fully felt.



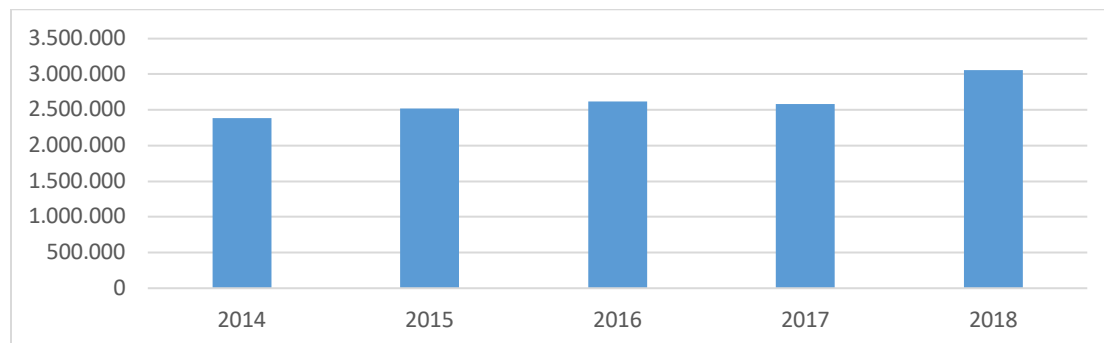
**Figure 28:** Labor productivity, 2017 (euro)

**Source:** Eurostat, NIS

From a comparative perspective, the value of labor productivity was 86% of the regional average in 2017, the values being higher than the counties in the North-East of the region, but significantly lower than some counties such as Cluj and Timiș.

#### Investments

The value of investments of active local units increased by almost 30% in 2014-2018 period, the developments being mainly due to the additional contribution of companies in the sectors: transport and storage, construction, real estate transactions, trade and agriculture, in the context of industry (which holds the largest volume, 35% of the total) decreased its investment value by 10%.



**Figure 29:** Gross investments of active local units\*

**Source:** NIS

The investments of Bihor companies represent a fifth of the regional total (over half of the regional volume is generated by the companies from Cluj), while the level of investments of the Maramureş companies has the third share, of approximately 12%.

### Foreign trade

At the regional level, in the period after 2012, the Bihor companies are the main exporters, the commercial volume exported in the period 2012-2018 being over 60% higher than that of the Cluj companies. At the level of 2019, the difference was significantly reduced, to 15%, but Bihor maintains the first regional position, with almost 30% of the total regional volume of over 7.5 billion euros.

The exports of Bihor companies (amounting to over 2 billion euros, representing 3% of the nation exports) were 7% lower in 2019 compared to 2011, but the decrease was more pronounced in the periods after the base year. The developments are mainly due to decreased exports of the main components: machinery, appliances and equipment (reduced by half compared to 2011) and footwear and similar products (down 30%), which led to a restructuring of the composition of the exports of Bihor companies.

Although exports of cars, appliances and electrical equipment represent almost 40% of the county total in 2019, they are also the ones that suffered the most, losing a volume of almost 900 million euros in 9 years (currently the level of car exports, appliances and electrical materials is at 25%, compared to 2011).

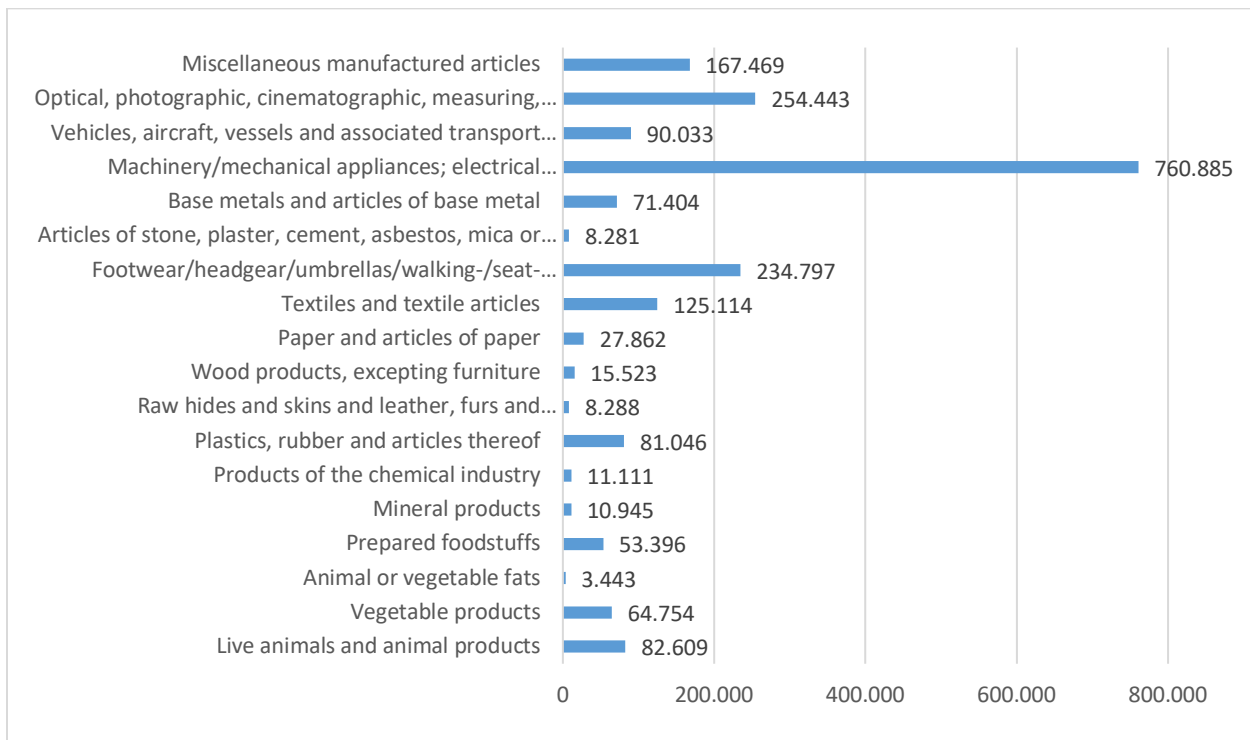


Figure 30: The structure of exports of local companies, thousands of euros, 2019

Source: NIS

Data from recent periods show a significant increase in areas with low initial values: optical and medical-surgical instruments and apparatus, but also means and means of transport, which reach a significant share in total (almost a fifth, in September of the year 2020).

The RCA Balassa index, which allows the identification of comparative advantages of local export areas, has high values in the case of the following categories:

- Live animals and animal products - almost 9% of the national export is generated by Bihor companies;
- Edible vegetables, roots and tubers (23% of the national) and fruits (over 10%);
- Straw materials;
- Preparations of meat and fish (over 7% national);
- Preparations of cereals, Preparations of vegetables and fruits, Miscellaneous edible preparations;
- Alcoholic and non-alcoholic beverages (over 7% of the national);
- Salt; sulfur; stones; plaster; lime and cement;
- Photographic or cinematographic products;
- Plastics and articles thereof;
- Raw hide and skins and leather;
- Paper and article of paper;
- Textiles (with high values in silk, wool, felt and special yarns, crocheted or knitted fabrics - a quarter of the national exports of the category and clothing articles or accessories);
- Footwear (20% of domestic exports of the category);
- Electrical machinery, apparatus and equipment and boilers, machinery and mechanical appliances;
- Optical and medical or surgical instruments and devices (10% of the national);
- Miscellaneous manufactured articles;
- Furniture; lighting fixtures and similar articles (including components).

The trade balance of the county is positive, the values of the export specialization index (which compares exports and imports of a category) show values above 1 (meaning specialization) in areas such as: *Animals and animal products, Footwear, Machinery, electrical appliances and equipment, Optical and medical instruments, Surgical and Miscellaneous manufactured articles*. The overlapping of comparative advantages and export specialization indices show possible sources of competitive advantage of the county economy.

### **Research-Development**

Research and development (R&D) activity at the regional level is more intensive in Cluj (university center, which covers over 92% of regional expenditures), while in Bihor the expenditures were almost 7 million lei in 2019, the second county at regional level, but the values are low compared to those of competitors such as Arad or Timiș (which surpasses Cluj in this respect).

In 2019, Bihor had a number of 56 employees in research and development (INS data), compared to 438 in 2008. In the Innovation and Technology Transfer Entities registry (in a total of 41 accredited and authorized entities temporary) one innovation and technology transfer entity appears. Oradea Technology Transfer Center (CNCG-CTT), an accredited institution in the fields of: unconventional energies, agriculture and wood processing and balneology. The structure is one without legal personality within the University of Oradea.

### Labor resources

	2008	2011	2014	2015	2016	2017	2018	2019
Labor resources	359.2	375.3	358.8	357.4	362.7	361.8	357.5	357.3
Employed population	275.6	263	264.8	262.8	259.6	260.4	261.5	260.5
Employment rate	77%	70%	74%	74%	72%	72%	73%	73%

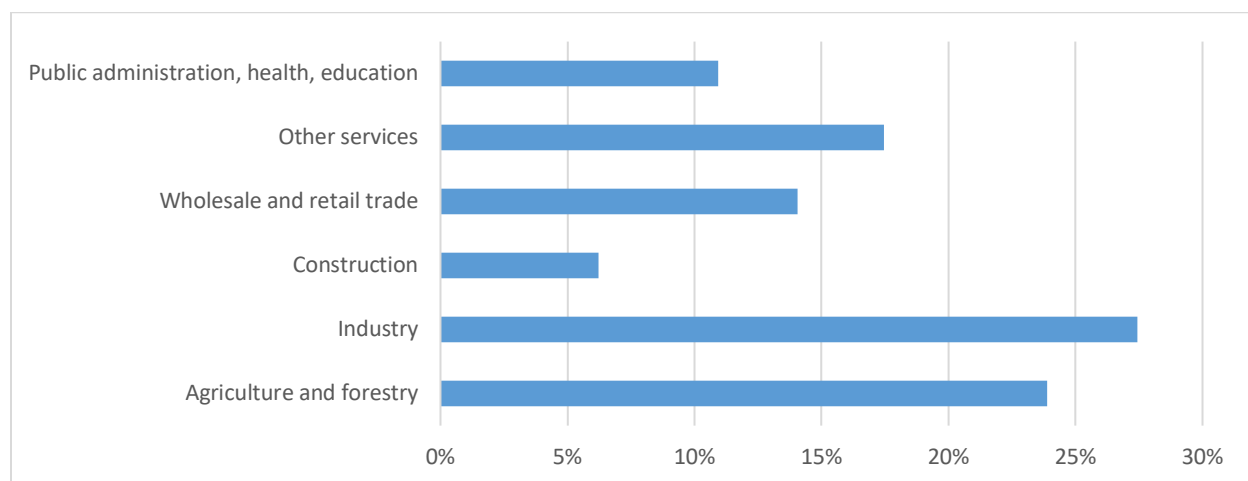
**Table 36:** Labor resources, Bihor County

**Source:** NIS

The labor resources of Bihor County were 10% lower in 2019 compared to 1990, the decrease rate being slightly more pronounced than the national one<sup>47</sup>.

The employment rate is higher than at the national level (by over 3%), being higher in the case of males (75.2% in 2019) than in the case of women (67.2%), these being explained by the structure of the local economy, but also by national trends, where the gender gap is similar.

The structure of the employed population by sectors shows a relatively balanced distribution. Over 40% of the employed population works in the tertiary sector, and the share of the employed population in industry is higher than that employed in agriculture.



**Figure 31:** The structure of employed population, Bihor, 2019

**Source:** NIS

We are also witnessing structural changes compared to 2008-2009; with the decrease of the population employed in agriculture by more than a quarter, significant increases being registered in the sectors of transportation and storage (+ 32%), accommodation and food service activities (+ 51%). IT (+ 20%), but also in other sectors related to services such as arts, entertainment and recreation and administrative and support service activities. Some of the service activities are in decline, namely professional, scientific and technical activities, real estate transactions and the financial sector.

<sup>47</sup> Labor resources represent the population that has all the physical and intellectual abilities that allow it to carry out useful work in one of the activities of the national economy. These include the working age population, able to work, as well as working under and over working age people.

		2008	2014	2015	2016	2017	2018	2019
Total	NORTH-WEST Region	3.3	3.8	3.4	3.2	2.8	2.3	2
Total	Bihor	3	3.7	3.5	3.1	2.4	1.5	1.4
Male	NORTH-WEST Region	3.3	3.9	3.5	3.4	2.8	2.2	1.9
Male	Bihor	3.1	4	3.7	3.6	2.5	1.4	1.1
Female	NORTH-WEST Region	3.3	3.5	3.3	3	2.8	2.4	2.2
Female	Bihor	2.9	3.3	3.3	2.4	2.4	1.7	1.7

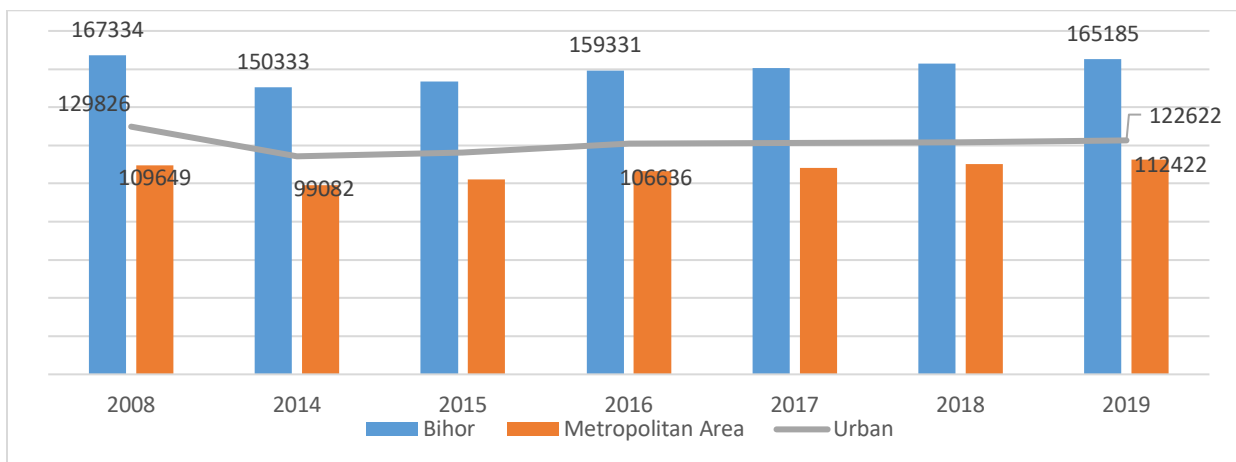
**Table 37:** The share of the unemployed in the total labor resources (%)

**Source:** NIS

The share of registered unemployment is low, below the rate recorded at national and regional levels, with values reduced by half compared to 2008.

### Employees

The number of employees of the local economy exceeded 165,000 at the end of 2019, the eighth nationally. The local economy is in the process of returning to the values of 2008, the number of employees being close to the value of the base year.

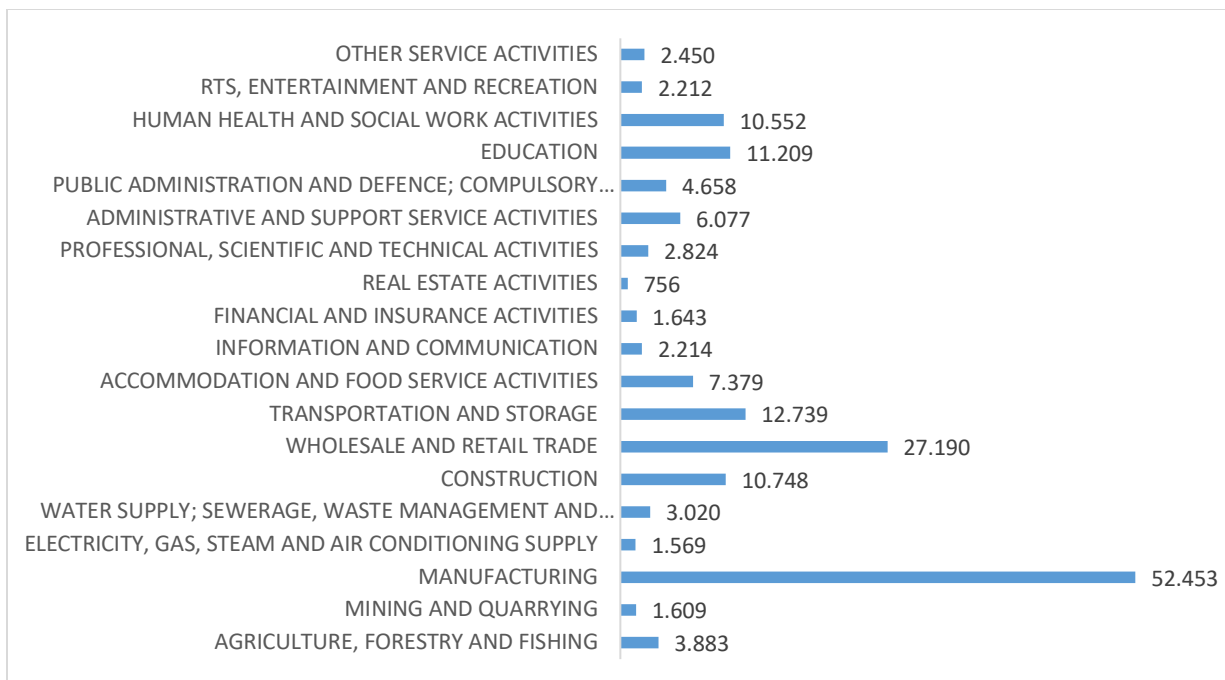


**Figure 32:** The evolution of the no. of employees

**Source:** NIS

If more or less coagulated economic units such as the county as a whole and the urban area return to the pre-crisis period, the Oradea Metropolitan Area has a growth rate of 3%, generated mainly by rural peri-urban areas (high growth rates for Paleu, Sântandrei and Oșorhei and important volumes for Borș and Sânmartin).

The importance of the urban economy has remained relatively constant over time (three quarters of the county's employees, 3% less than in 1990), but the county's economy is (as expected) concentrated in cities and the metropolitan area, with Oradea as a pole of economic development (almost 60% of all employees).



**Figure 33:** The structure of employees, sectors of the economy, 2019

**Source:** NIS

The county economy concentrates most of the local employees in sectors related to services. Together with the commercial activities, the tertiary sector (both private and public) retains 55% of the county's employees.

There is also an important industrial component, with over 58,000 employees in the manufacturing, extractive, energy, and water distribution industries. The contribution of industry to the local economy (in terms of employees) has remained relatively stable over the last decade.

The restructuring was carried out at the level of the construction and trade sectors, which together lost almost 7,500 employees compared to 2008, translating into an increase in the number of employees in the other services-related sectors. The share of services in the local economy increased from 34% to 39%, in fact absorbing the loss of employees in trade and construction.

### **Income**

The average net earnings were 2,385 lei in 2019, representing 80% of the value of national earnings (which was almost 3,000 lei), placing Bihor among the counties with the lowest incomes (position 37 in 2018).

The local economy concentrates over 85% of employees in sectors whose average salary level at county level has values below the national average net salary.

The growth rate of the county's average net earnings is higher than the national one, but the developments are not exceptional (the salary gap reduction rate is only 3% in a period of 12 years).

	2008	2014	2015	2016	2017	2018	2019	% from the national sector 2019
Agriculture, forestry and fishing	783	1,031	1,243	1,549	1,726	1,858	2,015	88%
Mining and quarrying	2,119	2,674	2,863	2,844	3,176	3,076	3,570	83%
Manufacturing	893	1,276	1,382	1,554	1,879	2,068	2,241	83%
Electricity, gas, steam and air conditioning supply	2,155	2,301	2,279	2,563	2,827	3,105	3,452	79%
Water supply, sewerage, waste management and remediation activities	1,083	1,518	1,459	1,534	1,889	2,079	2,349	97%
Construction	1,077	1,106	1,243	1,316	1,516	1,652	2,666	95%
Wholesale and retail trade	868	1,111	1,236	1,358	1,575	1,673	1,863	78%
Transportation and storage	1,127	1,147	1,321	1,425	1,629	1,833	1,998	73%
Accommodation and food service activities	729	970	1,017	1,154	1,434	1,551	1,759	102%
Information and communication	986	1,558	1,783	1,844	2,197	2,309	2,864	51%
Financial and insurance activities	979	1,426	1,264	1,409	1,604	1,848	2,144	65%
Real estate activities	1,025	1,437	1,676	1,746	2,087	2,066	2,744	86%
Professional, scientific and technical activities	668	891	957	1,298	1,466	1,544	1,784	70%
Administrative and support service activities	1,889	2,416	2,603	2,694	3,355	3,807	4,359	78%
Public administration and defense; compulsory social security	1,244	1,756	1,558	1,881	2,252	2,669	3,254	88%
Education	1,151	1,506	1,659	1,974	2,631	3,370	3,707	96%
Human health and social work activities	757	1,064	1,114	1,259	1,595	1,761	2,060	100%
Rts. entertainment and recreation	529	1,037	1,120	1,321	1,483	1,709	1,863	80%
Other service activities	529	1,037	1,120	1,321	1,483	1,709	1,863	98%

**Table 38:** Net salary earnings, Bihor (lei)

**Source:** NIS

At sector level, only Accommodation and food service activities. Construction and some service activities and activities connected to the public sector have values close to the sector's national wage income, but in some cases net income is low (below the national average net wage).

A systemic problem encountered in other counties of the region is related to the competitiveness of the local economy through costs-economic activity is concentrated in areas with low wage income (manufacturing, trade).

At the level of 2019, there is a significant increase in IT sector salaries, but the average value is significantly lower than the national value of the sector (IT employees earn. on average, even less than the national average net salary).

The net growth rates of most sectors are higher than at the national level, but the differences are not significant, which makes the gap recovery process difficult.

### *Incomes from pensions*

The number of pensioners in the county was almost 144,000 at the end of 2019. of which just over 5,700 were retired from agriculture. the latter having an average pension of 554 lei/month, increasing by almost 7% compared to the previous year. Over 70% of the 138,095 state social insurance pensioners are retired for old age, with an average pension of 1,515 lei. increasing by 14% compared to the previous year (Source: County Pension House).

### **Business supporting infrastructure**

Oradea Local Development Agency (OLDA). a public company owned by Oradea City Hall. manages eight industrial parks (existing, or in the process of completion/occupation). The total value of investments attracted in parks was about 400 million in 2020 (exclusively within Eurobusiness parks). Recent investments are focused on high-tech manufacturing (production of industrial robots – Braintronix, batteries for electric cars and research and development centers - Atnom). OLDA conducts promotional activities and provides support for various projects or initiatives. such as competitions (eg. Robotics Championship), support for various actors, educational projects, summer schools, pilot career guidance programs. project implementation common with units in the education system/technical schools, investments in service centers and housing system for long-distance commuters, the establishment of institutional training bodies, business incubators, idea competitions, support for start-ups etc.

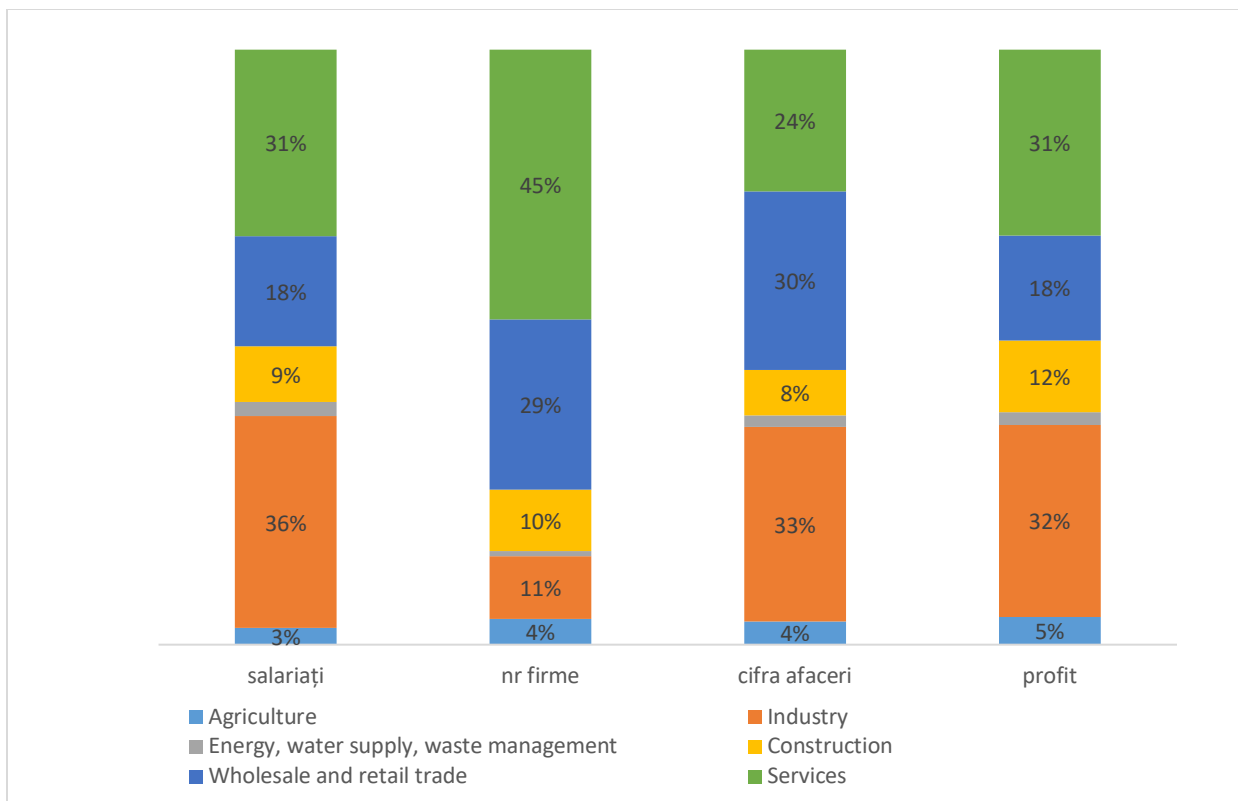
### **Results and activity of active local companies**

The analysis of the results of the economic activity uses data from the active local units, coming from the balance sheets of the economic agents with the registered office in Bihor County. The data originate from the National Office of the Trade Register (based on the balance sheets submitted by economic agents to the Ministry of Finance). The companies report the indicators in the localities where they have their registered office, and for this reason one of the limits of the research is to exclude the data of companies with their registered office in other cities, but which operate in the county. The data does not contain units of administration and other public services.

### **The structure and evolutions of Bihor economy**

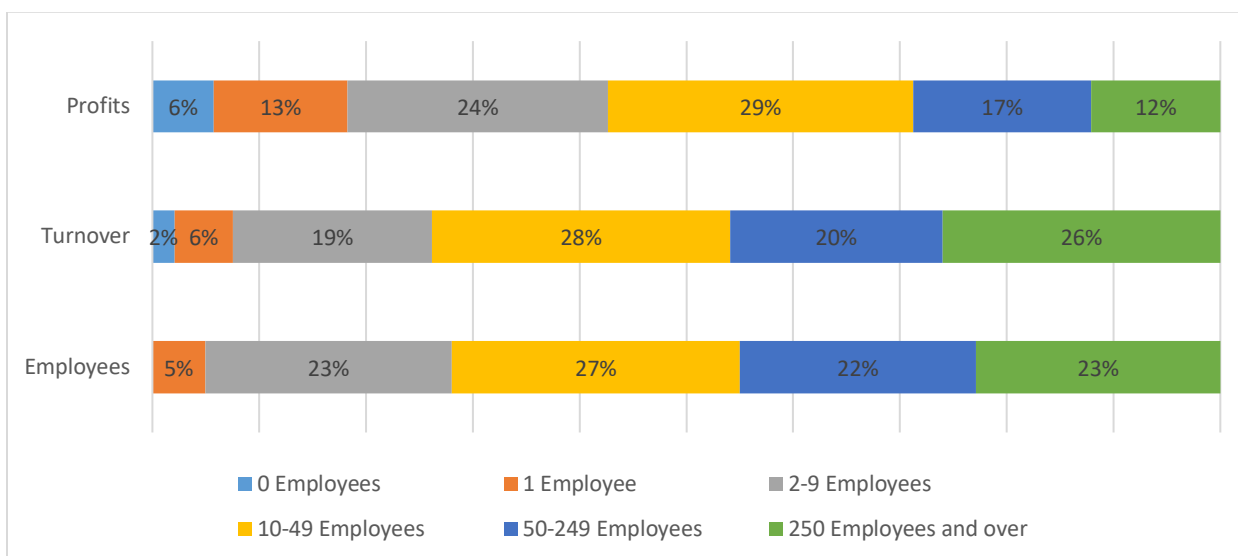
The local economy has a relatively balanced structure; more than a third of the employees of the local active companies work in the industry (mainly the manufacturing), while the services (including the trade) concentrate half of the employees of the local companies.

Most local firms operate in the tertiary sector - 75% of local firms (a feature of this type of activity, the industry tends to locate productive capacity in medium and large enterprises, to achieve economies of scale and, implicitly, cost competitiveness).



**Figure 34:** The structure of local economy, 2019

**Source:** Balance sheets of economic agents, NTRO (National Trade Register Office)



**Figure 35:** The structure of the local economy according to the size of enterprises, 2019

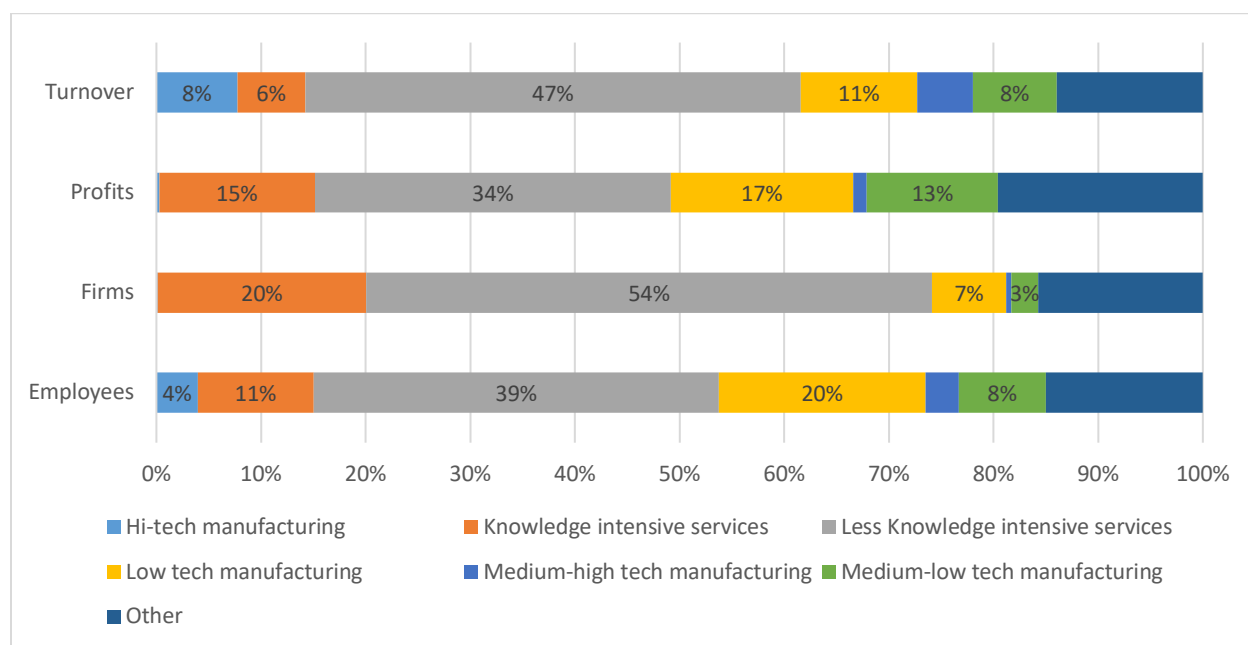
**Source:** balance sheets of economic agents, NTRO

If in terms of the number of companies, companies without employees represent 41% of the total, and those with between 1 and 9 employees 52%, the distribution of the number of employees being balanced between the categories of enterprises, a sign of a flexible and adaptable economy.

### The structure of the local economy according to the intensity of the degree of knowledge

The share of the knowledge-based economy is low, with low-tech and low-and-medium knowledge-intensive activities predominating. The local turnover is generated, for the most part, by companies with low knowledge-intensive activity.

High-tech and medium-tech manufacturing have a lower share than medium and low-tech manufacturing, both in terms of turnover and number of employees (high-tech manufacturing accounts for 4% of employees of local active companies and 8% of turnover). The profits generated by the high-tech industry are extremely low, which shows a lack of competitiveness of this type of companies.



**Figure 36:** The structure of economic activities based on the intensity of the degree of knowledge, 2019<sup>48</sup>

**Source:** Balance sheets of economic agents, NTRO

Knowledge-intensive services are present, concentrating a fifth of the number of local firms, their profits representing 15% of the total, but activities in the service sector are rather associated with less knowledge-intensive services (half of local turnover and total companies; 40% of employees).

<sup>48</sup> The classification refers only to the activities of the manufacturing and services (including trade), the sectors Agriculture and Forestry, Water Supply, Waste Management, Energy Production and Extractive Industry are in the category "Other".

## Agriculture, forestry and fishing

	2008	2011	2014	2015	2016	2017	2018	2019
Employed population (thousands of persons)	85.3	86.6	81.8	71.2	61.3	61.9	62.7	62.2
% in total	31%	33%	31%	27%	24%	24%	24%	24%

**Table 39:** Population employed in agriculture, forestry and fishing

**Source:** NIS

The number of people employed in agriculture decreased by over 23,000, almost 30% compared to 2008 (the largest decrease among all sectors of the local economy), given that at the county level the employed population decreased by 5%.

The latest available data (2014) show a total agricultural area of over 487,000 hectares, most of which are privately owned, down by almost 1,600 hectares compared to 2011 (the involutions are not significant over time, since 1990).

Local agricultural production has comparative advantages over sugar beet (8.8% of total national beet production) and maize grain (3.6%).

The structure of the agricultural area has changed in the last 30 years, towards an increase in arable land and pastures and a significant decrease in the areas occupied by vineyards and nurseries (with over 3,500 hectares, more than half of the initial area), but also those occupied with orchards (reduced to one third; loss of over 7500 hectares).

The area occupied by forests (40% of the county land fund and 3% of the national one) was in the 2014 statistics higher by 1,154 hectares than in 1990.

The production of the agriculture branch was estimated at over 2.6 billion lei in 2018, with over 30% higher than in 2014 (current prices), most of it (70%) being generated by the vegetable sector.

The cultivated land in 2018 was over 304 thousand hectares (increasing by almost 60,000 hectares compared to 2014), representing 3.6% of the nation's total. Over two-thirds of the area is cultivated with grain cereals, with corn and wheat predominating (almost 170,000 hectares in total). The increase in the cultivated agricultural area translated into an increase in agricultural production (compared to 2014), by over 60% in the case of grain cereals, + 40% in the case of grain legumes and by 30% in the case of oil plants.

Agricultural production has comparative advantages over sugar beet (8.8% of total national beet production) and maize grain (3.6%).

The machine park registered positive evolutions (+1,700 tractors, over 900 plows and over 500 mechanical seed drills). The county stock of agricultural tractors represents 5.3% of the national total.

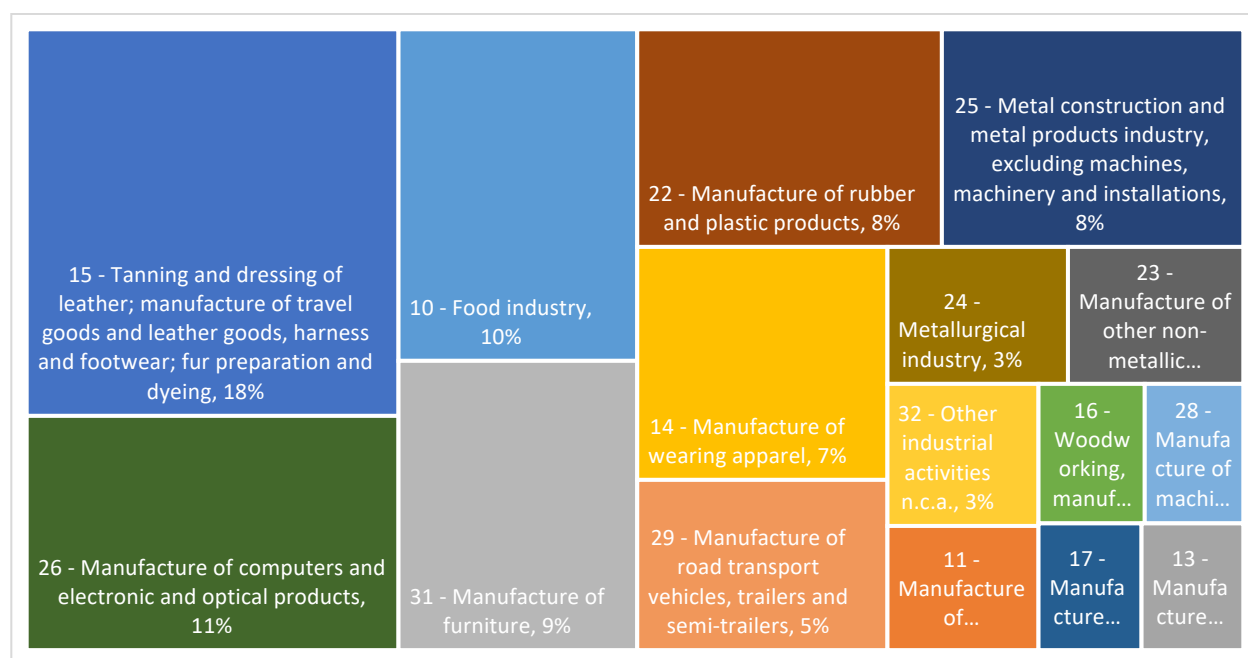
The number of pigs decreased in the period 2014-2018 (with over 56,000 heads, up to 137,000), but the number of cattle increased to 72,800, goats and birds. Meat production has doubled to almost 57,000 tons live weight (3.8% of the national total). Decreases in production were recorded for eggs (-22%) and milk (-11% compared to 2015), but developments are fluctuating over the period.

The county forest fund is over 207 thousand hectares, the surface of the forests being occupied in proportion of 84% with deciduous trees. INS statistics show that the volume of timber harvested was 455 thousand cubic meters in 2015 and 683 thousand in 2018, most of the harvests consisting of beech (50% of the total, with over 60% more than in 2014) and oak (15%). Artificial regenerations were carried out on 917 hectares in a period of five years (2014-18).

The turnover of the active local units in the sector doubled in real terms (real values) in the period 2019-2008, being over 312 million euros. The growth of the sector is visible: the doubling of the share in the total local economy in terms of output, but also the increase by a quarter of the number of employees and by over 60% of the number of registered companies. The profits of the sector have increased dramatically, being 4 times higher in real terms.

### Local industry

The local industry is a diversified one, with specialization in the fields of the manufacturing industry such as: the leather and footwear industry, the manufacture of electronic products, the food industry, the manufacture of furniture, etc. The textile industry also has an important presence at county level.



**Figure 37:** Main industrial areas by number of employees (percentages)

**Source:** Balance sheets of economic agents, NTRO

The low and medium-low tech industry has four times more employees than the high and medium high-tech industry, but the ratio in terms of turnover is 1.5/1. Companies in the high and medium industry suffer in terms of results - their profits are 18 times lower than those of medium and low technology.

Low wages and proximity to the western border have been important locational factors in attracting investors in many areas, such as the food, footwear, and electronic equipment components.

Data from active local companies show a decrease of almost 6,400 employees in the industry compared to 2008. In the textile and footwear industries, almost 11,000 jobs were lost together. Both the food industry and the manufacture of non-metallic mineral products are undergoing a process of restructuring and decline in activity.

The last decade has witnessed a restructuring and placement of the industry on different bases, from a production mainly in Lohn mode/system, to activities specialized in the production and assembly of electronic and industrial equipment, but also automotive components.

Industries such as the manufacture of computers and electronic and optical products, the manufacture of rubber and plastics products, the manufacture of automotive components, but also the metal and metallurgical construction industries are in a process of growth. These are also the ones that currently generate most of the sector's turnover (almost a quarter of electronics manufacturing, 12% of automobiles, 9% of rubber and plastics products and 8% of the metal construction industry).

Industrial production indices (source: INS) also showed significant annual increases in the recent period (+ 8%) in 2019 compared to the previous year, with increases in production in the above-mentioned sectors related to changes in turnover, but also with decreases in production.

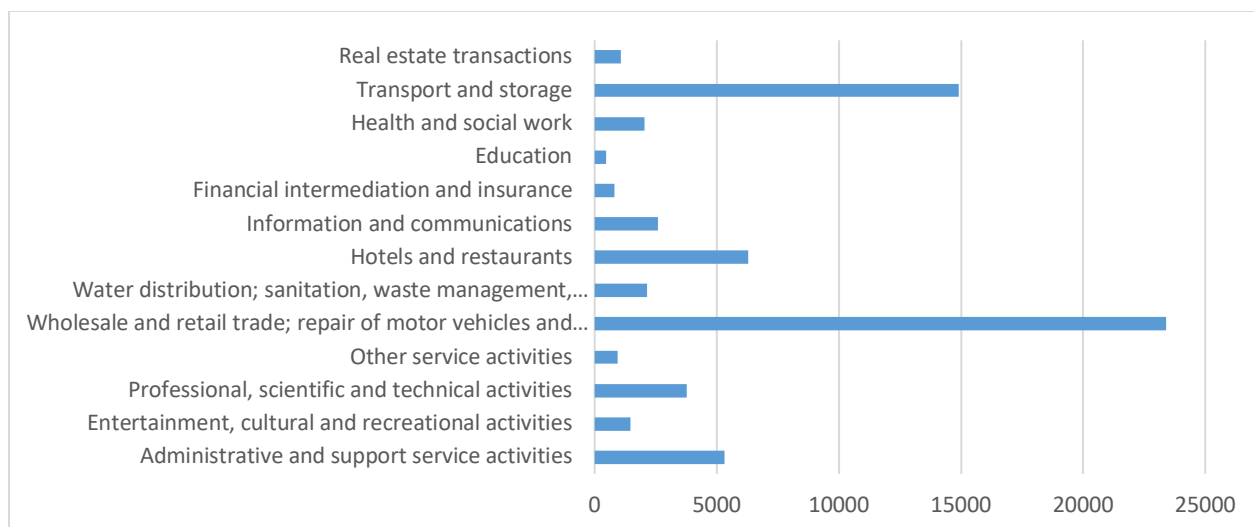
In terms of efficiency/profitability, the food industry, with almost 40% of the profits of the local industry performs (in 2008 its share was 5%), along with the rubber and plastics industry, with almost 30% of the total, while the main player in the field of computer manufacturing recorded losses.

## **Construction**

After the sharp decline caused by the economic crisis. the construction sector has followed a growing trend. The number of employees in the sector is lower than in 2008, but the increase compared to 2014 is almost a third. The turnover of the sector was over 2.8 billion lei in 2019, increasing by almost 80% compared to 2014, generated mainly by the construction of buildings, and the profits are three times higher (in real terms) than in 2008. The number of completed homes was over 2.300 in 2019, the best year since 2008.

## **Services**

The tertiary sector contributes more than half to the turnover of active local units. generating half of the profits. Although the contribution to total output is low (11% of employees of local active companies and only 6% of turnover), knowledge-intensive services bring 15% of the profits of the local economy, which confirms their high added value.



**Figure 38:** The structure of the services sector (employees, 2019)

**Source:** Balance sheets of economic agents, NTRO

The restructuring of the local economy has also taken place at the level of services, not only of the industrial activity. Commercial and car repair activities remain a very important component of service providers and goods for local consumption, but the contribution in terms of employees and turnover is declining; the number of companies in the commercial sector is 30% lower than in the base year.

The Bihor tertiary sector is gaining specialization (and possible competitive advantages) in multiple areas:

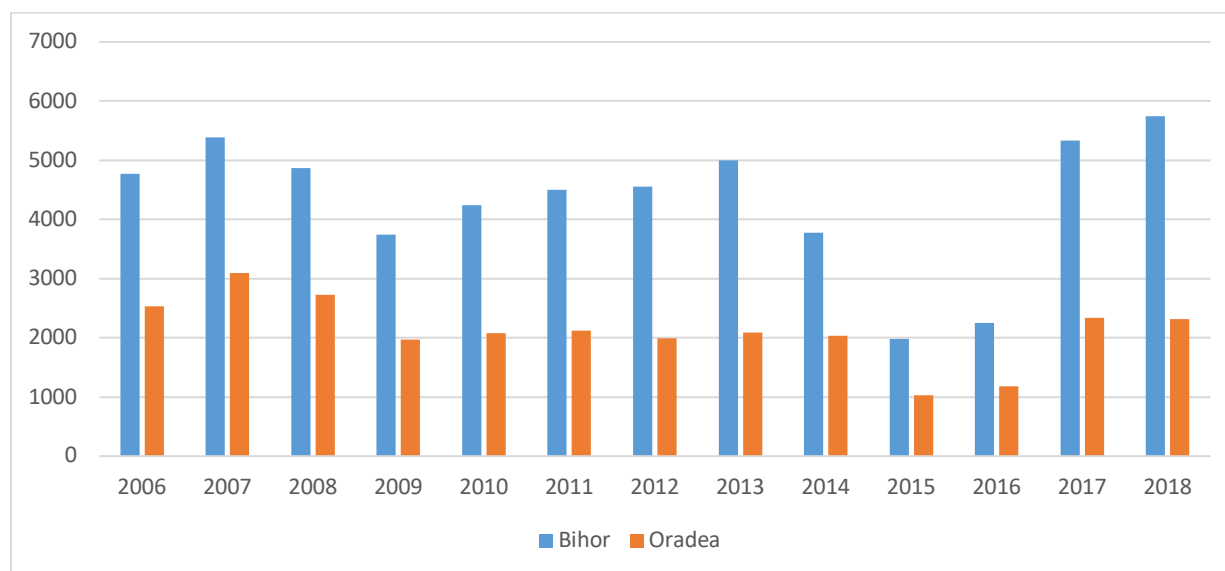
- Transportation and storage (+ 60% employees, threefold increase in turnover and fivefold increase in profits);
- Accommodation and food service activities (with a third more employees and about the same increase in output and profits as transportation);
- Administrative and support services (+1,500 employees, profits five times higher) - evolution related to industrial restructuring and the benefits of globalization;
- Creative industries - Cultural and recreational activities - very significant increase in the number of employees and exceptional increase in profits (x16 compared to 2008 and six times higher than in 2014) - the growth process is a continuous one, which has beneficial effects on diversification of the economy, but also of the creative community spirit, especially in the urban area, where this sector is located mainly;
- Private health sector - doubling the number of economic agents has greatly increased the values of all indicators.

The local IT sector is in the shadow of the one in Cluj, which attracts most of the local resources; the developments in terms of indicators are modest, with the level of salary income being half of the national average of the sector.

### Local entrepreneurship

A lively entrepreneurial environment allows the development of business relationships and the creation of agglomerations of skills, which reduces the efforts and costs of local companies in identifying and procuring resources. The high level of entrepreneurial intensity of an area is generally associated with an educated population and leads to a higher standard of living.

The registrations of new companies exceeded the value of 5,700 in 2018, especially Oradea and the localities in the metropolitan area being the areas with higher values.



**Figure 39:** Registration of economic agents, 2006-2108

**Source:** NTRO

### ***Business density***

The Oradea metropolitan area hosts the administrative-territorial units with the highest entrepreneurial density.

The cities of the county (Săcuieni, Nucet, Vașcău) have lower values of the indicator than many of the rural communities of Bihor, especially some of those in the Oradea Metropolitan Area.

In the period 2006-2018, the growth rates of the number of local firms in areas where the stock was significant were impressive: Paleu - fourfold increase, Sântandrei – tripling, Borș. Nojorid and Sânmartin – doubling, while in Ștei, Nucet and Aleșd the number of companies decreased.

### ***Entrepreneurial capacity***

The entrepreneurial capacity measures the "entrepreneurial intensity" of a geographical area, being an indicator used in research to assess its economic vitality, being calculated as the number of newly created enterprises per thousand inhabitants.

As in the previous indicator, the entrepreneurial capacity is higher in the Metropolitan Area; the average of new companies/1000 inhabitants shows problematic urban areas, with very low values of the indicator, such as Săcuieni, Nucet, Valea lui Mihai, Ștei, Vașcău.

### **Local economy – Specialization and Competitiveness**

The analysis of the performances of the local economy aims to identify those areas in which the Bihor economy presents or can develop competitive and comparative advantages, but also to identify the non-competitive areas of the local economy, or which are losing competitiveness.

For this we used a mixed analysis - Location Coefficient (specialization index) and Shift-Share, benchmark analysis. which uses tools/indicators such as the Industrial Mix and Regional Competitiveness (differential variation).

### **Specialization/diversification**

The level of specialization of an economy in certain fields can be determined based on the localization coefficient. a way to identify local comparative advantages - branches with low opportunity costs, areas of concentration/specialization of the local economy.

Through this technique we have identified areas with potential - whose production of goods or services is likely to be "exported" (not necessarily in the common sense of the term - we refer here to the likelihood of goods or services being used by residents of other areas - external to the local economy). The location quotient (CL) allows us to determine to what extent a certain sector of the local economy has a higher or lower share in total, compared to the reference area with which it is compared. Sectors that give a comparative advantage (with supra-unitary CL) to a territory have the potential to be an economic engine.

The Hachman Index is a way of identifying diversification by measuring the degree of similarity of the structure of the local economy with that used as a reference. The values of this index increased from 0.54 to 0.61 (1 being the maximum value) which confirms the process of diversification of the local economy.

The sectoral analysis shows a focus on four of them: agriculture, forestry and fishing, manufacturing, trade and accommodation and food service activities. At the domain level, the analysis becomes more reliable, more accurately identifying the comparative advantages of the community.

The selection of areas of specialization at the field level shows that a large part of the fields with a high degree of concentration belong to the manufacturing sector, confirming pre-existing comparative advantages, such as beverages, clothing, furniture manufacturing, plastics and rubber and others, in which the number of employees is important and their share in total is higher than in the area of comparison. Very high values of coefficients stand out in the footwear and computer and electronics industries.

The construction sector has comparative advantages in its entirety - all three related areas have a higher degree of specialization than the reference, while the commercial sector benefits from specialization in wholesale trade and in the repair component of motor vehicles.

Concentration in the transportation and storage sector is important in the land transport and storage component and ancillary transport activities.

The accommodation and food service activities sector has definite comparative advantages in the hotel area, and the restaurant component has a value of the location coefficient very close to the limit values and can be considered as one of specialization.

The service sectors are underrepresented in terms of specialization, except for a few areas, such as IT services, ancillary activities for financial intermediation, sports and leisure activities and betting and gambling, as well as the repair of computers and other personal items.

## Competitiveness

The competitive advantages of an area can be identified based on the Shift-share analysis which starts on the assumption that changes in the local economy are based on three sources: the overall evolution of the national economy, the local mix of industries and local competitiveness. Thus, the analysis considers the impact of the national economy, but also of the evolution of the branch, and allows the identification of the possible competitive advantage at the local level.

Competitive advantage is measured based on differential shift (DS), an indicator that compares the growth or decline rates of a local sector or domain with the growth or decline of the same sector in the reference area (in our case the national level). This indicator allows us to observe the sectors of the local economy that performed better than at the level of the reference unit over a period, or if the evolution of the local economy (through its sectors and domains) takes place at a lower or higher rate than expected.

The differential shift is a dynamic analysis (as opposed to the location coefficient, which is a static measure), evaluating changes over the period 2008-2019. Out of the 85 domains, in 40 the local economy has evolutions that exceed the national ones. Over 52% of local company employees work in such areas, with a high probability of having competitive advantages (these can be seen in the table above, which contains data for areas with a significant number of employees).

Although it has a positive coefficient in the manufacture of textiles (a sector whose number of employees has decreased), the national decrease rate is higher. We find a similar situation in the field of wood processing, but also in the construction sector.

The commercial activities register values below the optimum of the indicator - the important decrease of the domains compared to the basic period was made at a higher rate than that of the reference area.


Although they do not have a high level of concentration. many activities in the fields of services have a positive differential variation – professional, scientific, and technical activities, labor intermediation services, business support services and secretarial services, private education, recreational activities, gambling and computer repair.

## Identifying the engines of the local economy and the potential for engagement

The correlation of the two coefficients analyzed so far allows us to identify the sectors and activities in development and those in decline, but also those that need increased attention or with potential for evolution.

The chart below concentrates in the upper right quadrant the sectors that can represent the engines of the local economy - where the level of concentration/specialization is high. and the rate of evolution compared to the national level is higher.

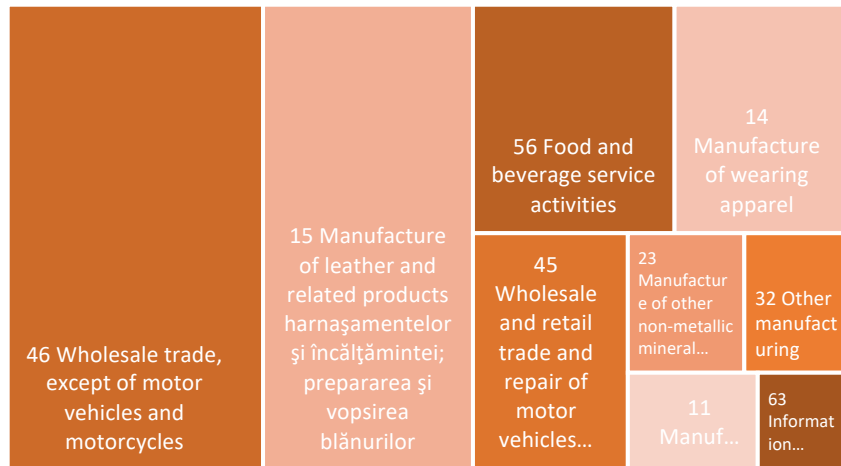
The category of areas in transformation, those activities that concentrate a significant number of employees, but which lose their competitive advantage, indicate the tendency to transform the local economy, by losing the competitiveness of some representative sectors.



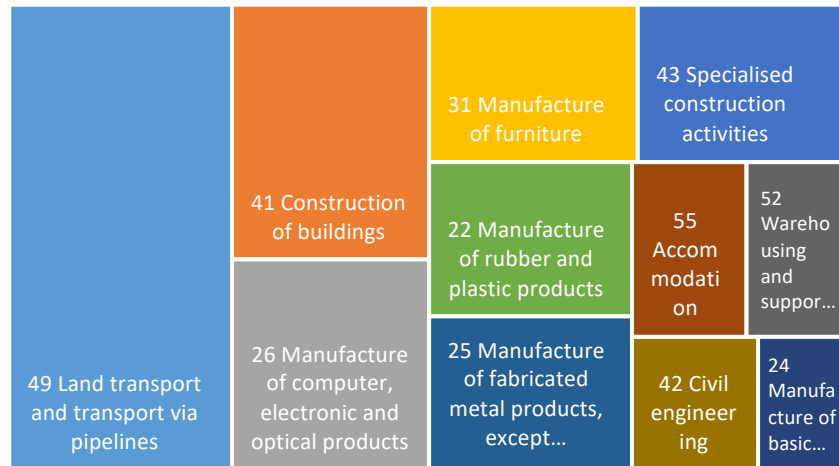
The declining sectors are those where the concentration of the number of employees is below the reference level and their growth rate is below that of the sector at national level.

Prospective sectors have growth rates that exceed the expected level, but do not have a location coefficient that shows a high level of concentration.

## Transformation



## Growth base



## Decline



## Prospective



## The main conclusions regarding the specialization and competitiveness of the local economy

The growth base is the areas where the local economy has proven strong and is the engine of growth of the local economy. To these areas is added the group of prospective areas, to complete the competitive advantages. The growth base is represented by areas that concentrate 40% of the county workforce such as transport, computer manufacturing, furniture manufacturing, etc.<sup>49</sup>

Prospective sectors can maintain the pace of growth, with efficient management and in the conditions of returning to the pre-pandemic situation. Over time, they can increase their employee base and become core sectors of the local economy, in a possible subsequent structural transformation (Manufacture of vehicles, processing of agricultural products and some service activities).

A quarter of local employees are engaged in declining fields. most of them in business and the food industry. Information technology service activities are a special case - the increase in the number of employees. although significant, is lower than the expected quota according to the methodology (this is not a declining sector in the true sense of the word). Business support is unfavorable, probably due to the restructuring of the local industrial sector.

The changing sectors (almost a quarter of the employees of local private companies) can generate significant negative effects on the local economy, if the spiral of decline continues for a long time. The prolongation of the lack of competitiveness trend leads in the end to the loss of the position of specialization and their slip in the category of declining sectors and the transmission of shocks in the local economic system. Developments in the footwear, garment and textile industries follow an expected pattern of reduced activity and mobility to better cost-effective areas. The local economy is being rebuilt on other bases. with the increase of living standards/income. Commercial activities are problematic, both in terms of developments and the level of staff salaries. The restaurant sector had the competitiveness index slightly below the limit, in its case the placement in this category being rather a momentary situation. However, the current period may affect the sector in the long term, with the prolonged cessation of activity.

### SWOT analysis on Bihor county's economy

Strong points	Weak points
<ul style="list-style-type: none"> <li>● Development and modernization of the airport (increase of operational capacity);</li> <li>● Functional Oradea metropolitan area;</li> <li>● Upward dynamics of GVA at county level;</li> <li>● Relatively stable economic structure, with a growing trend in the importance of services;</li> <li>● Increased labor productivity of local economy employees, indicator values superior to other counties in the region (except Cluj);</li> </ul>	<ul style="list-style-type: none"> <li>● Low values of indicators such as GDP/capita;</li> <li>● County GDP growth rate - the lowest in the NW region;</li> <li>● Significant involvement rates in sectors such as Construction and agriculture (in terms of GVA and employees);</li> <li>● Poorly developed R&amp;D and IT&amp;C;</li> <li>● Low share of the knowledge-based economy</li> </ul>

<sup>49</sup> Note - the chart above brings together only the domains with a significant number of employees, the distribution of domains within the four quadrants (decline, outlook, transformation, development) being proportional to the number of employees in the domain.

<ul style="list-style-type: none"> <li>● Still significant stock of foreign direct investment;</li> <li>● Diversified economic structure;</li> <li>● Local economy - the main regional exporter;</li> <li>● Employment rate higher than the national average;</li> <li>● Increasing trend in the number of employees compared to 2011-2014;</li> <li>● Significant growth rates of the economies of the communes in the peri-urban area;</li> <li>● Oradea - important economic pole. developing area;</li> <li>● Positive developments in business support infrastructure (OLAD/Eurobusiness industrial parks);</li> <li>● Significant agricultural potential - high competitiveness in some areas (sugar beet, Corn, etc.), increasing the stock of machinery, increasing the indicators of companies in the sector.</li> </ul>	<ul style="list-style-type: none"> <li>● Decreasing the value of investments of local sects (especially industry. pre and pandemic);</li> <li>● Restructuring of some activities - significant losses of employees and activity (textile and footwear industry);</li> <li>● Declining labor resources, significant declining rates;</li> <li>● Low level of average earnings - in general but also in sectors - compared to the national average;</li> <li>● Non-competitive economic zones - small urban areas;</li> <li>● Low level of economic resilience (having as a reference the crisis of 2008-2012);</li> <li>● Although connected to pan-European transport corridors, transport infrastructure is still inadequate.</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>● Carried out and observed a regulation of urbanism and environmental protection by all the ATUs in the county that have tourist objectives and accommodation units;</li> <li>● Existence of government programs and European funding to support investments in the field of rehabilitation and expansion of water networks, sewerage and wastewater treatment;</li> <li>● External financing opportunities for development projects with an impact on the county's economy;</li> <li>● Resumption of passenger flow and operation of new air transport routes;</li> <li>● Completion of the Borş-Braşov Highway.</li> </ul>	<ul style="list-style-type: none"> <li>● Growing intraregional competition from other areas (Sălaj. Maramureş);</li> <li>● Uncertainty about the evolution of the pandemic and its effects on markets, purchasing power and consumer behavior;</li> <li>● The polarization potential of Cluj-Napoca. which leads to a well-prepared labor migration and the migration of young people (educational goals/establishment in areas with superior opportunities).</li> </ul>

### Conclusions and strategic perspectives on the economy of Bihor County

- The growth rate of the county's GDP is the lowest in the NW region, the phenomenon of reducing the gaps compared to other counties is slow.
- There is a tendency to shy away from increasing the importance of public and cultural services (administration, education, health, arts and recreation), but also the share of other services in GVA, to the detriment of the construction sectors (whose GVA has halved) and agriculture.
- The local economy is in a restructuring process. There is an additional contribution of companies in the sectors: transport and storage, construction, real estate transactions, trade and agriculture in the total volume of investments, in the context in which the industry (which still has the largest volume, 35% of the total) and- decreased the value of investments by 10%.
- The labor resources of the community have a slower rate of decline than other counties, the employment rate is higher than the national average. The structure of the employed population by sectors shows a relatively balanced distribution: over 40% of the employed population works

in tertiary sectors, and the population employed in industry is higher than that employed in agriculture.

- The average net earnings place the county among the lowest income, position 37 nationally in 2018. The growth rates of net income of most sectors are higher than those at the national level, but the differences are not significant, which makes the gap recovery process difficult.
- We can still talk about the competitiveness of the local economy through costs - economic activity is concentrated in areas with low wage incomes (manufacturing industry, trade), but their share decreases over time.
- In real terms (updated with inflation) economic activity exceeded pre-crisis turnover in 2008; local companies are more profitable; the number of employees and the number of companies is higher.
- The economy is relatively diversified, and small and medium enterprises generate over half of local turnover and over 70% of profits. The industrial sector is in a process of structural resettlement, but the low and medium low-tech industry has four times more employees than the high and medium high-tech industry (the turnover ratio is 1.5/1). The services sector is developing, based on significant increases in transport and storage.
- The growth base (and area of competitive advantage) of the local economy is represented by areas that concentrate 40% of the county workforce such as transportation, computer manufacturing, furniture manufacturing, etc. At the same time, a quarter of local employees are engaged in declining areas. most of them in business and the food industry.
- The transforming sectors (trade, footwear manufacturing, clothing/textiles) can have significant negative effects on the local economy. if the spiral of decline continues for a long time. The prolongation of the lack of competitiveness trend leads in the end to the loss of the position of specialization and their slip in the category of declining sectors and the transmission of shocks in the local economic system. Developments in the footwear, garment and textile industries follow an expected pattern of reduced activity and mobility to better cost-effective areas. The local economy is being rebuilt on other bases, with the increase of living standards/income.
- Oradea Metropolitan Area grows organically - the evolution of economic indicators reveals a relocation of economic activity from Oradea to municipalities in the area of influence/a large part of the declining sectors and areas in Oradea are growing and have become competitive in municipalities area of influence. The largest and most economically developed communes (Borș, Sântandrei, Biharia, Sânmartin and Nojorid) are more specialized and competitive in a growing number of sectors and areas. The urban environment, with a few exceptions, has problematic evolutions.
- In the communes in the area of influence of Oradea municipality, including those in Oradea MA, the economic indicators have a positive evolution superior to the one registered by Oradea municipality.
- Some of the declining sectors and areas in Oradea are growing and have become competitive in the communes in the area of influence.
- One can observe a specialization on various functions of the municipality of Oradea and of the communes in the area of influence, including those in Oradea MA, each ATU fulfilling certain economic functions and thus contributing to increasing the degree of economic competitiveness of the area.
- Compared to the other counties in the North-West Development Region, but also to Timiș and Arad counties, Bihor County was less resilient to the economic crisis from 2008, the economic shock triggering a process of transformation of the county economy, process in which Oradea MA becomes the economic engine of the county; In the new context, each community included in Oradea Metropolitan Area is developing as a functional unit within a larger, more complex, but more competitive and resilient economic and social system.

- In the case of tourism, continued investment in infrastructure, improving the quality and diversification of tourism services are absolutely necessary to support a greater influx of tourists in the future;
- Coherent urban planning and improving land management to unlock areas with potential for growth in tourism and to prevent unsustainable real estate development and environmental degradation are imperative measures at the county level.
- The economic crisis of 2008-2012 seems to have triggered the relocation of economic activity from the municipalities to the neighboring communes/area of influence. Therefore, the communities concentrated around the large urban centers are starting to function more and more from an economic and social point of view as urban functional areas and not as individual entities (administrative-territorial units) established bureaucratically. It is obvious that in Cluj-Napoca and Oradea the quality of life is higher today than before the economic crisis that started at the end of 2008, but the economic activity that contributes to it is no longer concentrated only at the level of urban communities (ATU) but has been partially transferred and developed in the surrounding communities. Thus, each community develops as a functional unit within a larger, more complex but more competitive and resilient economic and social system.

## Tourism in Bihor County

### The tourist potential of the County

Bihor County is one of the counties with the largest and most diversified tourist potential in the country. Its tourist potential is concentrated in the biodiversity of the Apuseni Mountains, but also in the spa resources currently exploited at Băile Felix and 1 Mai, respectively. In addition to these two essential components, the county enjoys an extremely endowed and diversified cultural heritage due to the 431 built heritage monuments, of which 170 are archaeological sites and monuments, 221 architectural monuments and ensembles and 40 memorial houses and fine art monuments ([investinbihor.com](http://investinbihor.com)).

The main tourist areas in the county are the Oradea Area, together with the Băile Felix and 1 Mai resorts and the Apuseni Mountains Area.

### Oradea area, Băile Felix and Băile 1 Mai resorts

The county seat (Oradea) has a significant tourist heritage, attracting a large number of tourists annually for the 6 monuments and archeological sites, 91 technical monuments and architectural ensembles, 6 memorial buildings and 19 monuments and ensembles of fine arts. These buildings can be accessed through the two main areas of interest, namely the urban complex "Historic Center Oradea" (the area between Independence, Marshal Averescu, Redutei, Constantin Dobrogeanu Gherea, Griviței, Suceava, Ion Vidu, Bacau, Romanian Army, Universitatii, Nicolae Bălcescu Park, Decebal Boulevards, Dacia, Rozmarinului, Berzei, Republicii, Louis Pasteur, Măcinului streets, IC Brătianu Park, Dacia bridge) and Oradea II Urban Ensemble (the area between Inului, Parângului streets, CFR Oradea station and Bihor Episcopy) ([oradea.ro](http://oradea.ro)). In the above-mentioned areas you can find architectural buildings and monuments in Renaissance, Baroque, Romantic, Art Nouveau, Eclectic, Classical and Austro-Hungarian styles.

The municipality of Oradea, due to recent initiatives, proposes an effervescent urban setting, with a growing cultural activity that is suitable both for "city break" visits and as activities associated with spa tourism in Felix and 1 Mai resorts. Among the most important tourist objectives in Oradea and its surroundings we mention: Șirul Canonicilor, a baroque urban ensemble formed by ten houses lined up in front of the garden of the Episcopal Palace; The Baroque Palace, which is, together with the Basilica of St. Mary and the Row of the Canons, the most valuable Baroque complex built in Romania; Black Eagle Palace; Greek Catholic Episcopal Palace; places of worship such as the Roman Catholic Basilica of the Ascension of the Virgin Mary; the Orthodox Church "with the Moon"; the Church of St. Ladislaus; the Museum of the Land of the Crisuri; etc.

In the two spas - Băile Felix and 1 Mai - the main tourist activity is related to spa tourism, which annually attracts a large number of tourists and for a longer period of stay.

Băile Felix resort is located in Sînmartin commune, 9 km from Oradea, at an altitude of 160 m in Crișurilor Plain. The resort is located about 2 km from Băile 1 Mai Resort, which is also located on the territory of Sînmartin commune. The thermal waters in the area are famous for their therapeutic qualities.

#### *Adjacent secondary areas*

- Cefa Natural Park, located 30 km southwest of Oradea, where you can practice activities such as fishing, ornithological observations, boating, horseback riding, etc.;
- Diosig vineyards, where you can organize activities/routes related to wine culture. The vineyards belong to the Crișurilor and Ierului Plain, an area where cultural tourism and heritage activities can be practiced (eg. visiting the private rush weaving workshop in Șuiug, participating in annual events such as: "Grape Ball" at Cetariu "Wine Festival"), and "Autumn in the Ierului Valley" in Săcuieni, "Acacia Days in Bloom" in Mihai's Valley, or "Potato Festival in Slovak" in Șinteu);
- Avenul de la Betfia area, Vârciorog area or Dobrești area, where you can practice sports activities and adventure tourism (eg mountain biking, caving, climbing, etc.);
- Valea Ierului - Sălacea commune from Bihor County, is located on DJ 191F, which connects Marghita with Valea lui Mihai and is inhabited in proportion of 90% by ethnic Hungarians.

#### **Apuseni Mountains area**

Bihor County is one of the six counties on which there are divisions of the Apuseni Mountains. These are young, wrinkled mountains, formed in the Alpine-Carpathian-Himalayan orogeny. They are generally composed of a mosaic of rocks, predominantly limestone, which explains the very large number of caves in these mountains. The landscape of these mountains is a karstic one, well developed, made up of caves, gorges and a gorge.

In Bihor County, the mountain area is highlighted by the existence of 40 approved mountain tourist routes in the care of Salvamont-Salvaspeo Bihor, another 5 being in the process of approval. The routes cross the main tourist areas in the mountainous area of the county, as follows:

- Bihor - Vlădeasa Massif, with 21 routes in the Apuseni Natural Park area, 9 in the Stâna de Vale resort area, 5 in the Băița - Vârtop area;
- Pădurea Craiului Massif with 8 routes in the Crișul Repede Gorge area and 1 route in the Remeți - Meziad area;
- Codru Moma massif with 1 route in the Cărpinet area.

Bihor is the county with the largest number of caves, over 8% of the approximately 20.000 known cavities in the country. Among them are 5 speleological superlatives of Romania:

- The deepest cave - the avenue under the Grind Peak from the Piatra Craiului Massif;
- The largest cave - Wind Cave - Șuncuiuș;
- The largest underground waterfall - Câmpenească Cave - Vașcău;
- The deepest sunken cave - Izbândiș Spring;
- The largest landscaped cave in the country - Bear Cave.

The caves that can be visited are: Bear Cave, Ponor Fortress, Living Fire Glacier, Bortig Avenue, Vadu Crișului Cave, Unguru Mare Cave, Meziad Cave and Crystal Cave from Farcu Mine.

In fact, Bihor County is the only county in Romania that has a network of tourist caves, as shown in the map below:

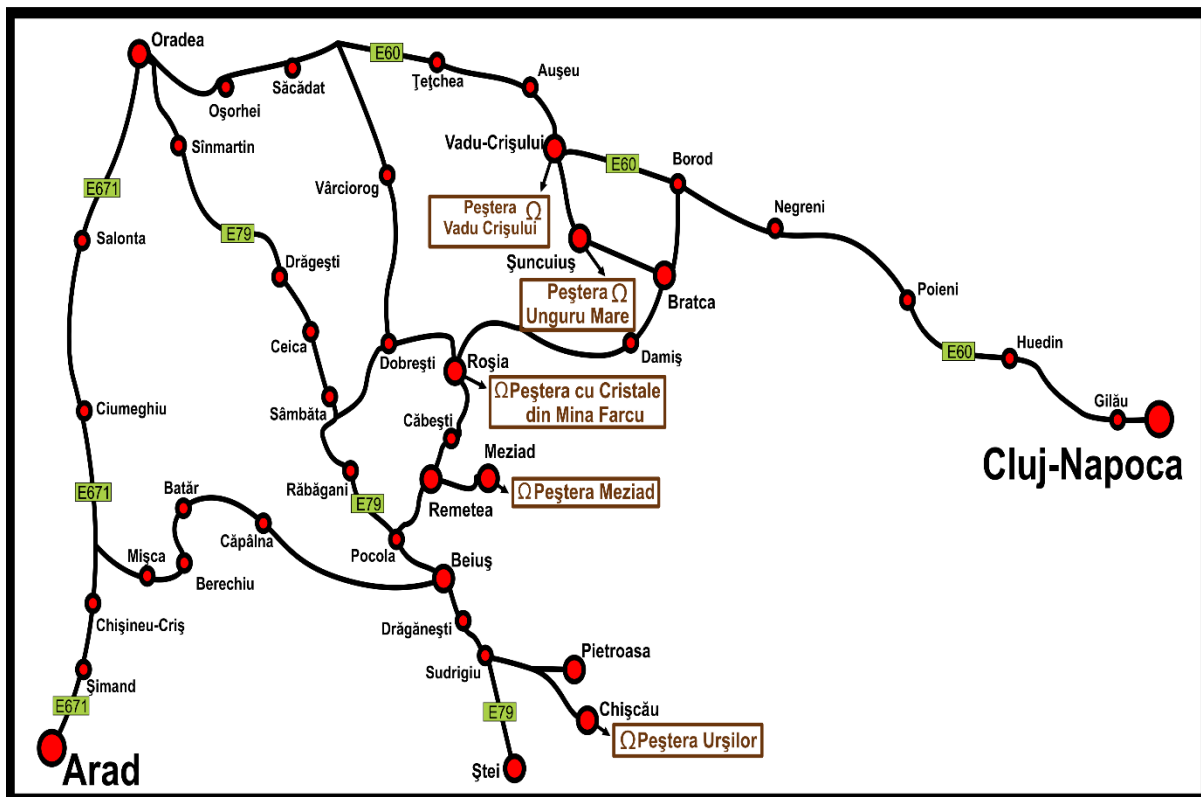


Figure 41: Map of the network of tourist caves in Bihor County

Source: Center for Protected Areas and Sustainable Development Bihor / CAPDD Bihor

Next to these tourist caves. there is a significant number/a network of cave tourism, with different degrees of difficulty, some of them (3) being with entrance only for scientific purposes:

No.	Name	Type of visit			Level of difficulty				Level of protection				Observations		
		1	2	3	1	2	3	4	A	B	C	D			
1	Avenul Hârtopul fără Fund		X				X					X			
2	Avenul Sohodol		X					X					X		
3	Avenul Stanul Fociei		X					X					X	only with an attendant recommended by the custodian	
4	The Old Man's Cave		X					X					X		
5	Ciur Ponor Cave		X	X				X	X					only with an attendant recommended by the custodian	
6	Craiului Cave		X			X							X	only with an attendant recommended by the custodian	
7	Apă de la Leșu Cave		X			X				X					
8	Fern Cave		X					X						X	
9	Cubleș Cave		X			X								X	
10	Mina Farcu Cave	X	X	X		X			X	X	X			only with an attendant recommended by the custodian	
11	Mina Jofi (1J2) Cave		X					X						X	The mine gallery through which the access to the cave is made is very dangerous
12	Doboș Cave		X			X								X	
13	Gălășeni Cave		X			X					X			only with an attendant recommended by the custodian	
14	Grueț Cave		X			X				X					
15	Meziad Cave	X	X	X	X	X			X	X				only with an attendant recommended by the custodian	
16	Moanei Cave		X			X								X	
17	Osoi Cave		X			X				X					
18	Ponoraș Cave		X			X	X	X						X	only with an attendant recommended by the custodian
19	Unguru Mare	X	X		X	X	X							X	only with an attendant recommended by the custodian
20	Peștera Vacii (Cuților Keys) Cave		X					X						X	
21	Vadu Crișului Cave	X	X		X	X								X	

No.	Name	Type of visit			Level of difficulty				Level of protection				Observations
		1	2	3	1	2	3	4	A	B	C	D	
22	Vântului Cave		X			X			X	X			only with an attendant recommended by the custodian
23	Hârtopul Bonchii Cave		X				X					X	only with an attendant recommended by the custodian
Type of visit		1 - Organized tourism in arranged caves											
Level of difficulty		2 - Specialized speleological tourism (speleotourism)											
Level of protection		3 - Entry for scientific purposes											
		According to L 402/2006											
		According to OM 604/2005											

**Table 40:** The caves in Bihor County

**Source:** Center for Protected Areas and Sustainable Development Bihor / CAPDD Bihor

Therefore, the speotourism potential is huge, placing Bihor County in the top of speotourism destinations in Europe.

The most important tourist attractions belong to the perimeter included in the Apuseni Natural Park and consist of:

- Padiş karst tourist area - Ponor Fortress. It is the main tourist area of the Apuseni Mountains, with the largest concentration of tourist attractions, such as: Padiş Plateau, Poiana Ponor, Lost World, Ponor Fortress, Groapa de la Barsa, Focul Viu Cave, Valea Galbenei. At the source of the Valea Seacă valley tributary, upstream of the canyon, is Groapa Ruginoasă.
- Evantai Waterfall - in the middle of the Galbenei Gorges from the Padiş basin - Ponor Fortress. It is accessible from the Galbena circuit route.
- Boga - Aleu and Pietroasa - Chişcău tourist area. Special attractions of this area are the rock walls of the Boghii Amphitheater, the Boghii spring, the Bohodeiului Jump, the Oşelu waterfall. There is also the Bear Cave in Chiscau.
- Valea Sighiştelui tourist area, which houses over 160 caves, the best known being the Măgură and Coliboaia caves. The valley ends in a spectacular canyon through the narrowness and verticality of the walls.
- Vârtop tourist area, representing a developing area, especially for winter sports. The area has many guest houses and holiday homes. At Vârtop there is a functional slope of 750 m length of medium level of difficulty, equipped with a ski lift. In the area you can visit Vârciorog Waterfall with a height of 15 m, Cucurbăta Mare Peak (Bihor Peak) the highest peak in the Bihor Mountains, 1.849 m.
- Wind Cave - is the largest cave in Romania, with a total length of 47 km. It is located in the Craiului Forest Mountains, near Şuncuiuş, Bihor County.

### *Adjacent secondary areas*

Besides the Apuseni Natural Park in the county there are also a series of areas with tourist potential, thus completing the package of tourist objectives in the county that can be included and promoted in common tourist packages:

- Roșia - Remetea area, with an important potential both from the point of view of speleological tourism (Crystal Cave from Farcu Mine, Meziad Cave, etc.), but also of agrotourism. In fact, in the commune of Roșia there are already several initiatives for the rehabilitation of traditional houses and arrangement in tourist reception structures.
- Șuncuiuș - Vadu Crișului area, where the Crișului Repede gorge offers the possibility to practice various adventure and relaxation activities. The potential of this area is reflected in the growing number of tourist accommodation structures.
- The Vașcău - Cărpinet area, which includes several karst relief objectives (eg. Izbuclul de la Călugări) and at the same time represents an area with old traditions in crafts such as pottery or wood processing.
- Stâna De Vale - located in the Vlădeasa mountains, about 70 km from Oradea and Groapa Ruginoasa in the commune of Budureasa located near Stâna de Vale.

### **Accessibility**

The access infrastructure in the county has a major impact on the range of potential tourists. Currently, the county's visitors come mainly from the nearby urban centers: Cluj-Napoca, Arad and Timișoara, but also from Hungary, especially from localities near the border. The accessibility of the county is increased, being facilitated by the direct connection with the European roads E60, E71, E79, the railway and the airport from Oradea.

In the case of Băile Felix and Băile resorts, accessibility is mainly from DN 76 Oradea-Deva, but there is also the possibility of access from E69 to reach some of the approximately 30 hotels, pensions or villas.

Especially the spa tourism, but also the mountain/adventure tourism is suitable for a foreign public, from European countries and not only. The competitive advantages of the county for such an audience depend on the quality of the spa resources and the environment, as well as on the relatively low price of the services compared to similar areas in other countries.

In the case of the Apuseni Mountains, the main access roads are DJ763 and DN76. In general, the routes in the mountain areas are also tourist routes, and the fact that these roads are not modernized enough leads to strong development delays, given that the areas with tradition and tourist potential cannot be highlighted as eg. Stâna de Vale tourist area with DJ 764A Beiuș - Stâna de Vale, Meziad area with DJ 764C Remetea – Meziad, Vârciorog area with DJ 767D, DJ 108K Bulz-Remeți - Drăgan Dam. In particular, the area of the Apuseni Mountains, namely DN 76, must be taken into account.

## **Challenges and perspectives**

- An important challenge for the Bihor County Council is related to the design and promotion, in an integrated manner, of the main areas of tourist interest in the county.
- There was insufficient coordination and experience of working in partnership both at the sector level, on the part of economic agents, and in terms of involvement and collaboration between/with local authorities.
- Accessibility to the main areas of tourist interest has improved in recent years, a notable example being the modernization of the access road to the Padiş Plateau.
- There is still a great need for investment in both major infrastructures to expand the tourist attraction (for example by modernizing the airport to access foreign markets or rehabilitating DN76 to facilitate access for tourists in the center of the country) and to enrich their experience in the visited area (local roads and access paths, new routes, markings and information panels, etc.).
- Continued investment in infrastructure, complementary to the improvement of quality and diversification of tourism services are absolutely necessary to support a greater influx of tourists in the future.
- An important need is related to urban planning and improving land management, both to unlock areas with potential for growth in tourism, and to prevent unsustainable real estate development and environmental degradation.

## **The evolution of the indicators regarding tourism in Bihor county**

Of the eight indicators analyzed in the extended version of the diagnostic/preliminary analysis on tourism in Bihor County. we present here only the analysis of the evolution in the case of four of them, as well as the SWOT analysis and the main conclusions and strategic perspectives on tourism in Bihor County.

In the case of all indicators, the calculation of the evolution was made by reporting the values from 2019, to the values from 2008 (the last year before the economic crisis). If there are no values for this year, the values in 2019 have been compared to those in the first year after 2008 for which there is a value other than 0 in the period covered.

### **Tourist accommodation capacity in operation**

The tourist accommodation capacity in operation represents the number of accommodation places made available to tourists by the tourist accommodation units, taking into account the number of days the units are open during the considered period. It is expressed in places-days. Places in rooms or units temporarily closed due to lack of tourists, for repairs or for other reasons are excluded (INS).

At the level of the urban area, there is a positive evolution, the city of Nucet registering the largest increase in tourist accommodation capacity in operation, followed by the city of Oradea and the city of Aleşd. However. these increases come from different types of tourist structures. If at the level of Oradea municipality and Aleşd city the increase is generated by the structures of hotels and hostels, the city of Nucet registered increases in the case of structures such as agritourism pensions and tourist pensions.

At the level of the rural area there is no uniform evolution of this indicator. Some communes registered considerable increases (Nojorid, Hidişelu de Sus, Pietroasa and Vadu Crişului), others registered modest

increases (Sânmartin), and a large part registered significant decreases (Tinca, Pocola, Şoimi -100%). The positive evolution is given by a substantial increase in capacity in structures such as agritourism pensions. Therefore, there is a specialization in the field of agrotourism in the communes of Bihor County.

Places	2008H	2009	2010	2012	2015	2018	2019	Increase/ decrease 2008 - 2019
Oradea municipality	322,648	390,764	444,673	616,108	1,019,768	1,087,021	915,730	183.8%
Beiuş municipality	4,015	0	0	5,375	5,152	8,962	5,096	26.9%
Marghita municipality	70,788	47,450	68,794	82,132	75,414	86,412	93,656	32.3%
Salonta municipality	0	2,208	8,760	8,784	2,312	3,610	3,510	59.0%
Aleşd city	0	0	0	0	13,482	28,042	28,091	108.4%
Nucet city	3,844	8,784	24,616	21,480	14,564	97,306	88,214	2,194.8%
Săcueni city	2,928	2,555	1,057	0	0	4,046	4,015	37.1%
Ştei city	29,110	29,192	29,684	0	4,280	0	0	-100.0%
Valea lui Mihai city	2,196	2,190	3,166	5,124	0	2,050	2,160	-1.6%
Biharia	0	14,600	14,600	14,640	14,042	25,860	30,136	106.4%
Borş	63,486	58,506	64,240	51,833	53,290	59,130	59,052	-7.0%
Bratca	8,100	4,568	6,460	9,638	13,107	18,830	18,926	133.7%
Budureasa	62,512	51,430	53,405	53,353	55,233	51,670	51,535	-17.6%
Bulz	52,592	5,760	9,040	15,177	16,560	46,984	42,902	-18.4%
Curatele	0	0	5,186	6,821	8,030	15,802	8,030	54.8%
Hidiselu de Sus	2,296	0	4,656	5,856	11,644	24,326	24,973	987.7%
Madaras	18,815	18,980	18,980	19,001	0	33,102	30,126	60.1%
Nojorid	0	0	0	5,124	5,110	5,110	5,096	1,074.2%
Osorhei	15,018	13,855	11,795	10,980	16,942	12,578	2,150	-85.7%
Pietroasa	0	4,600	9,125	11,779	9,030	26,008	32,588	608.4%
Pocola	0	0	0	4,620	0	0	0	-100.0%
Remetea	2,790	2,730	3,030	4,608	1,840	3,212	4,928	76.6%
Rosia	6,100	1,300	0	0	5,660	15,201	15,719	157.7%
Sanmartin	1,756,434	1,515,404	1,500,535	1,653,758	1,450,898	1,747,816	1,899,111	8.1%
.Santandrei	0	0	0	2,920	11,608	11,076	0	-100.0%
Sarbi	0	0	14,906	14,640	24,496	23,570	24,084	61.6%
Soimi	1,800	0	0	0	0	0	0	-100.0%
Suncuius	21,100	15,268	19,596	21,852	22,351	57,827	53,455	153.3%
Tinca	53,084	50,050	14,000	25,060	23,540	0	0	-100.0%
Vadu Crisului	1,612	0	0	4,066	4,066	6,935	6,656	312.9%

**Table 41:** The evolution of the tourist accommodation capacity in operation in the territorial administrative units from Bihor County 2020

**Source:** NIS

By types of tourist accommodation structures, the highest increase was registered by structures such as agritourism pensions (over 1,600%). This increase was mainly registered in the communes of the county, which suggests that in the rural area of the county there is the potential for the development of this type of tourism.

Spectacular increases are also noticeable in the case of structures such as hostels (928%), tourist cottages (646%), tourist pensions (535%) and apartment hotels (253%). On the other hand, the other structures registered modest increases or decreased the capacity of tourist accommodation in operation. It is noted that 2 types of structures have disappeared from the county, namely inns and bungalows. These structures have disappeared from 3 communes of the county, of which 2 have registered considerable increases in the case of agritourism pensions.

Regarding the average total annual growth registered at the county level (3.2%), it is below the one registered at the national level (3.8%). A considerable decrease in the tourist accommodation capacity in operation at the county level was registered in 2009, most likely against the background of the economic crisis.

### Arrivals of tourists in structures of tourist reception by types of structures

The number of tourists staying in the tourist accommodation units includes all persons (Romanians and foreigners) who travel outside the localities where they have their permanent residence, for a period of less than 12 months and stay at least one night in an tourism accommodation unit in visited areas of the country; the main reason for the trip is other than to carry out a paid activity in the places visited (INS).

As expected, the evolution of tourist arrivals at the level of territorial administrative units reflects the evolution of tourist accommodation capacity. Thus, at the level of the urban area, the evolution of arrivals is, in general, a positive one. The highest increase is recorded in Nucet (21.406%), followed by Beiuș (1.137%), Oradea (255%) and Salonta (349%).

At the level of the rural area, the evolution of tourist arrivals is not uniform. A small number of communes in the county registered considerable increases, namely Hidișelu de Sus (2.636%), Nojorid (1,844%), Roșia (1,229%), Vadu Crișului (807%) and Pietroasa (716%). These increases were recorded exclusively in the case of structures such as agritourism pensions. Although, in general, the communes in the county registered modest increases in tourist arrivals, a small number of communes is notable for the lack of tourist arrivals at the end of the analyzed period. Thus, the communes: Ținca, Șoimi, Sântandrei and Pocola registered decreases of 100% in the case of this indicator.

Places	2008	2009	2010	2012	2015	2016	2018	2019	increase/ decrease 2008 - 2019
Oradea municipality	66,630	63,920	71,388	110,900	163,416	190,022	250,395	236,793	255.4%
Beiuș municipality	59	0	0	53	265	1,095	969	730	1,137.3%
Marghita municipality	5,171	3,370	3,886	4,343	4,536	5,093	5,950	6,094	17.8%
Salonta municipality	0	136	474	490	678	2,419	783	610	348.5%
Aleșd city	0	0	0	0	1,372	618	674	858	-37.5%
Nucet city	50	264	1,336	1,992	1,164	1,716	10,865	10,753	21,406.0%
Săcueni city	1,027	639	23	0	0	0	609	295	-71.3%
Ștei city	1,436	1,353	137	0	195	264	0	0	-100.0%
Valea lui Mihai city	168	191	175	182	0	0	301	470	179.8%
Biharia	0	1,706	996	793	1,073	925	2,384	3,707	117.3%
Borș	9,952	8,033	8,606	6,371	6,228	6,947	18,418	24,382	145.0%
Bratca	500	483	557	420	393	1,111	1,023	836	67.2%

Places	2008	2009	2010	2012	2015	2016	2018	2019	increase/ decrease 2008 - 2019
Budureasa	5,851	3,022	3,230	3,967	3,447	3,835	5,883	4,302	-26.5%
Bulz	1,119	470	265	1,258	1,749	2,067	5,382	4,324	286.4%
Curatele	0	0	135	131	429	446	1,118	511	278.5%
Hidiselu De Sus	99	0	305	592	1,156	2,565	2,602	2,709	2,636.4%
Madaras	3,225	1,832	1,673	2,211	0	0	2,697	1,999	-38.0%
Nojorid	0	0	0	537	439	637	732	700	1,844.4%
Osorhei	1,545	1,062	1,451	1,203	3,575	3,159	412	61	-96.1%
Pietroasa	0	283	463	1,196	526	99	2,145	2,309	715.9%
Pocola	0	0	0	807	0	0	0	0	-100.0%
Remetea	395	484	276	237	227	144	707	312	-21.0%
Rosia	200	115	0	0	505	778	1,969	2,657	1,228.5%
Sanmartin	127,072	110,017	94,813	125,044	144,862	177,204	222,894	224,336	76.5%
Santandrei	0	0	0	68	352	527	203	0	-100.0%
Sarbi	0	0	1,563	1,700	2,961	3,212	3,552	3,803	143.3%
Soimi	120	0	0	0	0	0	0	0	-100.0%
Suncuius	1,295	1,923	869	1,443	1,372	3,469	3,091	2,928	126.1%
Tinca	1,172	1,037	508	1,087	1,160	1,032	0	0	-100.0%
Vadu Crisului	70	0	0	117	177	402	500	635	807.1%

**Table 42:** Evolution of tourist arrivals in tourist accommodation structures in the territorial administrative units in Bihor County between 2008-2019

**Source:** NIS

On the types of reception structures, there is a considerable increase in the arrival of tourists in agritourism guesthouses. Thus, at their level there was the largest increase in tourist arrivals (1,547%). The other types of structures in which there is a spectacular increase, in the order of growth, are: tourist pensions (998%), apartment hotels (583%), tourist cottages (335%) and hostels (208%).

Regarding the total evolution of tourist arrivals at the county level, there is a decrease in 2009 and 2010, a decrease that is also recorded at the national level, which suggests that this is explained by the economic crisis of 2008. However, since with the year 2011 there is, in general, a positive evolution of this indicator. It should be mentioned that, at the level of this indicator, the average annual growth at the county level (8.8%) exceeds that at the national level (6.2%).

### Occupancy rate of tourist accommodation structures

The occupancy rate of the structures measures the level of efficiency of the use of tourist accommodation structures. The indicator is measured by reporting the number of nights spent in the tourist accommodation capacity in operation. Thus, the higher the occupancy rate (closer to 100%), the more efficiently the accommodation units are used, respectively according to their destination.

It is noted that the evolution of this indicator at the level of territorial administrative units in the county is different from the evolution of other indicators. Thus, although there were localities that

recorded spectacular increases in the number of overnight stays and the tourist accommodation capacity in operation (eg. the town of Nucet, Hidişelu de Sus, Nojorid, Pietroasa), these increases did not translate into a substantial increase in the efficiency of tourist accommodation structures.

Both at urban and rural level, the evolution of this indicator is positive. However, on average, rural communities recorded higher percentage increases (19.3%) compared to those in urban areas (14.2%). At the urban level the highest increase was registered at the level of the county seat municipality, while at the rural level the highest increase was registered by the Sânmartin commune, which registered increases at the level of all the existing accommodation structures at the commune level.

Places	2008	2009	2010	2012	2014	2016	2017	2018	2019	Mean of period
Oradea municipality	35.4%	27.3%	26.8%	24.9%	32.2%	37.2%	35.8%	42.2%	43.1%	32.7%
Beiuş municipality	13.1%	0.0%	0.0%	1.8%	0.0%	26.2%	25.0%	12.0%	14.3%	9.5%
Marghita municipality	23.2%	21.1%	18.1%	19.4%	15.6%	13.5%	18.4%	22.7%	21.3%	19.1%
Salonta municipality	0.0%	12.4%	10.7%	11.2%	5.5%	32.9%	34.4%	27.0%	17.4%	16.8%
Aleşd city	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	6.8%	5.8%	8.1%	3.6%
Nucet city	2.6%	7.0%	13.4%	19.6%	8.0%	13.8%	17.9%	23.9%	26.4%	15.6%
Săcueni city	45.3%	25.2%	2.8%	0.0%	0.0%	0.0%	0.0%	28.6%	36.2%	11.5%
Ştei city	28.0%	22.7%	7.5%	0.0%	0.0%	6.1%	5.7%	0.0%	0.0%	7.0%
Valea Lui Mihai city	27.4%	27.1%	13.5%	10.1%	0.0%	0.0%	0.0%	20.0%	30.8%	11.7%
Biharia	0.0%	11.7%	6.9%	5.6%	9.1%	7.6%	14.4%	10.7%	18.0%	9.6%
Borş	19.7%	18.6%	15.5%	20.8%	17.9%	22.6%	24.4%	36.0%	42.9%	23.2%
Bratca	23.5%	62.1%	25.0%	9.8%	6.0%	7.4%	6.9%	12.2%	12.2%	16.0%
Budureasa	23.0%	13.1%	14.5%	16.7%	10.1%	16.0%	14.8%	23.0%	19.8%	16.3%
Bulz	6.8%	45.0%	11.6%	18.0%	18.9%	22.7%	23.6%	21.6%	20.0%	20.6%
Curatele	0.0%	0.0%	9.8%	7.8%	4.9%	15.0%	10.7%	17.0%	16.6%	9.4%
Hidişelu De Sus	8.4%	0.0%	10.0%	17.2%	39.0%	25.6%	18.4%	23.9%	27.1%	18.7%
Madaras	34.4%	34.2%	27.6%	23.6%	18.7%	0.0%	12.9%	13.1%	11.8%	19.1%
Nojorid	0.0%	0.0%	0.0%	17.1%	29.1%	13.7%	13.6%	14.4%	13.7%	11.0%
Osorhei	10.9%	8.7%	13.9%	11.7%	15.9%	21.5%	4.9%	4.2%	6.2%	11.3%
Pietroasa	0.0%	9.9%	10.9%	19.0%	14.6%	9.6%	23.2%	25.7%	17.7%	14.9%
Pocola	0.0%	0.0%	0.0%	22.5%	26.4%	0.0%	12.6%	0.0%	0.0%	8.6%
Remetea	37.9%	29.0%	18.0%	11.9%	12.9%	18.4%	12.9%	44.7%	15.6%	22.6%
Rosia	3.3%	23.7%	0.0%	0.0%	46.1%	37.6%	44.4%	27.0%	29.6%	19.8%
Sanmartin	52.2%	53.4%	46.5%	47.5%	52.4%	52.9%	45.7%	51.9%	52.3%	49.8%
Santandrei	0.0%	0.0%	0.0%	5.4%	0.0%	64.8%	2.8%	14.4%	0.0%	9.3%
Sarbi	0.0%	0.0%	36.2%	52.4%	72.8%	51.1%	64.4%	68.9%	73.2%	47.6%
Soimi	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%
Suncuius	25.6%	42.5%	10.3%	15.1%	8.8%	13.3%	10.1%	12.7%	14.1%	16.3%
Tinca	36.2%	42.8%	62.9%	67.0%	48.2%	34.7%	29.4%	0.0%	0.0%	42.3%
Vadu Crislui	13.0%	0.0%	0.0%	6.3%	8.8%	17.9%	18.0%	32.2%	26.4%	12.9%

**Table 43:** Occupancy rate of tourist accommodation structures in the territorial administrative units in Bihor County between 2008-2019

**Source:** NIS

By types of structures, the most efficient structures are those of the hotel type, followed by hostels and tourist villas. It is important to note that although the agritourism pensions have registered the most

significant increases, both in terms of accommodation capacity and overnight stays, the average occupancy rate is below that of other types of accommodation structures.

At the total level of the county, the annual occupancy rate and on average of the period is above the one registered at national level, the differences being considerable. Thus, the average occupancy rate at the county level is 40.4%. while at the national level it reaches 29%.

### Number of employees

At the total level of the county, the evolution of the average number of employees in the field of *Hotels and other accommodation facilities* is a positive one. Thus, the number of employees in this field increased by 18.3% in 2018, compared to 2008. The number of employees decreased in 2009, most likely due to the economic crisis, but subsequently recorded a relatively steady increase.

Although in general the evolution is a positive one, at the level of the territorial administrative units there is a high number of communities that have registered a negative evolution. At the level of the urban environment, the highest percentage increase was registered by the city of Nucet and Ștei (500%). being followed by the municipality of Salonta (144%) and the municipality of Beiuș (136%). On the other hand, the largest decreases were recorded in the cities of Săcuieni and Aleșd, as well as in the case of Marghita. It is noted that in Oradea there was a decrease in 2018 compared to 2008, although previously the average number of employees had an increasing trend. At the level of the communes in the county, the highest percentage increases were registered in the Serbian communes (300%) Șuncuiuș (200%), and the highest increase in absolute figures was registered by the Sânmartin commune (298 persons).

Places	2008	2009	2010	2012	2014	2015	2016	2017	2018	increase/ decrease 2008 - 2018
Beiuș municipality	11	17	21	19	17	11	16	16	26	136.4%
Marghita municipality	23	20	27	29	26	23	17	24	16	-30.4%
Oradea municipality	570	514	553	662	615	702	629	665	519	-8.9%
Salonta municipality	9	3	3	26	19	34	31	36	22	144.4%
Aleșd city	29	29	31	6	18	14	14	14	12	-58.6%
Nucet city	1	2	15	14	4	4	6	5	6	500.0%
Săcuieni city	0	1	1	2	1	1	0	0	0	-100.0%
Ștei city	0	3	2	3	3	2	3	4	18	500.0%
Valea Lui Mihai city	0	0	0	0	14	15	20	16	15	7.1%
Biharia commune	2	3	3	8	8	8	4	4	3	50.0%
Borș commune	34	37	32	34	32	35	35	37	45	32.4%
Bratca commune	1	1	0	4	2	2	3	2	1	0.0%
Budureasa commune	4	3	3	22	4	2	1	1	1	-75.0%
Bulz commune	1	0	0	7	7	10	15	28	0	-100.0%
Curățele commune	1	0	0	1	1	0	1	1	1	0.0%
Hidișelu De Sus commune	7	9	7	4	3	3	4	4	3	-57.1%
Mădăras commune	15	12	13	16	15	11	8	11	9	-40.0%
Nojorid commune	44	39	28	53	66	57	75	76	84	90.9%
Oșorhei commune	15	15	14	13	14	15	13	15	11	-26.7%
Pietroasa commune	6	4	2	3	2	3	3	4	3	-50.0%
Pocola commune	0	0	0	0	0	5	4	0	0	-100.0%
Remetea commune	0	0	0	0	0	0	0	1	2	100.0%

Places	2008	2009	2010	2012	2014	2015	2016	2017	2018	increase/ decrease 2008 - 2018
Roşia commune	0	0	0	0	0	0	0	0	1	0.0%
Sânmartin commune	980	948	964	832	870	1,004	1,287	1,246	1,271	29.7%
Sântandrei commune	0	0	0	1	1	0	0	5	0	-100.0%
Sârbi commune	1	1	1	1	1	4	3	4	4	300.0%
Şuncuiuş commune	5	4	5	6	8	16	16	16	15	200.0%
Tinca commune	0	0	0	0	0	0	0	0	2	0.0%
Vadu Crişului commune	25	22	16	26	21	19	21	17	21	-16.0%
Total	1,784	1,687	1,741	1,792	1,772	2,000	2,229	2,252	2,111	18.3%

**Table 44:** Evolution of the average number of employees in the field of Hotels and other tourist accommodation facilities in the territorial administrative units in Bihor County between 2008-2018

Source: NIS

### Turnover

In the case of turnover, the values were updated with the inflation rate/consumer price index, the base year being 2008. At the county level, the real turnover in the field of *Hotels and other accommodation facilities* increased by 53% in 2018, compared with the year 2008. In the case of the urban environment, the evolution is generally a positive one, the highest percentage increases being registered in the case of Ştei City (3,970.3%) and of Salonta (509%) and Beiuş (325%) municipalities. It is noted that in Oradea the evolution is a positive one, although the number of employees has decreased, which suggests an increase in the productivity of employees in this field.

At the level of the communes in the county, the evolution is also generally positive. The highest percentage increases in turnover were registered by the communes of Şuncuiuş (525%), Sârbi (412%) and the commune of Hidişelu De Sus (203%). In absolute terms, the highest increase was recorded by the commune of Sânmartin.

Places	2008	2009	2010	2012	2015	2018	increase/ decrease 2008 - 2019
Beiuş municipality	367,707	726,100	632,713	804,914	690,563	1,563,020	325.1%
Marghita municipality	1,281,201	813,842	859,224	1,198,159	808,620	953,126	-25.6%
Oradea municipality	34,263,450	28,511,797	34,802,455	54,063,965	57,457,421	43,702,931	27.5%
Salonta municipality	260,985	35,880	12,724	1,145,371	1,379,715	1,588,700	508.7%
Aleşd city	1,814,827	3,752,013	6,124,967	3,019,524	636,559	584,571	-67.8%
Nucet city	104,097	72,760	1,620,170	1,174,719	199,138	322,866	210.2%
Săcueni city	0	90,249	179,119	42,784	19,107	272,880	202.4%
Ştei city	14,961	106,542	89,826	62,309	85,678	608,959	3970.3%
Valea Lui Mihai city	0	0	0	0	276,196	382,795	85.5%
Biharia commune	0	368,256	339,764	582,405	1,116,512	524,836	42.5%
Borş commune	1,800,488	2,692,966	1,392,800	1,282,215	1,347,238	2,480,890	37.8%
Bratca commune	174,695	91,644	0	112,522	13,342	37,270	-78.7%
Budureasa commune	231,660	518,989	1,136,836	1,549,367	150,385	17,979	-92.2%
Bulz commune	0	0	0	346,736	496,632	0	-100.0%

Places	2008	2009	2010	2012	2015	2018	increase/ decrease 2008 - 2019
Curățele commune	55,854	0	0	204,934	0	62,706	12.3%
Hidișelu De Sus commune	145,270	294,789	266,653	447,488	228,120	439,423	202.5%
Mădăras commune	654,517	591,299	415,362	447,653	764,733	536,862	-18.0%
Nojorid commune	4,502,089	3,753,451	2,998,681	6,176,878	6,389,645	8,891,822	97.5%
Oșorhei commune	337,948	253,827	231,218	249,730	485,572	801,261	137.1%
Pietroasa commune	355,005	165,003	482,469	111,000	46,733	129,571	-63.5%
Pocola commune	0	0	0	0	146,883	0	-100.0%
Remetea commune	0	0	0	0	0	53,793	179.6%
Roșia commune	0	0	0	0	0	0	0.0%
Sânmartin commune	66,707,265	57,444,624	49,400,647	47,750,257	63,464,347	108,347,006	62.4%
Sântandrei commune	0	0	0	0	0	2,246	-64.3%
Sârbi commune	0	0	0	44,468	235,573	227,826	412.3%
Șuncuiuș commune	178,395	200,914	310,413	777,041	1,020,535	1,115,149	525.1%
Tinca commune	0	0	0	0	0	19,991	2,451.7%
Vadu Crișului commune	1,649,550	940,779	537,885	757,590	792,736	2,170,933	31.6%
Total	114,899,964	101,425,727	101,833,928	122,352,030	138,251,984	175,839,413	53.0%

**Table 45:** Evolution of turnover in the field of Hotels and other tourist accommodation facilities in the territorial administrative units in Bihor County between 2008-2018

Source: NIS

### Strategic perspectives and SWOT analysis

#### SWOT analysis

Strong points	Weak points
<ul style="list-style-type: none"> <li>● Correlation of several types of tourism due to accessibility and proximity;</li> <li>● The good condition of the patrimony objectives and of the entire urban area rebuilt and modernized in the central area of Oradea;</li> <li>● Important thermal water resources;</li> <li>● The quality (including curative) of the thermal waters;</li> <li>● High potential for adventure tourism (speotourism, mountaineering, mountain biking), winter sports, water sports (rafting);</li> <li>● High accessibility from Hungary and other Central European countries;</li> <li>● Very good accessibility by road (E60, E71, E79), railway and aeronautics;</li> </ul>	<ul style="list-style-type: none"> <li>● Reduced coordination/synchronization between authorities and tourism operators in order to capitalize on the tourist potential;</li> <li>● Outdated technological and digital infrastructure for the promotion of tourist areas (old-fashioned, outdated websites);</li> <li>● Sources of information scattered through materials and web pages of low quality and/or that present punctual information;</li> <li>● Insufficient coordination and an integrated approach in the design and development of complex tourism packages;</li> <li>● Insufficient tourist reception structures and related services in the mountain area;</li> </ul>


<ul style="list-style-type: none"> <li>● Recent investments in road infrastructure, which have increased the degree of accessibility within the county;</li> <li>● Significant tourist accommodation capacity and with an increasing growth trend;</li> <li>● Positive evolutions of the number of arrivals and overnight stays of tourists in the structures of tourist reception;</li> <li>● The growth trend of the turnover, the number of employees and the profit in the tourism sector.</li> </ul>	<ul style="list-style-type: none"> <li>● Poor development of common use infrastructures and related tourist services, which limits the quality and revenues generated from tourism, especially in the Băile Felix / 1 Mai area;</li> <li>● Limited alternative transport solutions (public transport, bicycle lanes, etc.);</li> <li>● Reduced capacity to mitigate and prevent the negative impact of tourism (proliferation of waste, etc.).</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>● Increasing interest in spa tourism;</li> <li>● Carried out and complied with an urban planning regulation and environmental protection by all the ATUs in the county that have tourist objectives and accommodation units;</li> <li>● Belonging to the Oradea Metropolitan area;</li> <li>● Existence of government programs and European funding to support investments in the field of rehabilitation and expansion of water networks, sewerage and wastewater treatment;</li> <li>● Potential to attract international tourists by modernizing the airport;</li> <li>● Modernization and expansion of the airport;</li> <li>● Completion of the Borş-Braşov Highway.</li> </ul>	<ul style="list-style-type: none"> <li>● Growing competition from other areas with tourist potential in Romania (eg. neighboring counties, Banat Mountains, other spas in the west of the country, etc.);</li> <li>● Increased risk of degradation of the natural environment by intensifying the flow of tourists, in the absence of municipal services and an increased capacity of the bodies that ensure prevention and control;</li> <li>● Insufficient and unskilled human resources.</li> </ul>

## Conclusions and strategic perspectives regarding the tourist sector in Bihor County

The main conclusions resulting from the analysis of tourism at the general level of Bihor County and at the level of territorial administrative units in the county are:

- An important challenge for the Bihor County Council is related to the design and promotion, in an integrated manner, of the main areas of tourist interest in the county.
- There was insufficient coordination and experience of working in partnership both at the sector level, on the part of economic agents, and in terms of involvement and collaboration between/with local authorities.
- Accessibility to the main areas of tourist interest has improved in recent years, a notable example being the modernization of the access road to the Padis Plateau.
- There is still a great need for investment in both major infrastructures to expand the tourist attraction (for example by modernizing the airport to access foreign markets or rehabilitating DN76 to facilitate access for tourists in the center of the country) and to enrich their experience in the visited area (local roads and access paths, new routes, markings and information panels, etc.).
- Continued investment in infrastructure, complementary to improving the quality and diversification of tourism services are absolutely necessary to support a greater influx of tourists in the future.

- An important need is related to urban planning and improving land management, both to unblock areas with potential for growth in tourism, and to prevent unsustainable real estate development and environmental degradation.
- The evolution of the existing tourist accommodation capacity was a positive one. At the level of the urban environment, the municipality of Oradea, the municipality of Beiuș and the city of Săcueni registered an increase of over 100% of this indicator. This increase is mainly explained by an increase in accommodation capacity in hotels and tourist boarding houses. At the level of rural communities, the positive trend registered was mainly due to the positive evolution of the tourist capacity in agritourism pensions.
- In general, the evolution of the accommodation capacity in operation has also experienced a positive trend, although at the level of the territorial administrative units the evolution is different from that of the previous indicator. The city of Nucet registered the highest increase, followed by the city of Aleșd and the municipality of Oradea, these increases being generated by structures such as hotels and hostels, structures such as agritourism pensions and tourist pensions. At the rural level, some communes have seen considerable increases, while a large part have seen significant decreases. The positive trend is given by a substantial increase in capacity in structures such as agritourism pensions, while the decreases are explained by the disappearance of structures such as bungalows and inns and a decrease in structures such as motels and student and preschool camps.
- The evolution of tourist arrivals reflects the evolution of tourist accommodation capacity. Thus, at the level of the urban area, the evolution of arrivals is generally positive, while at the level of the rural area, the evolution of tourist arrivals is not uniform. Thus, a small number of communes in the county registered considerable increases, due exclusively to structures such as agritourism pensions, while a small number of communes is noted by the lack of tourist arrivals at the end of the analyzed period.
- The evolution registered in the case of overnight stays in the structures of tourist reception is similar to the evolution of the other indicators presented. In urban communities, the evolution is generally positive, although there are considerable differences between the percentage increases recorded by municipalities and cities in the county. At the level of rural communities there are considerable differences between communes. Although some communes have seen spectacular increases, especially in structures such as agritourism pensions, some communes have seen considerable decreases.
- Measuring the level of efficiency of the use of tourist accommodation structures, it is noted that in the conditions of the increase of the other indicators, these increases did not translate into a substantial increase of the efficiency of the use of tourist accommodation structures. Surprisingly, rural communities recorded higher percentage increases (19.3%) compared to those in urban areas (14.2%).
- Regarding the number of employees, the turnover and the net profit in the field of *Hotels and other accommodation facilities*, there are significant differences between the territorial administrative units in the county. Thus, although a number of municipalities, cities and communes had a positive trend (e.g. Beiuș, Salonta, Nucet), some of them experienced considerable losses (e.g. Marghita, Budureasa, Bulz). Despite this fact, the evolution of these



indicators at the total level of the county is a positive one. There is also a higher increase in net profit compared to turnover, both at the county level and at the level of territorial administrative units. This suggests that the tourism sector has generally become more profitable.

# Bihor: Strategic Profile

## Strategic Concept

*(concept that focuses on the essence of strategic development)*

The strategic concept for Bihor County includes 2 dimensions: connectivity and accessibility, but understood in a broad sense. The particularly advantageous geographical location, at the western border of Romania, is the basis on which the administration and the community can build an intelligent development model, which values the role of Bihor County within an interconnected international network.

Bihor County should be seen as part of an international network of territories of different sizes, with different degrees of development, with differentiated access to resources of all kinds, territories overlapping different governance structures that are increasingly sophisticated, involving partnerships between relevant community stakeholders. Physical/geographical placement within this international network is critical, but equally important is the digital connection, which can reduce the physical barriers of time and space, cooperation with other public entities in multilevel governance, connecting the development priorities of the county to the context regional, national and supranational, etc.

At the strategic level, territorial cooperation, strengthening the institutional capacities of public authorities and economic and social actors are important, to use their untapped development potential and to address existing challenges at several levels: intra-county, intra-regional and interregional, including cross-border.

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## Strategic Risks

*(problems that, left unresolved, will strategically affect the development capacity of the county):*

1. Although the county's economy is relatively diversified, economic activity is concentrated in areas with medium to low value added and low wages. The loss of the county's industrial and mining base was not compensated by the development of new relevant sectors. This results in a number of issues related to withholding/attracting labor. The share of the knowledge-based economy (which also brings great added value) is low, with low-tech manufacturing and less knowledge-intensive services predominating.
2. There are large development discrepancies between the county center (Oradea Metropolitan Area) and the rest of it. The difference between urban-rural development and large urban-small urban development is significant and is able to negatively influence the future

development of the county community. Although urbanization indicators (population share in urban area, number of cities) for the county indicate a good placement in the regional context, most cities are small and very small with limited polarization capacity and as such are too little able to develop quickly and positively influence the adjacent areas.

3. Intra-county connectivity is a focal point and can negatively influence future development; also, the national and international connectivity (road, railway and air) is still sub-optimal, which affects a significant competitive advantage of the county, namely the geographical location.
4. Entrepreneurship is still underdeveloped, although it is essential in the development of a knowledge-based economy. The ICT sector is underdeveloped in terms of possibilities.
5. Insufficient use of existing university potential in the community. Although there is a local university, it is still insufficiently developed and not sufficiently connected with the local community to be able to stimulate economic, cultural, tourist development.
6. The county has a significant tourist potential, but insufficiently exploited. This is visible in the limited contribution of tourism as part of the local economy and in the limited development/promotion of some local products/services in an integrated model.
7. Migration of skilled labor (mainly for quality of life reasons) may severely limit future community development options.
8. Gaps in community cooperation; the strategic future of the community is not exclusively related to the action of the public administration, but depends on the capacity of local cooperation between the public, business, non-profit sectors.
9. Insufficient development of the non-profit sector with activities at county level, which limits the effectiveness of community development actions and increases the pressure on the public sector to solve community problems.
10. Problems related to quality of life: the county faces problems on various components related to quality of life - connectivity and mobility, cultural and leisure opportunities, income level, access to quality public services, etc. - and which may adversely affect future development.

## Sources of Competitive Advantage

*(elements that can provide an advantage over other communities that may represent relevant competitors):*

1. Geographical positioning. Bihor County can use this source to connect nationally and internationally and become part of a development flow that goes far beyond administrative boundaries. Connecting with developed urban areas in Romania and abroad, with major communication routes and international connection can offer major advantages in local development. Being placed at the western border can mean major opportunities in the development of the local economy, especially from the perspective of attracting foreign investors.
2. Administrative capacity - in recent years Oradea and Bihor County have benefited from an administrative leadership that has brought added value and built at national level the image

of an area with high potential. Certain examples of good practice targeting administrative capacity and local governance structures are recognized at national level, such as e.g. cooperation at the level of Oradea Metropolitan Area. This can be a strong source of competitive advantage, based on increasing administrative capacity throughout the local and county administration.

3. The high and diversified tourist potential can significantly contribute to the promotion and development of the county.
4. Multiculturalism and ethnic and religious diversity that can provide a positive environment for community development, if properly integrated into local public policies.
5. Cultural heritage and the development potential of culture and creative industries. Oradea mainly, but also the rest of the county, have a significant development capacity in the area of culture and creative industries. The conservation and integrated use of the built cultural heritage and existing cultural capacities can be a source of competitive advantage over similar communities.
6. The existence of an industrial and mining tradition which, even if it has diminished significantly, can help to develop new relevant economic areas (through specialized human resources, managerial experience, economic connections, etc.). This basis can also be used for the development of the entrepreneurial environment, small and medium business, sophisticated manufacturing, services and the knowledge-based economy (ICT, R&D).
7. The possibility of connecting the industrial tradition of some areas of the county with a major and integrated urban regeneration plan, which would offer these areas characteristics distinct from those of competitors.
8. The university environment - the development of the university and its organic connection with the development of the county community and not only can be an important element in the strategic development of the county. The existence of a successful university is an extremely important factor for smart urban communities, able to develop a knowledge-based economy and connect internationally.
9. The municipality of Oradea has an excellent image at national level and a very good potential for urban development able to act as an engine of local development for the county. Hence the need for permanent correlation of county strategies with those of the municipality and MA. The small urban in the county can transfer and adapt from the good practices already established at the level of Oradea municipality - e.g. conservation and capitalization of the built heritage and local specifics, renovation of urban physical infrastructure, etc.
10. Extremely rich natural environment, which includes a significant area of protected natural areas, top speleological objectives, vegetation and fauna, waters, thermal waters, etc.
11. Bihor has a high agricultural potential, and the development of a successful agriculture can have a significant impact on the local economy.

## Vision



Bihor has the perspective of a county with a competitive economy, able to capitalize on geographical positioning and internal and international connectivity, with a balanced urban-rural territorial development, with tourism that sustainably capitalizes on existing resources, with an increased quality of life, with a level of increased community cooperation, a successful education system and an active cultural life.

## Key Strategic Factors

*(factors that will influence the long-term and structural evolution of the community)*

1. Knowledge-based economy: the local capacity to develop an economy capable of generating high added value, involving highly qualified human resources and connecting with international trends in the economy of the future.
2. Quality of life: the local capacity to provide the level of the entire county (not only in the area of Oradea) a high quality of life, able to retain and attract specialized human resources. The permanent correlation of the indicators of quality of life at urban and rural level is important to avoid disparities that would negatively affect the strategic development of the county.
3. Tourism: the local ability to use existing resources efficiently, in an integrated and sustainable way and to turn them into a differentiating factor from competitors.
4. Entrepreneurship: the specificity of the county (the existence of an industrial tradition, the very high potential in tourism, international mobility of the population, geographical positioning/cross-border area) can be organically connected with the development of a dynamic, active and influential entrepreneurial environment. Entrepreneurship development can be a major element in terms of diversified economic development, based on innovative small and medium-sized businesses at the county level.
5. High administrative capacity, both at the level of the county administration and at the level of ATU: this can positively differentiate the county in relation to competitors facing administrative capacity issues, with direct effect in areas such as economic development, community attractiveness, cooperation at local level.

## Strategic Development Objectives\*:

*\* Note - At European level there is currently a significant and structured concern for the green (environmental or green pillar of sustainable development) and digital dimensions. These two priorities are taken over and integrated in the development strategy of Bihor County at the level of strategic development objectives from a transversal perspective. In other words, we believe that all the strategic objectives listed below must include the green and digital components, with specific applicability in each of these areas. For example, under the strategic objective of increasing the quality of life, we can discuss improving the living conditions of the population by encouraging green buildings and/or increasing energy efficiency through enveloping. The digital component should aim to integrate technology into the daily lives of citizens and businesses (for example, by moving as many public services as possible online or by creating and promoting participatory digital tools).*

1. Knowledge-based economic development;
2. Stimulating entrepreneurship (economic, social and cultural) at the local level;
3. Increasing the quality of life; It covers a complex set of dimensions of quality of life, both elements related to tangible dimensions that can be measured objectively (eg economic development) and elements related to the perception of residents such as access to quality public services, multiculturalism, safety, leisure, etc. The permanent correlation of the quality of life indicators at urban and rural level is important in order to avoid some disparities that would negatively affect the strategic development of the county;
4. Development of sustainable tourism based on local identity, heritage and inherited resources;
5. Development of the pre-university and university education system in relation to the strategic priorities of the county and to the market requirements;
6. Development of the cultural sector and creative industries in connection with the capitalization of cultural heritage;
7. Increasing the administrative capacity at the level of local administrations and county administration;
8. Balanced territorial development at county level (development must be coordinated and sustainable) by strengthening intra-county links between different communities (small urban - rural proximity; large urban - small urban; MA, etc.); creating/extending cooperation mechanisms such as those existing at the level of MA Oradea and other groups of communities in the county with potential common development objectives;
9. Increasing domestic and international connectivity (road, rail, airport, digital);
10. Sustainable development of rural areas in the county;
11. Conservation and improvement of environmental factors and adaptation to climate change.

# Objectives and Directions of Action

This section of the *Integrated Strategy for Sustainable Development of Bihor County 2021 - 2027* is correlated with the targets, objectives and priorities, directions of action and European, national and regional indicative actions, respectively with the *National Strategy for Sustainable Development of Romania 2030* and the *Northwest Regional Development Plan 2021 - 2027*.

## Transversal Objectives

1. The digital transformation of Bihor County in order to debureaucratize and streamline public services, increase resilience, sustainable development and increase the quality of life.
2. Civic participation and increasing the level of involvement, transparency and responsibility of all actors interested in the sustainable development of the county.
3. Sustainable development of the county in order to achieve the indicators related to the 17 sustainable development objectives developed by the UN (Sustainable Development Goals). Thus, by 2027 all municipalities and cities in Bihor County should be placed in the first two quartiles/parts of meeting these objectives while the localities currently placed in the lowest quartile should make progress for at least half of the 17 objectives, including Objective 11, which targets sustainable cities and communities.

*The possibility of achieving the specific objectives set in this strategy must be seen in the light of the legal framework, responsibilities, resources and tools that the Bihor County Council has at its disposal. It should be borne in mind that there are no subordination relations between the County Council and the local administrative-territorial authorities (municipalities, cities, communes). Also, the scope of activity of the County Council is limited to several areas: urban planning and landscaping, county roads, environment and monitoring of public utilities services, coordination of cultural units (libraries in general). In this context, in achieving certain specific objectives and targets proposed in the strategy, the Bihor County Council will have only a facilitator role, initiating the processes and coagulating the efforts of the actors responsible for implementing the measures and projects. Achieving the objectives therefore depends on the collaboration and involvement of other important actors, including: local administrative-territorial units/local public administrations in the county (municipalities, cities, communes), inter-community development associations, economic agents and their associations, NGOs, decentralized and decentralized structures.*

***Within the legal framework, respectively the attributions and competencies that the Bihor County Council has, the specific objectives that it assumes and for the fulfillment of which it has the necessary human, material and financial resources are the UNDERLINED ones. The other specific objectives, which are not underlined, are the development directions (targets) of Bihor County, to the achievement of which the Bihor County Council can indirectly contribute through specific indicative actions of support, facilitation and stimulation. These objectives are not explicitly assumed by certain actors in the target environments, and a multitude of actions and factors involved can contribute to achieving them.***

# Strategic Objectives

## 1. Knowledge-based economic development

### Justifying the objective

Although the economy of Bihor County is relatively diversified, economic activity is concentrated in areas with average to low value added and low wages, below the national average. This results in a number of problems related to the retention/attraction of the workforce, especially the highly qualified one. The share of the knowledge-based economy (which also brings great added value) is low, with low-tech manufacturing and less knowledge-intensive services predominating. Also, research and development (R&D) expenditures in Bihor are low compared to those of competitors such as Arad, Cluj and Timiș. The ICT sector is underdeveloped in terms of possibilities.

The focus on a knowledge-based economy implies a focus on developing an economy capable of generating high added value, involving highly skilled human resources and connecting with international trends in the economy of the future. Only a knowledge-based economy can ensure the competitiveness and sustainability of the local economy in the context of globalization and increasing pressures to reduce the negative impact of human activity on the environment. Efforts and investments should be focused on a limited number of key areas, namely those in which the county has competitive and comparative advantages, but at the same time are intensive in knowledge. In this sense, there is a need for intra and inter-sectoral cooperation, especially between the education system (pre-university and university) and the private environment, cooperation that can be facilitated by local and county administrations. Efforts must be focused on training and improving the workforce that is able to innovate and implement new technologies, and at the same time on facilitating the development and attraction of investments based on advanced technologies and knowledge.

The geographical positioning that allows the connection (physical, economic and digital) national and international of the county, as well as the existence of a university represent the sources of competitive advantage that the county has in pursuing this objective.

### Specific Objectives

Achieving these objectives depends largely on the economic environment, respectively on the private sector, Bihor County Council assuming the support of this sector and facilitating actions that contribute to achieving the specific objectives of the county.

- 1.1. The development of the high-tech industry and the increase of up to 7% of the share of employees and up to 14% of the turnover of the companies in the field until 2027, compared to 2019.
- 1.2. Development of knowledge-intensive services so that they generate over 8% of the total turnover and concentrate over 13% of the total number of employees of local companies by 2027.
- 1.3. Development of research and development activities by tripling compared to 2019 the expenditures allocated to this type of activities until 2027.

## **Directions of action**

### ***1.1 Supporting the innovation and implementation of the latest technologies by the business environment***

#### **Indicative actions:**

- Supporting investments in technological modernization and innovation activities of SMEs in the fields of smart specialization and other fields with a substantial contribution to the economic growth of the county;
- Supporting the development of collaborative innovation management structures (nursery of collaborative initiatives between RDI and enterprises, such as networks, innovation consortia/innovation hubs/DIH/resource centers/clusters) at county level;
- Supporting existing innovative firms, especially social innovators and firms with high growth potential;
- Supporting technology transfer centers/entities and innovation centers, in the fields of smart specialization;
- Supporting industrial research and/or experimental development activities;
- Facilitating technology transfer services, including by developing new types of technology transfer services related to the needs of the business environment, specialized business consulting or investments for the implementation of a research-innovation result in partnership between SMEs and ITT;
- Facilitating the digitization of micro-enterprises and SMEs;
- Facilitating the implementation by companies of innovative activities for the demonstration and verification of concepts regarding products, services, processes;
- Supporting training and specialization programs for company staff for the use of new production technologies, the acquisition of digital skills and competencies in the fields of smart specialization.

### ***1.2 Supporting the R&D sector for smart growth***

#### **Indicative actions:**

- Supporting the development of RDI infrastructure within public (universities, centers, research institutes, etc.) and private entities;
- Supporting research and innovation activities carried out both by research organizations (those within universities and independent ones such as the Oradea Agricultural Research and Development Station, etc.), and by enterprises;
- Supporting research and development activities carried out within public and private entities by RDI;
- Facilitating the development of cooperation platforms and supporting partnerships between research institutions, companies and public authorities;
- Stimulating the creation of economic entities based on the application of research results;
- Supporting the participation of RDI entities and companies in European Research programs;
- Supporting the development of science and technology parks;

- Supporting RDI staff training programs to adapt to the new skills required by technological development, including in areas of smart specialization.

### **1.3 Promotion and development of digital technologies**

#### **Indicative actions:**

- Supporting projects and activities aimed at increasing cyber security and interoperability;
- Supporting the digitization of universities so that they become “poles” of competences in the digital field, including through the creation and development of digital platforms, databases and virtual libraries, laboratories, technical equipment and equipment;
- Facilitating the digital transformation of SMEs by adopting digital technologies and tools that lead to business model innovation.

## **2. Entrepreneurship development (economic, social and cultural) at local level**

### **Justifying the objective**

Entrepreneurship is still underdeveloped at county level, although this element is essential in the development of a knowledge-based economy. There are very big differences in the density of enterprises in Oradea and in the other municipalities and cities of the county, some cities registering values below the level of many communes in Oradea MA. There are also large discrepancies between urban and rural areas in terms of business density. The entrepreneurial initiative, materialized in the established companies is problematic in many urban localities and in the communes outside Oradea MA.

The active participation of individual and associative units in economic activities is the key to the well-being of a community, through the activities of production, transmission of know-how, job creation, adding value to gross domestic product (GDP) and facilitating an environment in which entrepreneurs takes risks in developing new products and creating new markets. A high level of active entrepreneurial intensity is important for the economic life of the community, being generally associated with high incomes of employees, but also of local companies. A lively entrepreneurial environment allows the development of business relationships and the creation of agglomerations of skills, which reduces the efforts and costs of local companies in identifying and procuring resources. The high level of entrepreneurial intensity of an area is generally associated with an educated population and leads to a higher standard of living.

The industrial and mining tradition of some areas of the county, as well as the community identity can also be the basis for the development of the entrepreneurial ecosystem that can define the local economy and future development. The county can capitalize on strategic opportunities in this area, opportunities that connect organically with the use of existing natural resources.

The entrepreneurial environment needs to be strengthened, with new firms in need of support and support activities since its inception, with a need to strengthen market presence, increase access and funding opportunities, establish forms of collaboration at the ecosystem level and invest in product development and high value-added services.

## Specific Objectives

Achieving most of the specific objectives subsequent to this strategic objective depends primarily on the private environment, the Bihor County Council assuming the role of supporting, facilitating and stimulating the achievement of objectives through specific indicative actions.

- 2.1. Development of business support structures by setting up 5 new industrial parks in the county by 2027.
- 2.2. Development of the entrepreneurial ecosystem by operationalizing at least three structures for promoting and supporting entrepreneurship (business incubators, business accelerators, technology and science parks, innovation grants, project competitions, smart parks, etc.) in the county by 2027.
- 2.3. Development of the SME sector, development materialized in turnover higher by 30% (in nominal terms) and by 15% more employees in local SMEs by 2027, with a focus on the services sector. Achieving this goal aims to diversify the sources of potential growth and increase the resilience of the local economy.
- 2.4. Increasing the adaptability and resilience of the local economy by facilitating the digitization of business models and improving entrepreneurial indicators: increasing the number of start-ups by 10% and the density of enterprises by 7% by 2027.
- 2.5. Development of entrepreneurship in the field of social economy so that the number of certified/certified social enterprises will increase to 4 by 2027. Possible actions:
  - Supporting and financing the establishment of social enterprises at the county level (with the help of the non-governmental environment and the available non-reimbursable financing);
  - Facilitating training courses for social enterprise managers;
  - Promoting proposals for legislative changes to facilitate the process of establishment and operation.

## Directions of action

### ***2.1 Supporting the development of the entrepreneurial ecosystem, especially local micro and small enterprises***

#### **Indicative actions:**

- Supporting the expansion and development of local business support infrastructure: industrial parks, industrial areas, logistics platforms (including for agri-food products), clusters, business incubators, business centers, chambers of commerce, etc.;
- Supporting cooperation by supporting associative structures and stimulating business and technology links both nationally and internationally, supporting the internationalization of SMEs;

- Facilitating the establishment of companies in competitive fields at county, regional and national level;
- Supporting the development of existing companies and increasing their productivity, especially in areas with high added value;
- Supporting the creation/development of business support structures, including in rural areas;
- Supporting the development and implementation of new business models for SMEs;
- Facilitating the expansion and diversification of the range of services offered by business support structures (grant managers for enterprises and start-ups);
- Supporting the activity of clusters (with an emphasis on innovative ones) and other cooperation structures and networks as well as economic promotion activities;
- Facilitating SMEs' access to diversified and complementary financial instruments;
- Supporting entrepreneurial capacity development programs;
- Supporting investments in increasing the quality of human resources of local enterprises;
- Supporting the organization of specialized events (conferences, symposia, fairs, etc.).

### 3. Increasing the quality of life

#### Justifying the objective

Increasing the quality of life involves improving a wide range of services and living conditions that can be measured objectively (existence of jobs, income level, situation of public utilities, provision of educational and health services, etc.) and subjectively, based on the perception of residents regarding access and quality of public services, safety, leisure, shopping, etc. The permanent correlation of the indicators of quality of life at urban and rural level is important to avoid disparities that would negatively affect the strategic development of the county. The high quality of life presupposes the existence of health, educational, quality social assistance services, efficient and transparent local administration, which capitalize on the advantages of participatory governance, rich cultural life, sense of community security, various leisure opportunities. Increasing the quality of life is the basic condition in preserving educated human resources and attracting qualified human resources. Also, the permanent correlation of the indicators of quality of life at urban and rural level is important to avoid disparities that would negatively affect the strategic development of the county.

#### Specific objectives

Increasing the quality of life involves concrete projects and actions on several levels: standard of living, public services, public utilities, environment, leisure, etc. Consequently, the actors called to contribute to increasing the quality of life are also multiple: local public administrations, decentralized and decentralized structures of the central administration, NGOs, economic agents and residents. In this context, the Bihor County Council can assume only a few specific objectives that can contribute to a certain extent to increasing the quality of life in the county.

Apart from the technical-urban infrastructure, it is necessary to modernize, expand and adapt the infrastructure that serves the educational, medical, administrative, cultural, recreational and sports units in all urban localities and in the large communes of the county, not only in Oradea. In the

medical field, it is imperative to improve the accessibility of the inhabitants (not only of those in Oradea, but of those from the whole county) to the emergency medical services and permanent centers.

- 3.1. Reducing the existing discrepancies between urban and rural areas through investments in water and sewerage networks, natural gas distribution, electricity, etc. By 2027, the aim is to reduce to 5% of ATUs that are not connected to water networks, to 40% of ATUs that are not connected to sewerage networks, to 70% of ATUs that are not connected to gas networks.
- 3.2. Increasing the quality, functionality and accessibility of health infrastructure at county level by rehabilitating and modernizing existing infrastructure and/or creating new infrastructure by 2027 (including the development of telemedicine infrastructure) so that at least 70% of the county's residents are satisfied or very satisfied with the medical services.
- 3.3. Increasing the quality, functionality and accessibility of cultural infrastructure by rehabilitating and modernizing existing infrastructure and/or creating new units by 2027, so that at least 45% of the county's inhabitants are satisfied or very satisfied with cultural activities.
- 3.4. Increasing the quality, functionality and accessibility of infrastructure and social services by rehabilitating and modernizing existing infrastructure and/or creating new units by 2027, so that at least 50% of the county's residents are satisfied or very satisfied with social services.

The aim is to increase the quality of public services such as health, culture, sports, etc. by efficient use of resources and capitalizing on local potential. Measures must be considered to equip, endow, streamline and interconnect public services so that they respond better to the needs of the inhabitants, contributing to increasing their satisfaction.

- 3.5. Development of opportunities and leisure facilities in Oradea MA and in the urban localities in the county, so that at least 55% (compared to 43%, as in 2021) of the inhabitants to declare themselves satisfied or very satisfied with the recreation/leisure facilities free at county level until 2027.

In order to increase the quality of life and the level of satisfaction of the inhabitants, the organization and development of leisure facilities should be supported. Increasing the possibilities for recreation and leisure in the Oradea Metropolitan Area and in urban areas in the county facilitates the increase of local consumption and preservation of financial resources in the community, as an alternative to consumption "exported" to Cluj-Napoca, Timișoara, Arad or in localities from Hungary.

- 3.6. Development of the non-governmental sector in priority areas (social economy, culture, civic participation, education, environmental protection), by financing dedicated programs at county level with minimum annual allocations of at least 150.000 lei starting in 2023.

## Directions of action

### ***3.1 Supporting programs and projects for the extension and modernization of municipal networks (water, sewerage, natural gas distribution, electricity, fiber optics) and the connection of households to these networks***

#### **Indicative actions:**

- Prioritize ATUs where water, sewerage, and natural gas distribution networks are built so that they can be found in communities with a greater number of potential users willing to connect to these networks and use effective services;
- Facilitating by the County Council a dialogue between the operators of the utility networks and ATUs in order to optimize the tariffs so that the users can afford the costs related to these services;
- Supporting programs and projects for the extension and modernization of water supply, sewerage, natural gas supply, electricity, fiber optic networks;
- Supporting programs and projects for energy efficiency of public lighting;
- Supporting the establishment of photovoltaic power plants for electricity production;
- Supporting projects and actions for the rehabilitation and extension of stormwater collection systems.

### ***3.2 Increasing the quality, functionality and accessibility of medical and health infrastructure and related services***

#### **Indicative actions:**

- Construction/creation of new medical facilities/Renovation of the facilities of existing health units and improvement of the related medical and non-medical technical infrastructure, so that they become more efficient and effective, greener and digitized;
- Supporting activities that help prevent the formation of diseases: campaigns to promote a healthy lifestyle (diet, exercise, proper daily activity, etc.), discouraging harmful habits, awareness of the effects of addiction and conducting educational events for children (sports, etc.), screening;
- Supporting the measures of education/professional training of the human resources in the sanitary field and of the quality of the services offered to the beneficiaries;
- Supporting the involvement of private actors and non-governmental or denominational organizations in the development and direct provision of medical/related services or in partnership with public institutions;
- Supporting / coordinating the realization of a hospital medical consortium between the actors in the field.

### ***3.3 Increasing the quality, functionality and accessibility of social infrastructure and services***

#### **Indicative actions:**

- Construction of new facilities and/or renovation of existing social assistance units and related infrastructure (so that they become greener and digitized);

- Supporting the continuous development and improvement of public, private and / or non-governmental services/entities that provide medical, social assistance services to the community;
- Supporting the construction/arrangement of a business incubator for people from disadvantaged backgrounds;
- Supporting the construction/arrangement of an Emergency Social Center for homeless people;
- Supporting the arrangement of accommodation and canteen spaces for children from disadvantaged backgrounds;
- Supporting the construction/arrangement of sheltered housing for people with mental disabilities;
- Supporting the construction/arrangement of a Residential Center for the elderly;
- Supporting the construction/arrangement of a day center for people with disabilities;
- Supporting the construction/arrangement of a Day Center for young people with social problems (food and educational activities after lunch);
- Supporting the construction/arrangement of a Care Center for people with chronic diseases or with acute diseases with prolonged or terminal care;
- Support and development of home care services;
- Supporting rural community assistance services;
- Organizing or supporting the organization of social events - the day of the elderly, Christmas - New Year's Eve for the elderly and disadvantaged people;
- Organizing awareness programs for people with addictions;
- Supporting the activity of non-governmental organizations in the social field through funding programs;
- Supporting training and professional qualification projects for the population from disadvantaged areas and vocational retraining;
- Facilitating the professional development of human resources in the field of social assistance and the quality of services provided to beneficiaries;
- Supporting the involvement of private actors and non-governmental or denominational organizations in the direct provision of social services or in partnership with public institutions.

### ***3.4 Development of opportunities and facilities for recreation and leisure***

#### **Indicative actions:**

- Supporting the renovation and development of infrastructure elements with recreational and leisure functions (parks, markets, sports fields, etc.) so that they become greener, digitized and attractive;
- Supporting the continuous development and improvement of public, private and/or non-governmental services/entities that provide the community with recreational and leisure services within the community;
- Supporting the construction of multifunctional community centers;

- Supporting the construction of fitness centers/physical activities in the communities in the county;
- Supporting the construction, arrangement, renovation of structures aimed at organizing camps for children;
- Supporting the involvement of private actors and non-governmental or denominational organizations in the direct provision of recreational services or in partnership with public institutions.

**Multisectoral and multi-domain indicative actions aimed at increasing the quality of life in the community:**

- *Analysis, monitoring and continuous improvement of quality of life indicators at county level (from infrastructure and utilities to access to cultural and sports events, healthy living, education and medical system, etc.);*
- *Promoting medical, cultural, recreational and leisure services outside the county in order to attract tourists and those who could settle in the community;*
- *Supporting the acquisition of land by local authorities for community purposes (supporting entrepreneurial activities, socio-cultural functions, sports and tourism functions);*
- *Supporting the development of the housing stock (housing block for young people for rent, housing block for specialists - health and education);*
- *Supporting the development of civil society, supporting the establishment of foundations and associations of citizens;*
- *Organizing community sports events;*
- *Organizing thematic socio-cultural events - balls, days of the elderly, etc.;*
- *Supporting mechanisms such as participatory budgeting or innovation fund through which community actors are involved in generating ideas for regeneration or temporary use of disused, currently underused or abandoned industrial spaces;*
- *Supporting the increase of the quality of public services such as health, culture, sports, etc. by supporting the measures of efficient use of resources and capitalizing on the local potential: equipping, endowment, efficiency, interconnection of public services so that they respond better to the needs of the inhabitants, contributing to the increase of their satisfaction;*
- *Supporting the measures of organization and development of leisure facilities, such as increasing the possibilities of recreation and leisure in the Oradea Metropolitan Area and in the urban localities of the county, thus facilitating the increase of local consumption and preservation of financial resources in the community, as an alternative to consumption "exported" to Cluj-Napoca, Timișoara, Arad or in localities in Hungary.*

#### 4. Development of sustainable tourism based on local identity, heritage and inherited resources

##### Justifying the objective

Bihor county has one of the largest and most diversified tourist potentials in the country; its tourist potential is concentrated in the extraordinary geothermal resources (currently exploited mainly at Băile Felix and 1 Mai) and in the biodiversity of the Apuseni Mountains. Bihor County has the resources that allow it to become a European regional hub of spa and treatment tourism, but also of mountain tourism, speleological and cultural tourism. The challenges of exploiting this potential are related to: promoting in an integrated way the main areas of tourist interest in the county, insufficient coordination and experience of working in partnership at sector level, the need to invest in major infrastructure, urban planning and improving land management, use sustainable use of geothermal water resources, both to unlock areas with potential for growth in tourism, and to prevent unsustainable real estate development and environmental degradation.

The development of the tourism sector and related economic sectors can be achieved by preserving, consolidating and promoting the specific local identity, capitalizing on the natural and anthropic potential of the county, modernizing and expanding tourism infrastructure, supporting cultural and recreational activities, ensuring skilled labor.

In communities that had industrial areas/industrial platforms and are no longer functional, urban tourism that can connect with the new concept of urban regeneration, the idea of industrial museum cities, in which former industrial areas/industrial platforms are converted into various spaces (cultural, economic, event, sports, adventure, family tourism, conference, exhibition, etc.). The reinvention of industrial platforms can be an important element for this field, and industrial tourism can successfully complete the diversified tourist offer of Bihor County by developing integrated programs, from tourist packages to transport and complementary offers.

In this context, it is necessary to develop a sustainable tourism, which fully exploits the geothermal potential and the natural environment, to access the non-reimbursable financial resources addressed to the sector, to attract more international and domestic tourists, but at the same time to not jeopardize the chance of future generations to enjoy these resources. However, the cooperation of all stakeholders is needed and the creation of a system capable of coherently using all tourist attractions (natural resources, urban and rural architectural heritage, gastronomic heritage, historical heritage, museographic heritage, intangible heritage including traditions, customs and crafts), through the development infrastructure, effective promotion and increasing the quality of human resources in the field.

### Specific objectives

4.1 Achieving a sectoral strategy for tourism development in Bihor County by 2023.

4.2 Creation or reorganization by 2023 of a body responsible for monitoring the performance of tourism in Bihor County, analysis of statistical data, as a catalyst for regional tourism.

4.3. Improving the system of urban planning and land management by creating by 2023 a framework to prevent unsustainable real estate development and environmental degradation in areas with tourism potential.

4.4 Creating a tourist brand of Bihor County until 2024.

4.5. 30% increase in the number of tourists by 2027, compared to 2019.

4.6 Increasing the efficiency of the use of tourist accommodation structures, respectively increasing the occupancy rate to 55% by 2027 (from 44.2% in 2019).

## Directions of action

### ***4.1 Supporting measures for the protection, conservation, restoration and sustainable use of the natural and anthropic tourist heritage of the county***

#### **Indicative actions:**

- Supporting the measures of protection, conservation, restoration and putting in the tourist circuit of the heritage objectives, of those included in the value groups A and B from the List of Historical Monuments (wooden churches, fortresses, fortified settlements, archeological sites, etc.);
- Supporting the rehabilitation of cultural sites/objectives in order to capitalize on tourism;
- Initiating and/or supporting the carrying out of scientific studies in the archaeological, historical and cultural field in order to identify new possibilities for the tourist capitalization of the afferent patrimony;
- Supporting actions and initiatives for the protection, conservation, consolidation and promotion of local identity;
- Supporting the actions of restoration and marking for tourist routes and mountaineering routes, creation of access roads, resting and camping places, arrangement of observation points, mountain refuges, etc.;
- Supporting the modernization and extension of the infrastructure for visiting the cultural tourist objectives in the localities with tourist potential;
- Facilitating the realization of a unitary, standardized and obligatory tourist signage for the areas with tourist potential or that benefit from tourism, in accordance with the national and European standards;
- Supporting investments and measures aimed at the sustainable use of thermal waters;
- Supporting investments and actions in the field of tourism in order to capitalize on the superior and sustainable potential of the county in this field;
- Equipping the Mountain Rescue Service - Salvaspeo Bihor with safety and rescue equipment and supporting its activity;
- Supporting the rehabilitation of existing treatment bases and the creation of new treatment bases in localities with spa and balneoclimatic potential;

- Supporting the modernization and extension of the technical-municipal infrastructure in the localities with spa and balneoclimatic potential;
- Supporting the modernization and expansion of leisure infrastructure in localities with spa and balneoclimatic potential;
- Initiating and/or supporting the carrying out of scientific studies in the spa field in order to establish on a scientific basis the complementary medical spa treatment;
- Supporting actions and investments aimed at highlighting the increased potential for winter sports (skiing, snowboarding, etc.);
- Supporting campaigns to promote the objectives and tourist attractions in the county;
- Supporting partnerships between tourism entities in the county and those in other countries such as Hungary, Austria, Germany, France, Poland, Belgium, Israel, Italy, UK, USA, etc.

#### ***4.2 Supporting the modernization and expansion of infrastructure (accommodation, leisure, etc.) and improving specific services***

##### **Indicative actions:**

- Supporting the modernization of the accommodation infrastructure;
- Facilitating the extension of the tourist reception infrastructure at the level of the tourist areas in which there is a deficit of accommodation spaces;
- Supporting measures for modernization, expansion and diversification of leisure infrastructure;
- Supporting measures to modernize and expand the tourist infrastructure for spa treatment and recovery;
- Supporting measures to modernize and expand the tourist infrastructure for youth (school camps, youth centers);
- Supporting the rehabilitation of cultural spaces (museums, exhibition spaces, theaters, performance halls, etc.);
- Supporting the development of SPA and wellness services;
- Supporting measures for the rehabilitation, creation and development of infrastructures for tourism based on artisanal and handicraft products, by creating presentation workshops.

#### ***4.3 Supporting actions that contribute to ensuring the skilled workforce in tourism***

##### **Indicative actions:**

- Supporting the improvement of initial vocational training programs at high school and university level in the field of tourism, including supporting the rehabilitation and modernization of educational infrastructure;
- Supporting the dual education system in the field of tourist services;
- Supporting continuous professional training activities in the field of tourism;

- Facilitating the implementation of unitary quality standards at the county level;
- Facilitating the certification and registration of traditional local products;
- Supporting vocational reconversion and encouraging the mobility of workers in tourism.

#### Complementary measures:

- *Supporting the implementation of a sectoral strategy for tourism development in Bihor County and the creation and promotion of a county tourism brand;*
- *Supporting niche tourism, developing tourism-related activities and integrating tourism activities;*
- *Development of the construction of basic infrastructure (parking lots, garbage bins, toilets, etc.) in the vicinity of tourist attractions;*
- *Supporting the capitalization and promotion of cultural heritage through cultural tourist routes: Cultural-tourist route of wooden churches, Route of cities, Route of gastronomy, Cultural route of wine, etc.;*
- *Supporting the forms of thematic tourism and those of alternative tourism;*
- *Supporting cultural tourism and its forms of manifestation;*
- *Supporting the integrated development of the network of tourist and cave tourism caves in Bihor County;*
- *Supporting measures for the development and promotion of local identity and eco-destinations in the county such as Țara Beiușului, Platoul Vașcău, Padiș, Codru Moma, Pădurea Craiului, Barcăul, etc.;*
- *Supporting the implementation of activities and projects aimed at the development of tourist, leisure and leisure areas in the county, including those provided in the Integrated Development Strategy of the Țara de Piatră Microregion;*
- *Supporting the promotion and information activities of the destination management organizations;*
- *Supporting the development of economic activities related to tourism;*
- *Stimulating the cooperation of local community actors to provide integrated tourism packages so that tourists have as wide a range of opportunities as possible and spend more time in the county;*
- *Supporting cultural and recreational activities and their integration in the tourist offer;*
- *Supporting research and innovation activities in the field of tourism and related fields;*
- *Offering support in order to connect and integrate the local potential (local craftsmen with the tourist offer);*
- *Supporting the development and continuous improvement of the selective waste collection system in the areas and areas visited by tourists;*
- *Taking measures to help reduce pollution of riverbeds and river banks such as: cleaning them, creating barriers to stop waste, video surveillance of areas where waste is illegally stored;*

- *Development of road access in mountain tourist areas with the least possible damage to existing ecosystems.*
- *Promoting medical, cultural, recreational and leisure services outside the county in order to attract tourists and those who may settle in the county;*
- *Coordination of promotion actions at regional level through the body responsible for monitoring the performance of tourism in Bihor County;*
- *Facilitating the development of the area of large corporate events - MICE segment (Meetings, Incentives, Conventions, Exhibitions) by developing a convention and conference center in Oradea;*
- *Supporting the development of the network of tourist information centers, especially the staff within them (hiring qualified staff qualification of staff);*
- *Construction/arrangement of bicycle lanes along some county roads;*
- *Creating/supporting the creation of a map of safe forest roads for hiking or cycling.*

## 5. Development of the pre-university and university education system in relation to the strategic priorities of the county and to the market requirements

### Justifying the objective

The existence of an efficient educational system, able to predict the evolution of the market and to prepare the qualified human resource for this evolution and for the local and regional needs represents the fundamental premise of the sustainable development of the county. This is because the existence of qualified human resources is the most important factor for attracting investors. Also, the educated human resource is a basic condition for the development of entrepreneurship, the entrepreneurial initiative being the prerogative of those educated and experienced in various economic fields.

The pre-university education system requires significant investments both in the material base and in the human resource. Teachers need to be prepared to use new teaching and learning methods, making the learning process attractive and useful for students. Those specializations for which graduates exist (or are estimated to exist) in market demand need to be developed, and existing ones, but not anchored in market requirements, need to be re-profiled.

The existence of the university environment in Oradea is a source of competitive advantage for the county. Performance universities are an extremely important factor for smart urban communities, able to develop a knowledge-based economy and connect internationally. The correlation of its curriculum with the market, as well as the close cooperation with the economic agents and with the local administrations are key elements in order to make the most of the university's existence in Oradea.

### Specific objectives

5.1. Construction of an Educational Hub in the county, in the next 4 years, bringing together stakeholders from the public, private and nonprofit sector and which can permanently stimulate actions in this area (investments in educational infrastructure, correlation with the specifics of the local economy, reducing disparities in the field education, stimulation of extracurricular and community activities, etc.).

5.2. Creating/operationalizing a center of excellence in the next 5 years, able to stimulate the skills and abilities necessary for the economy of the future.

5.3. Creation of 5 dual education programs in 5 high schools in the county until 2026.

5.4. Supporting the development of a functional system to stimulate the performance of pupils, students and teachers by 2024, an objective materialized in organizing at least one annual inter-school competition on priority areas at county level: knowledge-based economy, entrepreneurship, tourism, organized trades since 2024.

5.5. Digitization of schools in municipalities and cities in the county until 2027.

5.6. Development and modernization of the educational infrastructure by creating a school campus in the county by 2026.

5.7. Establishment by 2026 of a county center for school and professional guidance in order to facilitate the market insertion of graduates.

5.8. Digitization of the county library network until 2027.

## **Directions of action**

### ***5.1 Supporting the development and modernization of the educational infrastructure and the educational process in accordance with the current skills needs and requirements of the labor market***

#### **Indicative actions:**

- Supporting the construction of buildings for preschool and primary education including facilities;
- Supporting the endowment of local educational institutions and classrooms with appropriate high-performance furniture, machinery and equipment;
- Supporting the construction of nurseries;
- Facilitating the rehabilitation and modernization of boarding schools, dormitories, schools, kindergartens, etc.
- Facilitating the development and expansion of kindergarten capacity;
- Supporting the construction of playgrounds for children;
- Supporting the modernization of sports infrastructure within local schools;
- Supporting school transportation;
- Supporting the arrangement of an experience center/scientific playhouse.

### ***5.2 Facilitating the process of digitizing education***

#### **Indicative actions:**

- Starting a digital literacy program among the population and especially the vulnerable categories, in the next 2 years, with the involvement of communal libraries;
- Supporting mentoring and training programs in the IT field.

### ***5.3 Facilitating the process of increasing school performance***

#### **Indicative actions:**

- Supporting the 8% increase in the BAC pass rate in high schools in the county in the next 10 years;
- Supporting the 5% increase in the pass rate for the national evaluation in the schools in the county in the next 10 years;
- Facilitate the reduction of school dropout by 1% in the next 5 years, including by organizing campaigns against school dropout and early school leaving.

### ***5.4 Supporting the continuous increase of the quality of the educational act and the level of its adaptation to the market requirements***

#### **Indicative actions:**

- Facilitating supporting the partnership between educational institutions, economic agents/employers, chamber of commerce and industry and NGOs;
- Supporting the formalization of partnerships between the educational environment and the economic environment by encouraging dual education and the creation of classes in vocational fields and specializations where there is a shortage of labor at the county level;
- Supporting teachers' motivation by facilitating access to public services: free public transport, financial support for rent/rate;
- Encouraging the development of programs for the development of entrepreneurship among pupils and students;
- Financial support by piloting a project of financial support of a specialist in career counseling and guidance in each high school;
- Carrying out/supporting projects for training and professional qualification of the population and professional reconversion;
- Supporting after-school programs;
- Supporting training-improvement programs for teachers, including in the field of IT;
- Supporting the development of extracurricular programs (folk-artistic programs, civic education, literature, ecological education, etc.).

### ***5.6 Facilitating access to education for people from vulnerable categories. Reducing school dropout among them by using school retention tools such as scholarships, free school transportation, mentoring, etc.***

### ***5.7 Supporting adult participation in continuing education and the development of a lifelong learning system***

#### **Indicative actions:**

- Supporting lifelong learning programs (qualification and requalification) offered by public and private actors or in partnership, as a form of adaptation to the realities of a constantly changing economy and society.

**5.8 Supporting the increase of university quality and performance and the connection of the university to the labor market through actions/projects such as:**

**Indicative actions:**

- Carrying out a pilot project for awarding a minimum of innovation grants until 2026 for teachers, students, master's students or doctoral students who develop new products or services in collaboration with the business environment;
- Carrying out a pilot project for granting a minimum of research grants until 2026 for teachers, students, master's students or doctoral students who carry out research in priority areas for the county's economy in collaboration with academia and businesses.

**Complementary measures:**

- Supporting the increase of the quality and functionality of the infrastructure, equipment and endowments of all educational units by 2027, so as to reduce the number of students/class (maximum 25 students/class), to provide free public transport for all students, all classrooms digitized, modernized and re-equipped classes;
- Supporting measures to facilitate access to education in isolated areas and/or in those with a high risk of dropping out of school;
- Supporting the continuous increase of the quality of the educational act and of its level of adaptation to the market requirements by:
  - ☐ Facilitating/supporting the partnership between educational institutions, economic agents/employers and NGOs;
  - ☐ Supporting the formalization of partnerships between the educational environment and the economic environment by encouraging dual education and the creation of classes in professional fields and specializations where there is a shortage of labor force at county level;
  - ☐ Supporting teachers' motivation by facilitating access to public services: free public transport;
  - ☐ Facilitating the increase of the degree of possibility at the national evaluations (capacity, baccalaureate);
  - ☐ Financial support by piloting a project of financial support of a specialist in counseling and career guidance in each high school.

## 6. Development of cultural sector and creative industries in connection with valorization of cultural heritage

### Justifying the objective

The integrated use of the cultural heritage and the existing capacities in the cultural field, as well as the multicultural character of the county, can be sources of competitive advantage over similar communities. Bihor County has a vast cultural heritage consisting of: museums, theaters, archeological sites and monuments, architectural monuments and ensembles, memorial houses and fine art monuments, monasteries and places of worship, houses of culture, libraries, etc. To these are added the particularly rich intangible cultural heritage, consisting of customs and traditions, traditional cultural events, architecture, folk costumes and traditional crafts. An essential condition for increasing the quality of life is related to the ways of spending free time. The existing human capital can also value from an economic point of view the rich cultural heritage of the county, by facilitating and diversifying the ways of spending free time. Also, economic areas that highlight the creative and innovative potential of human resources can bring high added value to the local economy, thus contributing to increasing the income and purchasing power of the inhabitants. Bihor County Council plays a key role in achieving this strategic objective in terms of its responsibilities, respectively of the subordinate institution and which has general powers in coordinating, protecting and capitalizing on the cultural potential of the county, namely the County Center for Culture Conservation and Promotion Traditional Bihor.

### Specific objectives

6.1. Carrying out an inventory of the state of the cultural heritage in the county until 2024.

6.2. Encourage the development of the creative industries sector so that its share in the local economy reaches 5% of turnover and 7% of the total number of employees by 2026. This can be achieved through 2 types of measures:

- Active: project competitions, local development grants for companies, non-profit organizations and organizations in the cultural and creative industries;
- Passive: facilities related to the payment of local taxes and duties for companies and non-profit organizations that carry out activities in the field of creative industries;
- Competitive funding of cultural and creative activities carried out by non-governmental organizations.

### Directions of action

***6.1 Supporting the increase of the quality, functionality and accessibility of the cultural infrastructure and the capitalization of the inherited anthropic heritage***

#### Indicative actions:

- Renovation of cultural units and related infrastructure, digitization and increase of their energy efficiency;

- Supporting the protection, conservation and enhancement of the architectural and cultural heritage of the county/rehabilitation of heritage buildings (historical, cultural, industrial, mining, etc.);
- Supporting the development of innovative cultural infrastructure (e.g. multifunctional cultural spaces/hubs, libraries, communities, reading clubs, green impact clubs, etc.);
- Supporting cultural entrepreneurs and creative industries through creative business incubators or specific grants, especially in areas with high digital potential and low environmental impact;
- Supporting the renovation and rehabilitation of local Cultural Houses, especially those in rural areas;
- Supporting the rehabilitation and modernization of traditional houses, historical and religious monuments (including churches and monasteries) of local interest, the establishment of local museums, the introduction of "village/memorial" houses in the county cultural and tourist circuit;
- Supporting/sustaining traditional-confessional events in communes, organizing and developing "village and commune days" type events in rural areas;
- Facilitate the organization of events to present local traditions, crafts and customs;
- Supporting the professional development of human resources in the cultural field and the quality of services provided to beneficiaries;
- Supporting the involvement of private actors and non-governmental or denominational organizations in the direct provision of cultural services or in partnership with public institutions;
- Promoting an efficient management of cultural institutions (performance halls and concerts, museums) in order to increase the number of visitors/participants/auditors;
- Facilitate the use of disused industrial and mining spaces as a material resource in cultural/creative activities;
- Identifying rural areas that retain traditional characteristics and taking measures for their conservation/preservation and enhancement (including the authorization of changes to buildings and the construction of new buildings).

## 7. Increasing the administrative capacity and the degree of digitalization at the level of local administrations and county administration

### Justifying the objective

Increasing the administrative capacity and the level of digitalization within the County Council and supporting the same process in the local public administration institutions in Bihor County can positively differentiate the county in relation to competitors who face administrative capacity problems and a low degree of digitization, with effects directly in areas such as economic development, community attractiveness, local cooperation and citizen participation. The municipality of Oradea has an excellent image at national level and a very good potential for urban development able to act as an engine of local development for the county. There is a need for a permanent correlation of the county strategies with

those of the municipality and of the Oradea Metropolitan Area, the other municipalities, cities and communes. The cities in the county can take over and adapt the good practices already established at the level of Oradea municipality regarding the conservation and capitalization of the built heritage and the local specificity, renovation of urban physical infrastructure, etc. Digitization of processes and tools can increase efficiency, simplify, increase transparency and improve the activity of local and county public administration and its relationship with residents. At the same time, the digitization of the processes and tools used by the local and county administration creates the favorable framework for attracting investors, developing entrepreneurship, respectively developing the knowledge-based economy.

### Specific objectives

- 7.1. Implement a GIS system at county level to provide transactional digital services to citizens and companies by 2025.
- 7.2. Increase the percentage of urban documents submitted digitally from about 10% to over 40% by 2024, through a dedicated digital service.
- 7.3. Increasing the number of town halls in the county that use a digital document management system from 11 to 50 by 2025.
- 7.4. Enrollment of all town halls in the county in ghiseul.ro until 2025.
- 7.5. Continuous improvement of the digital competencies of the employees of the local public administration in the county, through the annual participation of at least 10% of the officials from the local public institutions in training courses (cyber security, digitization, GDPR, data analysis, etc.).

### Directions of action:

***7.1 Increase the administrative capacity of local public authorities to implement the principles of integrated urban development and support cooperation at the micro-regional level***

### Indicative actions:

- Facilitating the increase of human capacity within local public administrations in order to improve the urban planning process;
- Supporting the consolidation of the spatial planning tools of the county;
- Supporting the development and implementation of integrated urban development strategies (SIDU);
- Supporting the strengthening of the capacity of multi-level governance structures;
- Encouraging cooperation and diversification of forms of cooperation between local public administration structures;
- Facilitating the consolidation of institutions with a role in planning and managing the development processes of the territory;
- Supporting the elaboration and implementation of integrated territorial strategies at micro-regional level through the use of ITI type tools (integrated territorial investments);
- Developed and strengthened partnerships and inter-county collaboration agreements in order to solve problems common to neighboring and regional counties.

## **7.2 Assumption by the County Council of the leading role of the process of digitization of local public institutions, especially of town halls, and of coordination of the improvement of the digital infrastructure and the level of digital literacy**

### **Indicative actions:**

- Initiating projects to increase the level of digital literacy for civil servants and the general population (if possible, with the involvement of other interested community actors: private companies, chamber of commerce and industry, NGOs, schools, libraries);
- Supporting the continuous modernization of the ITC infrastructure (hardware and software) of the public administration institutions as well as of the buildings and spaces in which the public institutions carry out their activity;
- Involvement to increase the average speed of internet connection, both for fixed and mobile connections;
- Providing support for the enrollment of all ATUs in the county in ghiseul.ro, for the online payment of taxes, fees, notices, fines, etc.;
- Standardization at the level of all ATUs of data collection and storage and opening of data sets to the community (application of the open data principle);
- Standardization at the level of all ATUs in the county of the acquisition of digital products and services; the introduction in the specifications of the good practices regarding the ownership of the source code, the ownership of the data, the possibility of interconnection;
- Increasing the number of digital transactional services, offered both by the County Council and by supporting other local public institutions;
- Supporting the interconnection of all applications and databases, initially within the county council, and then between institutions in different localities until 2026;
- Supporting the increase of the quality and efficiency of public services, so that:
  - ☐ 60% of the interactions between citizens and public institutions in the county should be digitized by 2027;
  - ☐ the level of user satisfaction to be high or very high for at least 65% (compared to 56% in 2021) by 2027;
  - ☐ to be able to offer open data sets on a dedicated platform;
  - ☐ to be able to increase public participation in decision-making processes.
- Facilitating the implementation of a *single sign-on* system for citizens and companies and its gradual expansion throughout the county starting in 2023.

## **7.3 Facilitating inter-jurisdictional cooperation between the county's ATUs**

### **Indicative actions:**

- Financial support for projects carried out through IDAs, which will increase trust between the local authorities involved and lead to immediate results;
- Connecting with the local authorities in the OMA and encouraging them to think of a common vision for the development of the OMA connected to the county's priorities;

- Defining a set of local areas and issues by the Bihor County Council that can be resolved through inter-jurisdictional cooperation and supporting ATUs that want to partner for such an endeavor.

#### **7.4 Strengthen cross-border and international cooperation**

##### **Indicative actions:**

- Continuation of cross-border projects under implementation;
- Development and improvement of common public services in the cross-border area of the Bihor - Hajdú Bihar Euroregion in areas such as health, public safety, cross-border transport, public administration, etc.;
- Initiation, development and implementation of new projects and programs of cross-border cooperation;
- Expanding, consolidating and capitalizing on existing partnerships with those sister communities in other countries of the world;
- Supporting actions and projects for cooperation and development of ethnic minorities in the county with other communities outside the country.

## **8. Balanced territorial development at county level**

### **Justifying the objective**

At the Romanian level, the discrepancies in development both internally and inter-regionally are extremely significant and have a decisive influence on the future of local communities. At the level of Bihor county we find the presence of intra-county cleavages that can be observed on the following levels: a) County residence municipality and the rest of urban and rural localities - while Oradea is perceived as an example of good administrative and development practices in many areas, the rest of the localities do not have similar performances; b) Large urban and small urban respectively (localities with less than 10,000 inhabitants) - Although the county has a relatively high urbanization rate, with many municipalities and cities, the size of some of them is likely to affect their financial sustainability and ability to act as local poles with influence on the surrounding countryside; also most small towns are stagnant or declining; c) Urban and rural - There are large differences in development between urban and rural communities as a whole, especially in relation to indicators targeting education, health services, green spaces and leisure opportunities free etc.; d) Peri-urban and rural isolated, without the presence of local urban or rural poles. Under these conditions, the future territorial development of the county must be coordinated and sustainable by strengthening intra-county ties and by promoting the concept of polycentric development. It is necessary to recognize that the territories/localities of various sizes can all contribute to the development of the county, provided that the specificity and advantages of each are identified and capitalized. It would be necessary to create/extend cooperation mechanisms such as those existing at the level of the Oradea Metropolitan Area (MA) and other groups of communities in the county with potential common development objectives. The need for an urban regeneration that maintains the connection with the history of cities and their traditions, must be based on the existing material (and cultural) capital, to connect with the (strong) identity of cities, to capitalize on the existing specific heritage (urban, cultural, identity) and to be an integral part of the harmonious development process.

### Specific objectives

To a large extent, the achievement of the specific objectives subsequent to this strategic objective depends on the synchronized effort and the human, material and financial resources of all ATUs in Bihor County. The County Council can assume the role of coordination and guidance of the process of spatial planning and urban/rural development, relying in this approach on good collaboration and partnership with all ATUs.

- 8.1. Reduction by at least 10% by the end of 2027 of the development gap between urban and rural localities of Bihor County, based on measurements that use a composite index for local development such as IDUL, IDSL (Local Social Development Index) or similar.
- 8.2. Increasing the quality of living conditions in all urban and rural communities in the county. By the end of 2027, the increase of 15% of the number of thermally rehabilitated buildings and of 5% of the living space per capita will be pursued. It will also aim to increase the degree of satisfaction of the inhabitants towards the built environment, including the urban equipment of the localities, by 10%.
- 8.3. Emphasizing the coordinating and guiding role of Bihor County Council in spatial planning and urban/rural development processes. By the end of 2027, the aim will be to carry out at least 4 small pilot projects aimed at: developing local public policy guides that address issues such as building standards in urban and rural communities that respect local and regional specificities and leads to a harmonious relationship of the built environment with the nature or principles of urban regeneration in former industrial and/or mining communities; carrying out activities, including contests of ideas/solutions, with the wide participation of community actors on topics related to urban and spatial development in the county; organizing workshop type events with ATU representatives to discuss issues related to urban and spatial planning, good practices in these fields, etc.

### Directions of action

#### ***8.1 Collection of relevant statistical data at county level in order to measure the level of local development at the level of ATUs***

##### **Indicative actions:**

- Identifying the relevant indicators to be monitored, their source and their effective collection;
- Developing a strategy for communicating to the public and other interested stakeholders, such as economic agents, the main results obtained from the study of the quality of life and the level of local development;
- Integration of such data in the process of monitoring and periodic updating of the sustainable development strategy of Bihor County.

#### ***8.2 Cooperation with ATUs in the county in order to increase the quality of housing and public buildings and the regeneration of land in urban areas***

##### **Indicative actions:**

- Encouraging ATUs in the county to increase the number of buildings for thermally rehabilitated communities, both from their own funds and from European funding;
- Encouraging the ATUs in the county to work with the owners' associations and with the owners in order to redesign the buildings for communities and the buildings in a state of degradation;
- Construction and/or rehabilitation of public buildings (e.g., schools, kindergartens) using high standards of energy efficiency and design, so that public buildings become models of good practice in this regard;
- Reconversion and refurbishment of land used in the past for other functions.

### ***8.3 Facilitating inter-jurisdictional cooperation between the county's ATUs, including at the OMA level***

#### **Indicative actions:**

- Creation of a county Agency for Intercommunity Development (AID) with wide coverage and whose object of activity is balanced local development;
- Financial support for small-scale projects, carried out through this AID ID, which will increase trust between the local authorities involved and lead to immediate results;
- Connecting with the local authorities in the Oradea MA and encouraging them to think of a common vision for the development of the Oradea MA connected to the county's priorities;
- Defining a set of local areas and problems by the Bihor County Council that can be solved through inter-jurisdictional cooperation and supporting the ATUs that want to associate for such an approach.

### ***8.4 Supporting communities with limited administrative capacity, especially rural ones, in their urban planning work***

#### **Indicative actions:**

- Communicating and discussing the implications of the main provisions of the PATJ (Plan for the Spatial Planning of the County Territory) for the ATUs in the county;
- Supporting ATUs that have problems updating PUGs (Zoning laws);
- Involvement in unlocking the process where the update activity was started a long time ago and has not been completed yet;
- Developed some guides and examples of good practice that can be put into practice by ATUs regarding the quality of constructions, optimal urban indicators on categories of ATUs, etc.;
- Connecting with the local authorities in the Oradea MA and encouraging them to think of a common vision for the development of the OMA connected to the county's priorities;
- Defining a set of local areas and problems by the Bihor County Council that can be solved through inter-jurisdictional cooperation and supporting the ATUs that want to associate for such an approach;
- Financial support for small-scale projects that increase trust between the local authorities involved and lead to immediate results.

## Complementary measures

- *Supporting communes that are not in the area of influence of a polarizing urban or rural center by creating a county public policy in this regard until the offer of support by the County Council on at least 3 areas of activity.*
- *Encouraging and supporting the limitation (increase of less than 3% of urban areas) or stopping (0% increase of urban areas) of the phenomenon of urban dispersion at the level of municipalities and cities in Bihor County; Enlargement must be correlated with demographic factors (population evolution) and the main indicators of local development.*
- *Supporting the regeneration of former degraded or abandoned industrial areas in the urban environment through reconversion that integrates elements of green infrastructure. An inventory of such areas at the county level will be considered through cooperation with ATUs and the development of at least one pilot reconversion project with the support of Bihor County Council.*

## 9. Increasing domestic and international connectivity (road, rail, airport, digital)

### Justifying the objective

At present, the way in which local communities in the Member States of the European Union, including those in Bihor County, perform and develop depends to a large extent on their placement in regional and global networks and their interconnection within these networks with other territories. Infrastructure of all kinds, including digital, is what determines the degree of accessibility and connectivity of local communities. Local authorities often face difficulties in increasing accessibility and connectivity because it sometimes depends on elements that are more difficult to control - geographical location, the existence of pre-set pan-European transport networks, national placement, responsibility for the development of certain transport networks that significantly and long-term influence local development. Bihor county currently has both advantages (placement on the border with Hungary, representing a turntable for the connection with Western Europe) and disadvantages (placement in the North-West region which is less connected to the main corridors of the TEN- Basic T) from the perspective of connectivity and accessibility. The strategic objectives for the county during this period will have to aim at maximizing the advantages and minimizing the disadvantages, including through national interventions to make up for the lack of connectivity given by the pan-European transport corridors.

### Specific objectives

- 9.1 30% increase in passenger volume on domestic air traffic and 35% on external routes by 2027, compared to 2018.
- 9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of modernized county roads by 2027.
- 9.3. Development and improvement of local public transport systems in Bihor County so that the number of passengers will increase by 2027 by 30% compared to 2019.

9.4. Development in small towns (at least in 3 cities until 2027) of the bicycle infrastructure as an alternative to public transport and car as well as the creation of the bike-sharing system in Oradea until 2024.

9.5. Construction of the bypass of Beiuș, Aleșd and the Oradea-Arad express road until 2026.

### ***9.1 Integration of green, social and digital considerations in the development of public transport systems in Bihor County***

#### **Indicative actions:**

- Imposing conditions related to green considerations (electric vehicles) and social considerations (vehicles adapted to people with disabilities, serving isolated communities, with few inhabitants) to companies to which transport is assigned on county routes;
- Encouraging local public transport authorities to invest in modernizing their fleet, including through the purchase of electric buses and minibuses and their appropriate equipment for people with disabilities;
- Developed the infrastructure necessary for the use of hybrid electric and electric vehicles;
- Encouraging the implementation of smart parking systems;
- Encouraging the implementation of digital systems for the purchase and payment of transport tickets.

### ***9.2 Facilitating the awareness of citizens and companies in Bihor County and stimulating them on the importance of using public transport and alternative means of travel in order to reduce carbon emissions***

#### **Indicative actions:**

- Organizing in partnership with the ISJ and the schools in the county educational campaigns for students on sustainable mobility;
- Encouraging local authorities to provide subsidies or free public transport for certain categories - students, pensioners, etc.;
- Encouraging companies to reward their employees who use public transportation or alternative means of transportation such as cycling;
- Publicly undertaking a goal of carbon neutrality in a realistic time frame (e.g. 2040) and identifying specific measures in this direction.

### ***9.3 Supporting the increase in the quality of ATU infrastructure for walking and cycling***

#### **Indicative actions:**

- Stimulating urban and rural ATUs in the county where there are no public transport systems to modernize their street infrastructure so that bicycles and scooters become an alternative;
- Stimulating ATUs in the county to develop separate bicycle infrastructure from pedestrian infrastructure where possible and/or combining bike lanes with pedestrian infrastructure but respecting design standards that provide safety and comfort to all traffic participants;
- Development of a bicycle infrastructure so as to ensure the connection with the neighboring communities;

- Partnerships with companies that implement bicycle/scooter rental solutions. Development of regulations for the use of public space to allow the integration of these vehicles in general traffic;
- Arrangement of areas with priority for pedestrians, such as shared spaces - shared spaces.

**9.4 Improving the infrastructure related to local and county public transport in order to facilitate the better correlation of the services of local and county public transport companies with the mobility needs of the residents**

**Indicative actions:**

- Understanding and analyzing the role of county transport in relation to local public transport and other forms of individual mobility of residents;
- Carrying out, in partnership with the town halls in the urban area, a survey every three years, aiming at the mobility needs of the residents, both inside the municipalities and cities and at intra-county level;
- Organizing annual meetings with the main economic agents in the county to determine how public transport can be used as a way to optimize employee mobility;
- Substantiation of new county routes, their frequency, the capacity of the vehicles allocated to these routes on the data resulting from the mobility studies carried out at the level of the population and of the economic agents;
- The debate with the town halls from the municipalities and cities in the county that have drawn up or are going to draw up their SUMP on how to integrate the priorities and scenarios proposed by them with the strategic planning documents at county level aimed at physical connectivity;
- Construction of inter-county transport terminal;
- Supporting the construction and arrangement of the roads of the road infrastructure on which the public transport runs;
- Supporting the arrangement of bus stations in order to increase the comfort for passengers;
- Construction/support for the construction of bike lanes (along county, agricultural and forest roads) between localities or towards tourist objectives, such as nature reserves;
- Supporting the modernization of communal roads, forest roads and field/agricultural roads;
- Supporting the modernization of the existing road network.

**Complementary measures:**

- *Facilitating the increase of passenger volume on domestic and international air traffic by developing domestic and international flights and international charter;*
- *Supporting the improvement of travel conditions for passengers on rail transport (modernization of stations, modernization of railway infrastructure) and interconnection of rail transport with other modes of transport (e.g. inter-county road);*
- *Supporting the improvement of fleets, transport stations, payment systems, etc. through which the local transport is made;*
- *Supporting the modernization of communal roads in the county.*

## 10. Sustainable development of rural areas in the county

### Justifying the objectives

Rural areas occupy an important share of the county's area and population, and their sustainable development is essential. The development of these areas cannot be left to chance, but must be coordinated in order to ensure its sustainability and to prevent the waste of resources and significant potential. It envisages the development of a successful agricultural sector, based on associativity and modern and ecological approaches, capable of bringing great added value, but also the development of non-agricultural activities with potential, thus contributing to increasing employment and diversifying sources of income. residents of these areas. In the case of agriculture, the relief factors (a significant area is in the Câmpiei de Vest area of Romania) and the increased soil fertility, as well as the thermal resources that can be used to heat greenhouses and solariums contribute significantly to the high agricultural potential of Bihor County. The development of a successful agriculture can have a significant impact on the local economy. However, this potential can be highlighted through the association and professionalization of producers, the improvement of sales chains, the accelerated development of organic farming. There is also a need to support measures to facilitate a greater proportion of local agricultural products being sold locally. At the same time, taking into account the goal of ensuring climate neutrality in the European Green Pact and the objectives of the *From Farm to Consumer Strategy* to ensure healthier and more sustainable food for Europe, we must support the development of organic farming, reduce food waste and improve labeling. products. Supporting the development of a more sustainable food system will also help to protect Europe's nature and biodiversity. The actions and projects targeting the communities within the Țara de Piatră Microregion must be synchronized and correlated with the actions and projects in the strategy of the micro-region.

### Specific objectives

In the case of this strategic objective, the achievement of specific objectives is largely the responsibility of the private sector, local public administrations, including Bihor County Council can only contribute indirectly through specific actions to facilitate, support and stimulate the sustainable development of rural areas. from the county.

10.1 Develop and strengthen entrepreneurship and associative forms/partnerships in agriculture so that the turnover in agriculture in 2025 will double that of the existing one in 2018.

10.2 Development of non-agricultural activities in rural areas so that their turnover increases by 50% and the number of employees by 25% by 2026.

### Directions of action

#### **10.1 Supporting the efficiency of the agri-food sector and improving the professional training of farmers**

##### Indicative actions:

- Supporting the modernization of agricultural holdings by supporting investments in the field;
- Supporting the development of local irrigation systems;
- Facilitating the creation and modernization of logistics centers for agriculture;

- Providing support for the creation and operation of micro-farms that capitalize on local products, including investments in product processing (dairy, etc.);
- Supporting the development of service centers for agriculture;
- Supporting the development and modernization of small and medium-sized units for processing agricultural products located in rural areas;
- Supporting research-related initiatives in the fields of agriculture and animal husbandry;
- Supporting the development of short food chains;
- Supporting young farmers and agricultural specialists;
- Supporting the professional development of farmers and agricultural consulting services;
- Supporting vocational and vocational schools in the field of agriculture.

### **10.2 Supporting agricultural and non-agricultural activities in mountain areas**

#### **Indicative actions:**

- Supporting the establishment of micro-units for industrial processing of agricultural raw materials in the mountainous areas of the county;
- Supporting the establishment of a compensatory payment system, specific to the mountain area and actively supporting viable economic alternatives for the preservation of traditional practices;
- Supporting through a premium system the producers from the mountain area who make products with PDO certifications - Protected Designation of Origin, PGI - Protected Geographical Indication, GTS - Guaranteed Traditional Specialty;
- Supporting organic farming and production;
- Supporting the establishment of a system to support producers who process berries.

### **10.3 Supporting the capitalization and in a sustainable way of the county forestry and forestry potential**

#### **Indicative actions:**

- Supporting the modernization of forestry operations by supporting the purchase of specific machines and equipment;
- Development of forest transport infrastructure;
- Supporting measures to increase the competitiveness and sustainability of the local forest industry (including in the areas of bioenergy and bioeconomy);
- Facilitating the integration of the wood industry into value chains, including through digitization/innovative solutions;
- Support for the superior capitalization of forest products - furniture industry (access to modern technologies, new materials, innovative products, etc.);
- Supporting research initiatives in the field of forestry;
- Stimulating the energy use of forest and agricultural residues;
- Supporting afforestation and forest maintenance actions;
- Encouraging certification of forest management as responsible forest management and companies operating in this field;
- Support the development of infrastructure for the collection, storage and processing of berries.

#### ***10.4 Facilitating the increase of economic attractiveness and diversification of economic activities in rural localities***

##### **Indicative actions:**

- Supporting business in non-agricultural economic fields;
- Facilitating the creation of new financial instruments adapted to the existing situation in rural areas, including for individuals - agricultural or non-agricultural producers;
- Supporting measures to improve the skills and entrepreneurial knowledge of rural residents;
- Supporting actions for the conservation and sustainable use of local human, cultural and natural heritage;
- Supporting actions to promote modern tools for strengthening and recognizing local identity.

#### ***10.5 Supporting the improvement of the technical-urban infrastructure of the rural localities***

##### **Indicative actions:**

- Supporting the expansion and modernization of drinking water networks;
- Supporting the expansion and modernization of sewerage networks;
- Supporting the expansion and modernization of household waste collection and management services;
- Supporting the modernization of the communal road network;
- Support the expansion and modernization of public lighting networks and systems to ensure public safety.

#### ***10.6 Supporting the development of social, cultural and recreational infrastructure and supporting community development***

##### **Indicative actions:**

- Supporting the rehabilitation, modernization and expansion of social infrastructure in rural areas;
- Supporting the rehabilitation, modernization and expansion of cultural and recreational infrastructure in rural areas;
- Supporting the rehabilitation of cultural centers, libraries, communal houses, memorial houses and local mini-museums of arts, crafts and crafts;
- Supporting cooperation between various actors and rural communities in integrated actions aimed at territorial development.

#### ***10.7 Supporting the development and consolidation of associative forms of production and marketing of local products***

##### **Indicative actions:**

- Providing support for associative forms in agriculture and animal husbandry (joint projects using the natural, agricultural and animal husbandry potential);
- Supporting LAGs in the realization and implementation of integrated territorial development strategies;

- Providing support for the modernization, expansion and better functioning of agricultural production cooperatives;
- Stimulating cooperation between actors through soft measures: facilitation, information, awareness, knowledge transfer and good practices, etc.;
- Supporting local product development actions: functionalization of systems, fairs, mobile shops, etc.;
- Providing support for the creation of a local brand (combined with approval and promotion of local products and services);
- Supporting the development of the infrastructure for collecting and storing agri-food products (logistics platforms, storage centers, etc.).

#### **Complementary measures:**

- *Supporting the development of certified bio and eco structures at the county level;*
- *Supporting actions and projects aimed at developing organic farming, reducing food waste and improving product labeling;*
- *Supporting the development and professionalization of local producer chains so that they can capitalize on their entire production.*

### **10. Conservation, improvement of environmental factors and adaptation to climate change**

#### **Justifying the objective**

A key condition for increasing the quality of life and sustainable development is to reduce CO2 emissions, better manage resources, support the transition to the circular economy, transpose and promote good practices in the field, conserve biodiversity and increase adaptation to climate change, taking into account the mandatory nature restoration targets proposed by the European Commission in 2021 and the 2030 Agenda and 2050 targets of the European Union<sup>50</sup>. Considering the existing natural environment and the opportunities for its enhancement, Bihor County must be in the top of the counties in Romania with the best air and water quality, the least polluted soils, the most, the most diverse and the best managed protected natural areas and the most efficient waste management system. To meet this goal, taking into account the goals of the *2030 Agenda*, the actions of the *European Green Pact*, the solutions proposed in the *European Climate Pact*, the objectives and actions of the *Biodiversity Strategy for 2030* (of the European Union) and the funding opportunities Bihor County aims to support, among other things, the support of public transport systems without emissions, continuous improvement of the waste management system, conservation and sustainable use of protected natural areas, reversal of ecosystem degradation, sustainable use of natural resources.

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<sup>50</sup> In order to achieve the European Union's long-term goals (2050), "Biodiversity and the ecosystem services it provides - its natural capital - are adequately protected, valued and restored for their intrinsic value and essential contribution to human well-being and economic prosperity. so that catastrophic changes caused by biodiversity loss are avoided." EC, 2020.

## Specific objectives

- 11.1 Upgrading traditional energy production systems, by stimulating the use of alternative energy sources and optimizing and modernizing road transport, so that the number of exceedances of air parameters to decrease by 25% by 2026.
- 11.2 Increase by 2027 by at least 30% the energy efficiency of the buildings belonging to the Bihor County Council.
- 11.3 Implementation of the strategy on energy efficiency and security of Bihor County by 2026.
- 11.4 Improving the air quality monitoring systems by setting up 4 more automatic stations in the county by 2026.
- 11.5 Increasing the share of the county's population connected to sewage systems with wastewater treatment from 41.3% in 2020 to 60% by 2027.
- 11.6 Increasing the share of the population connected to centralized drinking water systems from 59% in 2019 to 80% in 2027.
- 11.7 Develop the system of selective waste collection so that the degree of selective collection reaches from 45% in 2021 to 65% in 2027.
- 11.8 Implementation of a digitalized measurement system for household waste collection to ensure the principle "pay as you throw away" by 2024.

Directions of action:

### **11.1 Support measures to help improve air quality.**

Indicative actions:

- Modernization and optimization of road transport by creating bypass routes to reduce air pollution;
- Carrying out intervention works in order to increase the energy performance of public buildings;
- Supporting the construction/installation of electric charging stations or other unpolluted sources (hydrogen) for cars in the county;
- Supporting public, public and private transport without emissions/pollutants;
- Supporting the truck-free endowment of the Inspectorate for Emergency Situations of Bihor County;
- Facilitate the installation of heating systems that use renewable energy in public buildings.

### **11.2 Support measures to help reduce surface and groundwater pollution.**

Indicative actions:

- Reducing the pollution of watercourses, by periodically cleaning the riverbeds and their banks, by installing barriers to stop waste and video surveillance of areas where waste is stored illegally.

### **11.3 Modernization of municipal networks, with emphasis on considerations such as increasing energy efficiency, uniform territorial coverage, increasing the number of households served, etc.**

**Indicative actions:**

- Prioritize ATUs where water, sewerage, and natural gas distribution networks are built so that they can be found in communities with a greater number of potential users willing to connect to these networks and use effective services;
- Facilitating by the CC a dialogue between the operators of the utility networks and ATUs in order to optimize the tariffs so that the users can afford the costs related to these services;
- Supporting energy efficiency measures for public lighting;
- Supporting the construction of photovoltaic power plants for electricity production;
- Supporting projects for the rehabilitation and extension of stormwater collection systems;
- Supporting projects to expand the water supply network;
- Supporting projects for the extension of the sewerage network and treatment plants in the local system;
- Supporting projects to expand the natural gas supply network.

***11.4 Continuous improvement of the waste management system.***

**Indicative actions:**

- Involvement of communities in the process of selective waste collection through educational actions and actual collection actions;
- Promoting cross-compliance criteria among farmers and supporting agricultural activities that respect the principles of cross-compliance (both in the case of pasture and grassland management and in the case of arable land).

***11.5 Supporting measures aimed at improving the quantitative and qualitative improvement of green spaces, reducing noise pollution, conservation and sustainable use of protected natural areas, protection against floods and capitalizing on water resources.***

**Indicative actions:**

- Supporting actions to improve the situation of urban green spaces by achieving the indicator of 26m<sup>2</sup> of green space/inhabitant in all urban localities and achieving the record of green spaces through dedicated registers;
- Reduction of noise pollution along the main roads by optimizing traffic, and at the level of urban localities by creating detours and controlling the technical condition of heavy vehicles;
- Supporting programs aimed at the conservation and sustainable use of protected natural areas;
- Accessibility of protected natural areas, with minimal damage to ecosystems;
- Carrying out flood protection works adapted to local conditions instead of large protection works and protection of existing dams;
- Arrangement of water source areas, especially in tourist areas.

***11.6 Supporting the sustainable use of natural resources, reversing the degradation of ecosystems and adapting to climate change.***

### **Indicative actions:**

- Supporting policies and actions for sustainable exploitation of natural resources (thermal waters, ores, etc.) and biotic resources (wood, berries, fish, agricultural products) in the county;
- Stimulating the transparent management of the forest fund according to the forest arrangements through systematic information and taking measures to protect against illegal logging;
- Supporting afforestation and reforestation projects and actions;
- Facilitating dialogue between stakeholders/interested parts on exploitation and natural resources;
- Supporting the development of benchmarks for the sustainable management and exploitation of natural and biotic resources;
- Supporting actions and projects aimed at the strict protection of areas valuable for biodiversity and for combating climate change;
- Supporting the development of ecosystem services and green infrastructure;
- Promoting adaptation to climate change, disaster risk prevention, resilience, adopting ecosystem-based approaches.

## Action plan for the implementation of the strategy: the strategic projects of the Bihor County Council for the period 2021 - 2027

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
1.	Establishment of Aleşd Industrial Park	OS1. European Green Pact	Aleşd, Bihor County	Potential Entrepreneurs, Companies, Local Residents/Employees	2.1. Development of business support structures by setting up 5 new industrial parks in the county by 2027.	FP	7,353,320	2023 - 2027	POR 2021-2027 / local budget	Bihor CC / ATU Aleşd / ADLO	
2.	Establishment of Marghita Industrial Park	OS1. European Green Pact	Marghita, Bihor County	Potential Entrepreneurs, Companies, Local Residents/Employees	2.1. Development of business support structures by setting up 5 new industrial parks in the county by 2027.	FP	7,353,320	2023 - 2027	POR 2021-2027 / local budget	Bihor CC / ATU Marghita / ADLO	
3.	Establishment of Beiuş Industrial Park	OS1. European Green Pact	Beiuş, Bihor County	Potential Entrepreneurs, Companies, Local Residents/Employees	2.1. Development of business support structures by setting up 5 new industrial parks in the county by 2027.	FP	7,500,000	2023 - 2027	POR 2021-2027 / local budget	Bihor CC / ATU Marghita / ADLO	
4.	Establishment of Ştei Industrial Park	OS1. European Green Pact	Ştei, Bihor County	Potential Entrepreneurs, Companies, Local Residents/Employees	2.1. Development of business support structures by setting up 5 new industrial parks in the county by 2027.	FP	7,500,000	2023 - 2027	POR 2021-2027 / local budget	Bihor CC / ATU Marghita / ADLO	
5.	Digitization of school networks in the municipalities and cities of Bihor County	OS2. An Europe ready for the digital age	Municipalities and cities in Bihor County	Students, teachers from municipalities and cities in Bihor County	5.5. Digitization of schools in municipalities and cities in the county until 2027.	FP	25,550,000	2023 - 2027	PNRR or POR 2021-2027 or POCIDIF 2021-2027 / local budget	Bihor CC	
6.	Digitization of public services offered by	OS2. An Europe ready for	Oradea	ATUs in the county, deconcentrated and decentralized	7.1. Implement a GIS system at county level to provide	FP	10,000,000	2023 - 2027	PNRR or POR 2021-	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	Bihor County Council and subordinate institutions	the digital age		structures, residents, companies, NGOs	transactional digital services to citizens and companies by 2025.				2027 or POCIDIF 2021-2027 / local budget		
7.	Realization of the county public transport dispatcher Operational Command Center for the Public Passenger Transport Service in Bihor County	OS1. European Green Pact	Oradea	Public transport operators, users of public transport in the county	9.3 Development and improvement of local public transport systems in Bihor County so that the number of passengers will increase by 2027 by 30% compared to 2019.	FP	1,000,000	2023 - 2027	POR 2021-2027 or POCIDIF 2021-2027 or PNRR / local budget	Bihor CC	
8.	Integrated e-ticketing system in Țara Crișurilor Museum	OS1. European Green Pact	Oradea	Țara Crișurilor, Museum, museum visitors	6.2. Encourage the development of the creative industries sector so that its share in the local economy reaches 5% of turnover and 7% of the total number of employees by 2026.	FP	200,000	2023 - 2027	POR 2021-2027 or POCIDIF 2021-2027 / local budget	Bihor CC	
9.	Health facilities Integrated project on Medical Services and Emergency Services in Bihor County	OS1. European Green Pact and OS.2 An Europe ready for the digital age	Oradea	Pacienții, medicii și personalul medical din unitățile medicale din județ	3.2 Increasing the quality, functionality and accessibility of health infrastructure at county level by rehabilitating and modernizing existing infrastructure and/or creating new infrastructure by 2027 (including the	FP	3,000,000	2023 - 2027	PNRR or POS 2021-2027 or INTERREG RO-HU 2021-2027 / local budget	Bihor CC	Cross-border project

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
					development of telemedicine infrastructure) so that at least 70% of the county's residents are satisfied or very satisfied satisfied with medical services.						
10.	Energy efficiency - CC headquarters Republicii street	OS1. European Green Pact	Oradea	Bihor County Council and their employees	11.2 Increase by 2027 by at least 30% the energy efficiency of the buildings belonging to the Bihor County Council.	PT	6,480,589	2023 - 2027	PNRR or POTJ 2021-2027 or POR 2021-2027 or PODD 2021-2027 / local budget	Bihor CC	
11.	Increasing energy efficiency at Nucet Psychiatric Hospital	OS1. European Green Pact	Nucet	Doctors, medical staff and patients from Nucet and nearby communes	11.2 Increase by 2027 by at least 30% the energy efficiency of the buildings belonging to the Bihor County Council.	DALI	13,724,000	2023 - 2027	PNRR or POTJ 2021-2027 or POR 2021-2027 or POS 2021-2027 / local budget	Bihor CC	
12.	Arrangement of bicycle tracks in Bihor County	OS1. European Green Pact	Bihor county	County residents	9.4 Development in small towns (at least in 3 cities until 2027) of the bicycle infrastructure as an alternative to public transport and car as well as the creation of	FP	6,000,000	2023 - 2027	PNRR or POR 2021-2027 / local budget	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
					the bike-sharing system in Oradea until 2024.						
13.	Purchase of non-polluting means of transport	OS1. European Green Pact	Bihor county	County residents	9.3 Development and improvement of local public transport systems in Bihor County so that the number of passengers will increase by 2027 by 30% compared to 2019.	FP	10,000,000	2023 - 2027	PNRR or POR 2021-2027 / local budget	Bihor CC	
14.	Ensuring traffic safety conditions in Bihor County - Intervention equipment on county roads	OS1. European Green Pact	Bihor county	County residents	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	6,000,000	2023 - 2027	PNRR or POR 2021-2027 / local budget	Bihor CC	
15.	Integrated project for the promotion of mountain tourism in Bihor	OS3. An economy at the service of the citizens	Bihor county	Economic units in the field of tourism or related fields in the county, their employees, profile associations	4.1 Achieving a sectoral strategy for tourism development in Bihor County by 2023. 4.2 Creation or reorganization by 2023 of a body responsible for monitoring the performance of tourism in Bihor County, analysis of statistical data, as a catalyst for regional tourism. 4.4 Creating a tourist brand of Bihor County until 2024. 4.5. 30% increase in the number of tourists by 2027, compared to 2019.	FP	16,650,000	2023 - 2027	POR 2021-2027 / local budget	Bihor CC	
16.	Cave	OS1.Europ	Bihor	Economic units in the	4.5. 30% increase in the	FP	5,000,000	2023 - 2027	PNRR	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	improvement in Bihor County	ean Green Pact	county	field of tourism or related fields in the county, their employees, profile associations, tourists	number of tourists by 2027, compared to 2019. 4.6 Increasing the efficiency of the use of tourist accommodation structures, respectively increasing the occupancy rate to 55% by 2027 (from 44.2% in 2019).				or POR 2021-2027 or PODD 2021-2027 / local budget		
17.	Extension and consolidation of the INTEGRATED WASTE MANAGEMENT SYSTEM in Bihor County (SMID II)	OS1. European Green Pact	Bihor county	ATUs, households and companies in the county	11.7 Develop the system of selective waste collection so that the degree of selective collection reaches from 45% in 2021 to 65% in 2027. 11.8 Implementation of a digitalized measurement system for household waste collection to ensure the principle "pay as you throw away" by 2024.	FP	57,000,000	2023 - 2027	POIM or PODD 2021-2027 or PNRR / local budget	Bihor CC	
18.	Bihor Village Museum - Traditional Crafts	OS5. Promoting our European way of life	Bihor county	Bihor Village Museum, folk artists, county craftsmen and museum visitors	6.2 Encourage the development of the creative industries sector so that its share in the local economy reaches 5% of turnover and 7% of the total number of employees by 2026	SF	5,900,000	2023 - 2027	POR 2021-2027 / local budget	Bihor CC	
19.	Aquapark Beiuș	OS3. An economy at the service of	Beiuș	Beiuș ATU, economic units in the field of tourism, Beiuș	4.5. 30% increase in the number of tourists by 2027, compared to 2019.	FP	8,200,000	2023 - 2027	POR 2021-2027 / local budget	Bihor CC / ATU Beiuș	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
		the citizens		municipality residents, park tourists/visitors	4.6 Increasing the efficiency of the use of tourist accommodation structures, respectively increasing the occupancy rate to 55% by 2027 (from 44.2% in 2019).						
20.	Dairy factory	OS3. An economy at the service of the citizens	Beiuș area	Farmers (cattle, sheep, goats) in the county	10.1 Developing and consolidating entrepreneurship and associative forms/partnership in agriculture so that the turnover in agriculture will reach in 2025 double that of the existing one in 2018.	FP	3,000,000	2023 - 2027	POR 2021-2027 or PNSPAC after 2020 / local budget	Bihor CC/ business environment	
21.	Stations for public transportation	OS1. European Green Pact	Bihor county	Public transport users in the county	9.3. Development and improvement of local public transport systems in Bihor County so that the number of passengers will increase by 2027 by 30% compared to 2019.	PT	451,180.25	2023 - 2027	POR 2021-2027 / local budget	Bihor CC	
22.	Development of ecological septic tanks in the mountain area	OS1. European Green Pact	Apuseni Mountans	Localities and households in the mountain area	11.5 Increasing the share of the county's population connected to sewage systems with wastewater treatment from 41.3% in 2020 to 60% by 2027. 3.1 Reducing the existing discrepancies between urban and	FP	73,829.50	2023 - 2027	POR 2021-2027 or Podd 2021-2027 / local budget	Bihor CC/ ATUs from the mountain area	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
					rural areas through investments in water and sewerage networks, natural gas distribution, electricity, etc. By 2027, the aim is to reduce to 5% of ATUs that are not served by water networks, to 40% of ATUs that are not served by sewerage networks, to 70% of ATUs that are not served by water networks. gas network.						
23.	Express road Oradea-Arad	OS1. European Green Pact	Bihor county	Bihor and Arad counties, users of the expressway	9.5 Construction of the bypass of Beiuș, Aleșd and the Oradea-Arad express road until 2026.	SF	1,331,669,891	2021-2026	POIM 2014-2020 POT 2021-2027	CNAIR Bihor CC	In the process of drafting the PT, the execution will start on POIM 2014-2020 with phasing on 2021-2027
24.	Aleșd belt	OS1. European Green Pact	Aleșd	Aleșd ATU and its inhabitants, users of the bypass	9.5 Construction of the bypass of Beiuș, Aleșd and the Oradea-Arad express road until 2026.	SF	25,000,000	2021-2026	POIM 2014-2020 POT 2021-2027	CNAIR Bihor CC	In the process of drafting the PT, the execution will start on POIM 2014-2020 with phasing on 2021-2027
25.	Beiuș belt	OS1. European Green Pact	Beiuș	Beiuș ATU and its inhabitants, users of the bypass	9.5 Construction of the bypass of Beiuș, Aleșd and the Oradea-Arad express road until 2026.	SF	75,000,000	2021-2026	POIM 2014-2020 POT 2021-2027	CNAIR Bihor CC	In the process of drafting the PT, the execution will start on POIM 2014-2020

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
											with phasing on 2021-2027
26.	Multifunctional Cultural Center - Romanian-Hungarian cross-border cultural laboratory	OS5. Promoting our European way of life	Oradea	Bihor County and its population	3.3 Increasing the quality, functionality and accessibility of cultural infrastructure by rehabilitating and modernizing existing infrastructure and/or creating new units by 2027, so that at least 45% of the county's inhabitants are satisfied or very satisfied with cultural activities.	FP	15,000,000	2023 - 2027	INTERREG RO-HU 2021-2027 / local budget	Bihor CC	Cross-border project
27.	Airway access to Oradea Airport Cargo Terminal and Oradea Airport Cargo Terminal	OS1. European Green Pact	Oradea	Bihor County and its population	9.1 30% increase in passenger volume on domestic air traffic and 35% on external routes by 2027, compared to 2018.	SF	38,182,533	2021 - 2024	Private funds / local budget	Bihor CC Oradea airport	Development of air transport infrastructure PT for Runway for aircraft access to Cargo Terminal Oradea Airport completed. PT for Cargo Terminal is being developed.
28.	Development and modernization of airport	OS1. European Green Pact	Oradea	Bihor County and its population	9.1 30% increase in passenger volume on domestic air traffic and 35% on external routes	SF	26,830,000	2021-2023	POIM 2014-2020 POT 2021-2027 / local	Bihor CC Oradea airport	POIM 2014-2020 A. P. 2, O. S. 2.3

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	infrastructure at Oradea Airport				by 2027, compared to 2018.				budget		
29.	INCREASING THE SAFETY AND SECURITY LEVELS AT ORADEA AIRPORT	OS1. European Green Pact	Oradea	Bihor County and its population	9.1 30% increase in passenger volume on domestic air traffic and 35% on external routes by 2027, compared to 2018.	SF	14,600,000	2021-2023	POIM 2014-2020 POT 2021-2027 / local budget	Bihor CC Oradea airport	POIM 2014-2020 A. P. 2, O. S. 2.3
30.	Building repairs on Moscovei street no. 5	OS1. European Green Pact	Oradea	Bihor County and its population	11.2 Increase by 2027 by at least 30% the energy efficiency of the buildings belonging to the Bihor County Council.	FP	2,500,000	2022 - 2025	PNRR or POR 2021-2027 / local budget	Bihor CC	
31.	School Campus in Oradea	OS5. Promoting our European way of life	Oradea	Children in the county	5.6. Development and modernization of the educational infrastructure by creating a school campus in the county by 2026.	Execution	20,000,000	2020-2023	PNRR or POEO 2021-2027 or POR 2021-2027 / local budget	Bihor CC	
32.	Arrangement of four waste collection points located in Beiuș, Salonta, Marghita and Aleșd	OS1. European Green Pact	Bihor county	Bihor County and its population	11.7 Development of the selective waste collection system so that the degree of selective collection will reach from 45% in 2021 to 65% in 2027.	Execution	1,200,000	2022	POIM 2014-2020 / local budget	Bihor CC	
33.	Capital repairs and restoration of bridges on DJ 792 A Beliu-Tinca-Leș, km 24+987-	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	4.000.000	2020-2022	POR 2014-2020 / local budget	Bihor CC	POR 2014-2020–retrospective projects

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	67+696										
34.	Rehabilitation and modernization of DJ 764, Beiuș-Roșia-Aștileu, sector from km 31+000 to km 64+655, L=33.655 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	23.600.000	2019-2022	PNDL / local budget	Bihor CC	
35.	Rehabilitation and modernization of DJ 767: DN76 (Sâmbăta) - Dobrești, sector from km 0+000 to km 9+332 and DJ 767C: DJ 767 (Dobrești) -Luncasprie - DJ 764, sector from km 0+000 to km 11+672, L total=20,964 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	12.500.000	2019-2022	PNDL / local budget	Bihor CC	
36.	Modernization of DJ 768 A Șoimi-Suplacu de Tinca-Capilna	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	5.400.000	2019-2023	POR 2021-2027 / local budget	Bihor CC	
37.	Slope stabilization,	OS1. European	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor	PT	1.900.000	2022-2023	POR 2021-2027 / local	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	DJ 108K Bulz-Remeți	Green Pact			County by increasing to 95% the percentage of county roads modernized by 2027.				budget		
38.	Northern Transylvania Regional Route; Apuseni Road; Rehabilitation and modernization DJ 764A, DJ 104J L total=43.375km, Bihor County	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	27.100.000	2019-2023	POR 2014-2020 / local budget	Bihor CC	
39.	Modernization of DJ 797A Bicaciu-Ianoșda, km 2+993-km 8+321.88, L=5,328 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	2.200.000	2020-2022	POR 2014-2020 / local budget	Bihor CC	
40.	Modernization DJ795A Oșand-Sumugiu	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	Execution	1.300.000	2020-2022	POR 2014-2020 / local budget	Bihor CC	
41.	Arrangement of intersection and drainage works on DJ108I in Telechiu locality, Țețchea	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	360.000	2021-2022	POR 2021-2027 / local budget	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	commune										
42.	Road connecting Oradea and Sânmartin commune	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	44.500.000	2021-2023	POT 2021-2027 / local budget	Bihor CC	
43.	Bridge and connecting road to DJ 768A	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	SF	8.000.000	2021-2024	POR 2021-2027 / local budget	Bihor CC	
44.	Rehabilitation and modernization of DJ 795 Salonta-Tinca, sector from km 0+000 to km 23+320, L=23,320 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	17.600.000	2021-2025	POR 2021-2027 / local budget	Bihor CC	
45.	Modernization of DJ 767D; Vîrciorog-Călățeș (DJ 764); km 2+100-10+550, L=8.45 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	SF	6.800.000	2022-2024	POR 2021-2027 / local budget	Bihor CC	
46.	Modernization DJ763 Padiș-Ic Ponor km 35+100-44,845, L=9,745 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	SF	21.900.000	2022-2025	POR 2021-2027 / local budget	Bihor CC	
47.	Rehabilitation of DJ 795 A,	OS1. European	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor	SF	7.000.000	2022-2024	POR 2021-2027 / local	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	Șumugiu-Mierlău sector-DJ 768 km 11+744-km 19+956, L=8,212 km	Green Pact			County by increasing to 95% the percentage of county roads modernized by 2027.				budget		
48.	Rehabilitation of DJ 190 G Almașu Mare Intersection - Sălaj County Boundary, km 8+950-km 12+350, L=3,400 km	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	SF	8.900.000	2022-2024	POR 2021-2027 / local budget	Bihor CC	
49.	Pod pe DJ 764 H la Nimăiești	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	500.000	2022	POR 2021-2027 / local budget	Bihor CC	
50.	Bridge over the sewer on DJ 797A	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	SF	160.000	2022-2023	POR 2021-2027 / local budget	Bihor CC	
51.	Increasing accessibility on county roads in the Oradea Metropolitan Area Lot 1 - Oșorhei, DJ Oșorhei - Copăcel	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	32.100.000	2021-2025	POR 2021-2027 / local budget	Bihor CC	


No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
52.	Increasing accessibility on county roads in the Oradea Metropolitan Area Lot 2 -	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	PT	26.300.000	2021-2025	POR 2021-2027 / local budget	Bihor CC	
53.	Increasing the accessibility on the county roads in the Oradea Metropolitan Area Lot 3 (Bypass of Biharia)	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	FP	15.800.000	2021-2024	POR 2021-2027 / local budget	Bihor CC	
54.	Oradea metropolitan road ring	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	FP	51.200.000	2021-2024	POR 2021-2027 / local budget	Bihor CC	
55.	Bypass on DJ 792A - Tinca locality	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	FP	200.000	2022-2024	POR 2021-2027 / local budget	Bihor CC	
56.	County Road DJ 764L; Delani (DJ764) -Beiuș (DN76)	OS1. European Green Pact	Bihor county	Bihor County and its population	9.2 Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	FP	8.800.000	2022-2024	POR 2021-2027 / local budget	Bihor CC	
57.	Establishment of the Bihor	OS3. An economy	Bihor county	Bihor County and its population	5.7. Establishment by 2026 of a county center	FP	2.000.000	2022-2027	PNRR or	CJRAE Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	County Center for School and Vocational Guidance	at the service of the citizens			for school and professional guidance in order to facilitate the market insertion of graduates.				POR 2021-2027 / local budget		
58.	Elaboration of the Spatial Planning Plan of Bihor County	OS1. European Green Pact	Bihor county	Bihor County and its population	8.3. Emphasizing the coordinating and guiding role of Bihor County Council in spatial planning and urban/rural development processes.	Execution	200.000	2020-2023	PNRR / local budget	Bihor CC	
59.	Development and optimization of the public transport system in Bihor County	OS1. European Green Pact	Bihor county	Bihor County and its population	9.3. Development and improvement of local public transport systems in Bihor County so that the number of passengers will increase by 2027 by 30% compared to 2019.	FP	10.000.000	2023-2027	PNRR or POR 2021-2027 or POT 2021-2027 / local budget	Bihor CC	
60.	Increasing the energy efficiency of the Gheorghe Șincai County Library	OS1. European Green Pact	Bihor county	Bihor County and its population	11.2 Increase by 2027 by at least 30% the energy efficiency of the buildings belonging to the Bihor County Council.	FP	4.000.000	2023 - 2027	PNRR or POTJ 2021-2027 or POR 2021-2027 or POS 2021-2027 / local budget	Bihor CC	
61.	Increasing the degree of digitalization of the library network in	OS2. An Europe ready for the digital age	Bihor county	Bihor County and its population	5.8. Digitization of the county library network until 2027.	FP	1.500.000	2023 - 2027	PNRR or POR 2021-2027 or POCIDIF	Gheorghe Șincai County Library	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
	Bihor County								2021-2027 / local budget		
62.	Development of cultural tourist routes in Bihor County	OS3. An economy at the service of the citizens	The rural and urban area of Bihor County.	Tourists consuming cultural services and products, Bihor county	4.5. 30% increase in the number of tourists by 2027, compared to 2019.	FP	3.000.000	2022-2027	PNRR or POR 2021-2027 or ROHU 2021-2027 local budget	Bihor CC in partnership with other ATUs, organizations, associations	
63.	Business development program	OS3. An economy at the service of the citizens	Bihor county	Economic agents, entrepreneurs and potential entrepreneurs operating in the county, employees of economic agents	2.2. Development of the entrepreneurial ecosystem through the operationalization of at least three structures for the promotion and support of entrepreneurship. 2.3. Development of the SME sector, development materialized in turnover higher by 30% (in nominal terms) and by 15% more employees in local SMEs by 2027.	Idea	-	2022 - 2027	Own budget and external and national non-reimbursable sources	Bihor CC	
64.	NGO sector development program	OS5. Promoting our European way of life	Bihor county	NGOs operating in the county, the inhabitants of the county	3.6. Development of the non-governmental sector in priority areas (social economy, culture, civic participation, education, environmental protection), by financing dedicated programs at county	Idea	150.000 Euro (aprx. 30.000/yr)	2023 - 2027	Own budget	Bihor CC	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
					level with minimum annual allocations of at least 150.000 lei starting in 2023.						
65.	Social development program	OS5. Promoting our European way of life	Bihor county	Public and private organizations working in the social field in the county, disadvantaged people	3.4. Increasing the quality, functionality and accessibility of infrastructure and social services by rehabilitating and modernizing existing infrastructure and/or creating new units by 2027, so that at least 50% of the county's residents are satisfied or very satisfied with social services.	Idea	-	2022 - 2027	Own budget and external and national non-reimbursable sources	Bihor CC	
66.	Arrangement of fortresses in Bihor county	OS3. An economy at the service of the citizens	Bihor County	Economic units in the field of tourism or related fields in the county, their employees, profile associations, tourists	4.5. 30% increase in the number of tourists by 2027, compared to 2019. 4.6 Increasing the efficiency of the use of tourist accommodation structures, respectively increasing the occupancy rate to 55% by 2027 (from 44.2% in 2019).	PWS	5.000.000	2023- 2027	PNRR or POR 20212027 or PODD, PNDR, AFIR 20212027/ Local Budget	Bihor CC/ Şuncuiuş	
67.	Restoration of wooden churches - historical monuments	OS5. Promoting our European way of life	Bihor County	Local communities, students, folk artists, craftsman from Bihor County, companies/units in tourism, tourists	4.5. 30% increase in the number of tourists by 2027, compared to 2019. 4.6 Increasing the efficiency of the use of tourist accommodation	PWS	2.000.000	2023- 2027	PNRR or POR 20212027 or PODD, PNDR, AFIR 20212027/ Local Budget	Bihor CC / ATUs from Bihor County	

No.	Title/project description	EU strategic objectives	Location	Primary beneficiaries /target group	Specific objectives	Stage (FP, SF, DALI, PT, Execution)	Estimated budget -euro -	Period of implementation	Source of finance	Project responsible	Observations
					structures, respectively increasing the occupancy rate to 55% by 2027 (from 44.2% in 2019).						
<b>Total</b>							<b>2.113.888.663 Euro</b>				



# Management and implementation of the Integrated Sustainable Development Strategy of Bihor County for the period 2021-2027

## Strategy implementation management

The implementation of the Integrated Strategy for sustainable development of Bihor County for the period 2021 - 2027 requires the involvement of public and private actors in the county, who together with the Bihor County Council will act in pursuit of the vision of sustainable development of the community. **Strengthening the partnership of the county administration** with public and private actors is essential for the implementation of the necessary solutions to solve the identified strategic problems.

Bihor County Council is the main public entity responsible for implementing the strategy, but to this are added subordinate institutions, as well as municipalities, cities and communes, inter-community development associations, decentralized and decentralized structures of central government (eg ISJ, AJOFM, APM etc.) from the county, local action groups, clusters, universities, NGOs, private companies and their associative forms. The Bihor County Council acts as a catalyst for the processes and actions of sustainable development of the county, coagulating around it the stakeholders - institutions, companies and non-profit organizations - and coordinating their efforts in the direction of development assumed by this strategy and highlighted in the vision and development goals.

The capacity and level of expertise in the preparation and implementation of projects with non-reimbursable funding differs from one category to another of the above actors. Thus, Bihor County Council, Oradea City Hall, Oradea Metropolitan Area Intercommunity Development Association (ADI OMA), some of the communes in OMA, other municipalities and some of the cities in the county, companies in the field of public utilities (e.g. Water Company Oradea), the LAGs, some NGOs, as well as the universities have already registered outstanding performances in the management and implementation of the projects with non-reimbursable financing.

Bihor County Council and Oradea City Hall - the main actors in the field of local public administration - have a consistent portfolio of investment projects successfully implemented in recent years and financed by grants (Rehabilitation of the District Heating System in Oradea, construction of pedestrian routes in the Center History: Vasile Alecsandri street, Aurel Lazăr, Ferdinand square, Libertății street, acquisition of non-polluting means of transport, rehabilitation of county roads, Darvas La-Roche House, energy efficiency of schools and public buildings, etc.). In the period 2014-2020, the Bihor County Council attracted approximately 80 million euros, non-reimbursable funds. The County Planning Plan is being developed and will be finalized in the second half of 2022. The efforts of a small team of experts from the two institutions have made it possible to successfully develop and implement these projects will also be responsible for the development and implementation of future investment projects. For the successful implementation of the strategy, it is fundamental that all local public authorities, especially Bihor County Council and Oradea City Hall, collaborate in achieving the common interest of the community.

Bihor County Council went through an extensive restructuring process between 2020 and 2021, reducing staff by 50%. The Non-Reimbursable Projects Service, formerly called the European Funds Department, within the General Technical Directorate, currently has 8 positions. He, together with the other services within the General Technical Directorate, the Economic Directorate, the Public

Administrator and the Chief Architect within the Bihor County Council are responsible for initiating, elaborating, implementing and coordinating (as appropriate) projects in the strategy, closely related to organizational leadership.

Among the municipalities and cities in the county, the communes in the metropolitan area, such as Sânmartin and Sântandrei, respectively the municipalities in the county, among which we can mention Marghita, Aleşd, Ştei, Beiuş and Salonta, had performances in attracting non-reimbursable funds. Most communes have tried to obtain grants, the main obstacles being those related to lack of expertise in project management and/or lack of financial resources needed to implement projects.

In the case of the private sector, the capacity to attract non-reimbursable funding has increased significantly in recent years due to the experience gained in developing and implementing projects funded by sectoral operational programs for the 2014-2020 programming period (ROP, POCU POC, PNDR) or programs Start-Up Nation government. An important role in this success was also played by the consulting companies and associative structures in the county (for example the LAGs) which supported the economic agents and the individuals interested in the preparation and implementation of projects with non-reimbursable financing, thus increasing their level of expertise and the ability to make a significant contribution to the preparation of mature projects and their successful implementation in the next period.

However, the capacity to prepare and implement projects with non-reimbursable financing remains low in the case of town halls. One of the main causes of this state of affairs is the orientation in recent years of these town halls mainly to government non-reimbursable funds (PNDL, for example) to finance local investments. The main reason for this reorientation is the much easier access and implementation of projects funded by this type of grant. Thus, the development and implementation of projects financed by European non-reimbursable funds remained secondary, due to the complexity of their elaboration and implementation. Also, the own financial resources (low degree of local financial autonomy) of many municipalities do not allow the hiring of staff specialized in the development and implementation of investment projects, nor the contracting of specific consulting services.

The development of the Integrated Strategy for sustainable development of Bihor County for the period 2021 - 2027 was an initiative initiated and supported by the Bihor County Council, but both its development and implementation require the involvement not only of the structures of this institution or its subordinates, but of all local stakeholders. Many of them participated in the strategy development process as members of the working groups involved in the preliminary analysis debate, the strategic profile, the setting of specific objectives and the project proposal, thus making the strategic planning process inclusive, transparent and consultative.

However, it should be taken into account that there are no subordination relations between the local administrative-territorial authorities (municipalities, cities, communes) and the County Council. Also, the scope of activity of the County Council is limited to several areas: urbanism and landscaping, county roads, environment and monitoring of public utilities services, coordination of

cultural units. In this context, in achieving certain specific objectives and targets proposed in the strategy, the Bihor County Council will have only a facilitator role, initiating the processes and coagulating the efforts of the actors responsible for implementing the measures and projects necessary to achieve the objectives. Achieving the objectives therefore depends on the collaboration and involvement of other important actors.

Increasing the quality of life of the inhabitants of the county, one of the strategic objectives of the county, depends not only on the implementation of projects in the strategy action plan, but also on the implementation of projects at regional, local and, of course, the cooperation of decentralized and decentralized structures of central government and the development and increase of the competitiveness of the economic agents that carry out economic activities in the county.

Taking into account all the above, the projects included in the action plan of the strategy have been divided into two categories: strategic projects (those related to the above Action Plan) and support projects (annex to this strategy). Strategic projects are those that directly meet the strategic dangers of the county and which, taking into account the sources of competitive advantage and key strategic factors, contribute decisively to achieving the strategic objectives and pursuing the development vision of the county. Also, strategic projects are those projects that fall within the remit of the Bihor County Council and for which it has the resources, tools and levers necessary for their initiation and implementation. Support projects (Annex 1) are those projects that contribute to solving some specific/local problems identified in the preliminary analysis and that fall totally or partially in the sphere of attributions of the other local administrative-territorial units: municipalities, cities, communes.

In the aforementioned context, the successful implementation of the Integrated Strategy for Sustainable Development of Bihor County for the period 2021 - 2027 requires the following **measures**:

1. Strengthening the administrative capacity of the Bihor County Council and of the subordinated entities regarding the attributions in the field of urbanism, territorial planning and planning/management of major public investments in the field of connectivity, public utility infrastructure, cultural and tourist. It is recommended that the institution have experts in the field of project management, finance, public procurement, legal, technical/engineering assistance, communication and public relations who will deal exclusively with the investment project portfolio of the institution, in order to implement their success.
2. Strengthen the administrative capacity of ADI OMA, including in providing members with advisory services for the development, preparation and implementation of investment projects of common interest.
3. Contracting consulting services for the preparation of documentation and management of local investment projects by those town halls of ATUs in the county that do not have specialized staff for such activities.
4. Accelerate the digitization process at the level of local public administration, subordinate entities and decentralized and decentralized structures of central government in order to integrate

databases, standardize information collection, make transparent and facilitate communication between public institutions and residents.

5. Developing strategies in potential sectors such as tourism. Being one of the counties with the highest tourist potential in the country and in the area, it must be capitalized in a sustainable way. The great diversity of this potential (from thermal waters to ski slopes, caves, rivers for rafting, tangible and intangible cultural heritage) requires a separate and specialized approach to this sector that can significantly contribute to the sustainable development of the county.

***The role and responsibilities of the Bihor County Council and other actors involved in implementing the strategy is highlighted in the action plan (project portfolio), specifying the main people responsible for each project, as well as the inter-conditions and complementarities between projects. The action plan also includes the stage of the project/degree of maturity, the period foreseen for implementation, the estimated budget and the possible sources of funding.***

### **Steps to facilitate the implementation of the Sustainable Development Strategy of Bihor County for the period 2021 - 2027**

In order to implement the strategy and achieve the proposed objectives and indicators, the following measures need to be put in place:

<b>Needed measures</b>	<b>Responsible</b>	<b>Starting term</b>	<b>Ending term</b>
<b>Approval of the strategy by the Bihor County Council</b>	Bihor CC*	2021	2022
<b>Dissemination of the strategy in the approved form to the general public (publication on the website of the county council) and to the authorities at central/European level</b>	Bihor CC	2022	2027
<b>Establishment of the Monitoring Commission</b>	Bihor CC	2022	2022
<b>Permanent updating of SIDDB 2021 - 2027 in line with community needs and new opportunities</b>	Bihor CC	2022	2026
<b>Elaboration of PATJ Bihor</b>	Bihor CC ADI OMA	2021	2022
<b>Acquisition of consulting services for the preparation of technical and economic documentation related to strategy projects</b>	Bihor CC Other categories of beneficiaries	2022	2023
<b>Implementing the necessary measures to increase the implementation capacity at the level of public institutions that carry out investment projects included in the strategy</b>	Bihor CC Other entities	2022	2025
<b>Acquisition of consulting services for the preparation and management of project implementation (in case the public authorities do not have the necessary capacity and expertise)</b>	Bihor CC Other categories of beneficiaries	2022	2025
<b>Organizing information sessions for potential private beneficiaries on funding opportunities from grants</b>	Bihor CC Other categories of beneficiaries	2022	2027
<b>Updating the PUGs of the ATUs in the county in correlation with PATJ</b>	Bihor CC City Halls Consultants CTATU	2022	2027

Needed measures	Responsible	Starting term	Ending term
Elaboration/updating of the sectorial strategies that fall under the responsibility of the Bihor County Council and of the town halls (e.g. waste management, social services, etc.), in correlation with the county strategy	Bihor CC City Halls Subordinate institutions Consultants	2022	2027
Continuous training of local public administration staff in priority areas for the implementation of the strategy and ensuring a high level of quality of life	Bihor CC Commune Halls ADI OMA GALs	2022	2027
Ensuring co-financing and cash flow for non-reimbursable projects through measures to increase revenues to local budgets, contracting loans, launching municipal bonds	Bihor CC City Halls	2022	2027
Implementation of investment projects included in the strategy	Bihor CC City Halls Subordinate institutions GALs ADIs Other categories of beneficiaries Consultants AM/OI	2022	2027
Annual monitoring, through monitoring reports and the Management Unit, of the stage of implementation of the targets assumed by the strategy	CJ Bihor	2022	2027
Final evaluation of the implementation of the strategy and preparation of the update of the strategic documents for the period 2028 - 2034	Bihor CC City Halls Subordinate institutions Consultants Relevant actors	2026	2027
* CC = City Council			

## Potential risks identified regarding the implementation of the strategy and possible solutions to eliminate/mitigate their impact

We present below the main risks identified for each strategic objective, as well as the possible measures to prevent these risks or mitigate their effects.

Regarding the achievement of the first strategic objective - *Knowledge-based economic development* - the possible risks that may lead to its failure are both internal and external. Moving from an economic activity based on medium to low value-added areas and low wages, to one based on knowledge, capable of generating high added value, requires highly qualified human resources. Maintaining and attracting this highly qualified human resource implies a concentration of the efforts of the pre-university, university, local public administration and economic units education system. The education system must evolve in such a way as to provide knowledge and skills related

to international trends in the economy of the future. Local governments need to significantly improve the quantity and quality of public services and utilities that contribute to increasing the quality of life, which are key elements in attracting and retaining highly qualified human resources. The economic environment must become internationally competitive, being oriented towards innovation and the implementation of the latest technologies. In addition to the existing risks in terms of intensifying the efforts of each category of actors involved in this endeavor, the risks of concentrating and cooperating all these actors to follow the same direction are very high, and the main solution is an ongoing awareness campaign and the need for cooperation between the three categories of actors.

Achieving the second objective *the development of entrepreneurship (economic, social and cultural) at the local level* involves high risks in the context in which the culture of entrepreneurship in Romania, as well as basic financial education are at the lowest levels among EU countries. The causes of this state of affairs are many, and the solution to the gradual solution of this problem is the inclusion in pre-university and university educational programs of courses/subjects aimed at developing basic knowledge of entrepreneurship and financial education, collaboration of pre-university and university education units with economic agents. internships/internships within companies and the development of dual education, the development and implementation of start-up financing projects, the organization of centers to provide support to entrepreneurs in the beginning of developing a business or those who want to start a business. The risks of such approaches are multiple and are related to the inflexibility of the educational curriculum and the reluctance/resistance of educational institutions (at all levels), the reluctance of economic agents for internship and internship programs, the reluctance of public and private entities in developing projects aimed at developing entrepreneurial skills and the financing of start-ups, the lack of interest of young/potential entrepreneurs. The solution to mitigating these risks is again the cooperation of all the actors mentioned in order to follow a common direction.

The third strategic objective, *High Quality of Life*, given its complexity, the high number of specific objectives, actions and projects involves a specific type of risk related to external needs: changing the number of projects, increasing the complexity of actions and projects planned, but and the completion/introduction of new actions with the periodic updating of the strategic document. This entails the existence of risks related to financing - inadequate budgets of local authorities, inefficient prioritization of projects, but also certain regulatory risks, especially in the case of external financiers (amendment of rules to exclude from funding certain priority objectives at the level of municipality).

There are several types of risks in achieving the fourth strategic objective - *Developing sustainable tourism*. On the one hand, there are risks related to the unsustainable use of existing natural resources and tourist attractions. On the other hand, there are a number of risks related to the inability to mobilize and cooperate or the lack of motivation of all actors who must be involved in one way or another in the development and implementation of projects. The implementation of a strategy in the field can reduce these risks by raising the awareness of all the actors mobilized in the strategic planning approach at sector level and by mobilizing them in order to follow the direction

established in the strategy. The creation of a tourist brand of Bihor County must be complemented by an effective long-term public/territorial marketing policy.

The fifth strategic objective - *Development of the pre-university and university education system in relation to the strategic priorities of the county* - involves the existence of regulatory risks, which come mainly from outside - changes in legislation and the education system - specific to the local economy, based on sectors economic with a medium and low level of knowledge and low income. Actions and projects for the rehabilitation and endowment of school objectives/buildings involve significant costs, which attracts funding risks, but also technological risks. The general trend of declining school population also involves another type of risk, related to human resources (not only those involved in educational activities, but especially related to the subsequent effects on the labor market and human resources available to local companies). The goal of increasing the quality and performance of the university and connecting the university to the labor market risks meeting the resistance of the university system to the current status quo change, which requires significant and costly human and financial resources.

The main risks in achieving the sixth objective - *Development of the cultural sector and creative industries in connection with the capitalization of cultural heritage* - are those related to lack of entrepreneurial skills among artists and those in the creative industries, low interest in certain events and cultural activities development and underfunding of cultural activities. Overcoming these risks is possible by involving programs to develop the entrepreneurial skills of artists and people working in the creative industries, as well as increasing the financial resources allocated to the sector.

In the case of the seventh strategic objective - *Increasing the administrative capacity at the level of local administrations and the county administration* - the main risks in achieving it are those related to the resistance of employees within the administration to the process of digitization and modernization. In order to reduce this risk and increase the capacity of local government to solve local problems more efficiently and effectively, as well as to collaborate to solve these problems, it is necessary to explain the benefits of the digitization process and remove fears of job loss and growth in difficulty of tasks. Risks related to this objective refer to under-qualified staff, resistance and reluctance to change, poor IT infrastructure or legislative changes (regulatory risk) that could jeopardize the adoption of local reforms or the attraction of highly qualified human resources.

The risks in achieving the eighth objective - *Balanced territorial development at county level* - are mainly related to the possibility of controlling the partnership relations with the partner local authorities - the County Council, Local Councils, Mayor's Institutions. There are also risks related to funding, unskilled personnel, collaboration, resistance to change, but also risks of inefficient processes, due to the complexity of the proposed actions and projects. Balanced territorial development involves both risks related to human resources of institutions and risks specific to public investment projects: poor/contestable procurement procedures, inappropriate technical solutions, delays in work, non-compliance with technical specifications, etc. Financial resources must be identified, as well as feasible ways to finance joint projects, which carries an additional risk in managing partnerships (authority).

The risks involved in achieving the ninth strategic objective - *Increasing domestic and international connectivity (road, rail, airport, digital)* - relate to funding issues and the effectiveness of communication flows and channels. To mitigate the effects of these risks, it is necessary to identify feasible ways to finance joint projects, which entails an additional risk in the management of partnerships (the authority). Achieving specific objectives involves investing in infrastructure, but also a broad partnership framework and information campaigns, which implies the possibility of authority risks, but also risks on partnerships - coordination, relationships with key partners.

The main risks threatening the achievement of the tenth strategic objective - *The development of a successful agricultural sector, based on associativity and modern and ecological approaches, capable of bringing great added value* - are those related to the reluctance of producers to associate and lack of entrepreneurial skills. Campaigns to promote and present successful partnership models, as well as programs to develop entrepreneurial skills among the rural population, can help reduce the effects of these risks.

In addition to these specific risks, there are a number of general risks that may manifest themselves in the implementation of any county strategy.

- A first risk that can be identified is that of the deficient collaboration between the Bihor County Council and the other ATUs in the county. One solution to reduce this risk is to strengthen the dialogue, both formal and informal, between the ATUs in the county.
- Lack of qualified and experienced staff within the Projects Service with Grants and the Technical Directorate of the Bihor County Council, the main entities responsible within the Bihor County Council for the development and implementation of strategic projects of the county.
- The reduced capacity for planning and implementation of investment projects at the level of communes and some cities is another significant risk identified at the county level. Among the potential solutions for eliminating this risk, we identified the following: consolidating the role of the Chief Architect of the County in the field of urbanism; designing and operationalizing a unique GIS database at county level; joint procurement of specialized consultancy services.
- A very high risk is represented by the insufficiency of the ATUs' own financial resources, taking into account the high total value of public investments. Possible measures that can be taken to mitigate the effects of this risk are: increasing the local tax base through active measures to attract new private investment; streamlining public spending (eg reducing energy consumption, restructuring non-performing public and private entities subordinated to the CJ, etc.); contracting bank loans/issuing municipal bonds; preparing a portfolio of projects in order to attract as much European funds as possible.
- Difficulties in making public investments due to property and building ownership issues. In order to mitigate the effects of this risk, it is necessary to identify in time and inventory the land and buildings necessary for the implementation of the projects and start the settlement procedures. Possible settlement procedures include the following: the introduction of fiscal constraints to accelerate the pace of ceding private roads to ATUs; Expropriation of land for public utility

reasons; The transfer from state ownership to that of the local administration of some lands/buildings targeted by investment projects.

Limited skills and human resources of local governments to provide certain public services (e.g. in the social, cultural, sports, etc.) and digitization. Continuous training of local public administration staff in priority areas for the implementation of the strategy and ensuring a high level of quality of life.

## **Institutional framework for the implementation, monitoring and evaluation of the Sustainable Development Strategy of Bihor County for the period 2021 - 2027**

The dynamic context, as well as the large volume of public investments expected to be carried out in the next period, require a flexible and flexible institutional framework for the implementation and regular monitoring of the implementation of the strategy. The management, implementation and monitoring of the implementation of the county's development strategy will be carried out by the following units:

- The Technical Directorate (TD) within the Bihor County Council;
- The monitoring commission within the Bihor County Council;
- The President's Office.

The Monitoring Commission (MC) within the Bihor County Council will be appointed by order of the President and will consist of a maximum of 10 persons representing all the departments and/or services within the Bihor County Council. The Monitoring Commission will monitor the implementation of the strategy. The main purpose of monitoring is to identify potential bottlenecks early in the implementation of the strategy and to achieve the objectives in order to take the necessary measures to eliminate these risks or mitigate their effects. The main task of the MC is to monitor the implementation of the strategy and prepare semi-annual (for the first semester of each year) and annual reports for the period 2021-2027. The MC will evaluate every six months (in the first 15 days of July) the evolution of the implementation of the strategy and will bring to the attention of the Technical Directorate and the Office of the President of the Bihor County Council the concrete measures required to achieve the objectives proposed in the strategy. By February 15 of each year, the CM will prepare an annual report monitoring the implementation of the strategy for the previous year, a report that will be brought to the attention of the Technical Department and the Office of the President of the Bihor County Council. In order to prepare the annual strategy implementation monitoring report, the Strategy Implementation Monitoring Chart will be used as a working tool (see below). The annual monitoring report will include the identified problems, delays and bottlenecks and the measures needed to resolve the issues, recover the delays and unblock the processes and projects.

The Technical Directorate (TD Bihor CC) is responsible for facilitating, initiating, developing and implementing (as appropriate) projects and indicative actions in the strategy. In this endeavor, the Technical Department of the Bihor County Council will work closely with the services and departments within the Bihor County Council that have direct responsibilities in implementing projects and indicative actions in the strategy, such as the Economic Department, Human Resources

Department, Chief Architect Department, Public Administrator, Department relations with Counselors. Also, in this endeavor, TD Bihor CC will collaborate with the public and private environment in the county. By February 15 of each year, the Technical Directorate will prepare the annual report on the implementation of the strategy for the previous year and the annual strategy implementation plan (projects in the Action Plan and indicative actions) for the following year. The plan may be revised by the Technical Directorate whenever necessary.

The Projects with Non-reimbursable Financing Service (SPFN Bihor) will provide the secretariat of the Technical Directorate and the management and implementation of the projects that fall under the direct responsibility of the Bihor County Council. The Grant Projects Service will also provide databases on the projects under the strategy, provide information on the legal framework for project implementation and ensure project development and implementation planning. In the second half of February of each year, a meeting will be held on the stage of implementation of the strategy, which will be attended by the staff of the Monitoring Commission, the staff of the Technical Directorate and the staff with management positions in other departments and departments of the County Council. At this meeting:

- The MC will present the annual implementation monitoring report;
- The Technical Directorate of Bihor County Council will present the annual activity report and the annual implementation plan for the current year.

## Updating the strategy

The strategy can be reviewed annually or whenever necessary, which requires updates to the proposed interventions - directions of action, indicative actions, projects - in order to achieve the desired development vision or adjustments to the indicators. The update will be made by decision of the County Council, at the substantiated proposal of the management of the institution, of the departments within it, of the county councilors or of the stakeholders.

The situations that may require the revision of the strategy are those related to the updating and prioritization of projects and updating of funding sources of proposed projects with the approval of funding programs for the period 2021-2027 or sectoral or national strategies, which may require an update of projects, directions of action and indicative actions proposed in the Integrated Strategy for Sustainable Development of Bihor County 2021 - 2027.

## The monitoring Chart for the implementation of the Strategy

In the following lines, we present the **Monitoring Chart for the implementation of the Integrated Sustainable Development Strategy of Bihor County for the period 2021 - 2027**, which includes the monitoring indicators relevant for the specific key objectives of the strategy. The monitoring of the implementation of the strategy will be done annually by the MC based on the indicators in the table below. The evaluation of the implementation of the strategy will be done at the end of the strategic cycle. This can be done by the MC and by the Technical Directorate or by a specialized external entity. The final

evaluation of SIDD Bihor will be made after the end of the validity period of the document (2027), within the process of updating the strategic documents for the multiannual programming period 2027 - 2033.

The final evaluation report (final) of the implementation of SIDD Bihor will contain the following sections:

- Introduction: information on the period covered by the evaluation report, evaluation objectives, methodology and data sources used, difficulties encountered in applying the methodology;
- Presentation of the degree of achievement of the indicators in relation to the targets assumed for 2027;
- Detailed analysis of the actual impact in terms of reduction or disappearance of strategic hazards in the section on strategic profile;
- Assessing the sustainability of the results obtained (e.g. the degree of use of the infrastructure or services developed, operating and maintenance costs, etc.);
- Analysis of the degree of achievement of the specific objectives, of the problems and difficulties in achieving them, of the realism and of the reasons that prevented their achievement, if applicable;
- Analysis of the reasons that were the basis for success or failure in implementing the directions of action and projects included in SIDD Bihor;
- Analysis of the risks manifested (expected and not expected) during the implementation of SIDD Bihor;
- Highlighting the lessons learned from the implementation of SIDD Bihor in order to improve the strategic planning process at county level and its result for the period following 2027;
- Final conclusions - a general assessment of the successful implementation of SIDD Bihor.

According to the European Commission's Handbook on Sustainable Urban Development Strategies in 2020, in order to ensure the quality of indicators, they must meet certain criteria. We consider that these principles are also applicable in the case of the Sustainable Development Strategy of Bihor County for the period 2021 - 2027. Thus, in accordance with the Commission's guidelines on better regulation, the result indicators should be:<sup>51</sup>

- Relevant - closely related to the objectives to be achieved;
- Accept - by staff and stakeholders. The role and responsibilities of the indicator must be well defined;
- Credible for non-experts, unambiguous and easy to interpret. The indicators should be as simple and robust as possible;
- Easy to monitor - data collection should be possible at low cost;
- Resistant to manipulation.

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<sup>51</sup> [https://ec.europa.eu/info/sites/info/files/file\\_import/better-regulation-toolbox-41\\_en\\_0.pdf](https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-41_en_0.pdf)

**Graph for monitoring the implementation of the Integrated Sustainable Development Strategy of Bihor County for the period 2021-2027 - proposed indicators**

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
1. Knowledge-based economic development	1.1. <i>The development of the high-tech industry and the increase of up to 7% of the share of employees and up to 14% of the turnover of the companies in the field until 2027, compared to 2019.</i>	<ul style="list-style-type: none"> <li>The share of turnover and the number of employees in the high-tech industry</li> </ul>	<ul style="list-style-type: none"> <li>The share of employees in the high-tech industry in 2019 - 4%</li> <li>The share of CA of the high-tech industry in 2019 - 8%</li> </ul>	<ul style="list-style-type: none"> <li>The share of employees in the high-tech industry in 2027 - 7%</li> <li>The share of CA of the high-tech industry in 2027 - 14%</li> </ul>	•	
	1.2. <i>Development of knowledge-intensive services so that they generate over 8% of the total turnover and concentrate over 13% of the total number of employees of local companies by 2027</i>	<ul style="list-style-type: none"> <li>The share of turnover and the number of employees of knowledge-intensive services</li> </ul>	<ul style="list-style-type: none"> <li>The share of CA in knowledge-intensive services in 2019 - 6%</li> <li>The share of employees in knowledge-intensive services in 2019 - 11%</li> </ul>	<ul style="list-style-type: none"> <li>The share of CA in knowledge-intensive services in 2027 - 8%</li> <li>The share of employees in knowledge-intensive services in 2027 - 13%</li> </ul>	•	
	1.3. <i>Development of research and development activities by tripling compared to 2019 the expenditures allocated to this type of activities until 2027</i>	<ul style="list-style-type: none"> <li>Total expenses from the research-development activity</li> </ul>	<ul style="list-style-type: none"> <li>5,871,000 lei in 2020</li> </ul>	<ul style="list-style-type: none"> <li>17,613,000 lei in 2027</li> </ul>	•	
2. Entrepreneurship development (economic, social and cultural) at local level	2.1. <i>Development of business support structures by setting up 5 new industrial parks in the county by 2027</i>	<ul style="list-style-type: none"> <li>No. of industrial parks</li> </ul>	<ul style="list-style-type: none"> <li>8 industrial parks in 2021</li> </ul>	<ul style="list-style-type: none"> <li>12 industrial parks in 2027</li> </ul>	•	
	2.2. <i>Development of the entrepreneurial ecosystem by operationalizing at least three structures to promote and support entrepreneurship (business incubators, business accelerators, technology and science parks,</i>	<ul style="list-style-type: none"> <li>Number of structures for promoting, supporting and supporting</li> </ul>	<ul style="list-style-type: none"> <li>0 business incubators</li> <li>0 technology and science parks</li> <li>0 innovation grants</li> </ul>	<ul style="list-style-type: none"> <li>1 business incubator</li> <li>1 technology and science park</li> <li>1 innovation grant</li> </ul>	•	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	<i>innovation grants, project competitions, smart parks, etc.) in the county by 2027</i>	entrepreneurship by categories: business incubators, business accelerators, technology and science parks, innovation grants, project competitions, smart parks, etc.	<ul style="list-style-type: none"> <li>0 project competitions</li> </ul>	<ul style="list-style-type: none"> <li>4 project competitions for awarding grants to SMEs in the newly created industrial parks</li> </ul>		
	<i>2.3. Development of the SME sector, development materialized in turnover higher by 30% (in nominal terms) and by 15% more employees in local SMEs by 2027, with a focus on the services sector</i>	<ul style="list-style-type: none"> <li>Turnover and number of employees of SMEs in the county</li> <li>The turnover of and the number of employees of SMEs in the field of services in the county</li> </ul>	<ul style="list-style-type: none"> <li>CA SME - 28 billion lei (2019)</li> <li>Employees of SMEs - 97.6 thousand (in local active companies) in 2019</li> </ul>	<ul style="list-style-type: none"> <li>CA SME - 35 billion lei (2027)</li> <li>Employees of SMEs - 112.24 thousand (in local active companies) in 2027</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>2.4. Increasing the level of adaptability and resilience of the local economy by facilitating the digitization of business models and improving entrepreneurial indicators: increasing the number of start-ups by 10% and the density of enterprises by 7% by 2027</i>	<ul style="list-style-type: none"> <li>Number of enterprises established annually</li> <li>Density of enterprises</li> </ul>	<ul style="list-style-type: none"> <li>Enterprises established in 2018: 6.9 new enterprises/1000 inhabitants</li> <li>Density of enterprises in 2018: 48.8 active enterprises/1000 inhabitants in 2018</li> </ul>	<ul style="list-style-type: none"> <li>Enterprises established in 2027: 7.59 new enterprises/1000 inhabitants</li> <li>Density of enterprises in 2027: 52.2 active enterprises/1000 inhabitants</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	<i>2.5. Entrepreneurship development in the field of social economy so that the number of certified/certified social enterprises to increase at least to 4 by 2027</i>	<ul style="list-style-type: none"> <li>Number of certified/certified social enterprises</li> </ul>	<ul style="list-style-type: none"> <li>1 certified social enterprise</li> </ul>	<ul style="list-style-type: none"> <li>4 certified social enterprises</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
3. Increasing the quality of life	<i>3.1 Reducing the existing discrepancies between urban and rural areas through investments in water and sewerage networks, natural gas distribution, electricity, etc. By 2027, the aim is to reduce to 5% of ATUs that are not served by water networks, to 40% of ATUs that are not served by sewerage networks, to 70% of ATUs that are not served by water networks. gas network.</i>	<ul style="list-style-type: none"> <li>The share of ATUs in rural areas in the county that are not served by utility networks - water, sewerage, gas</li> <li>Percentage of dwellings with sewage installation in the dwelling in rural areas</li> </ul>	<ul style="list-style-type: none"> <li>11.9% (12 out of 101) ATUs are not served by centralized public water networks in 2020</li> <li>80% (73 out of 91) of the communes are not served by the sewerage network in 2019</li> <li>85% (77 communes) of communes did not have a gas network in 2020</li> <li>47.54% of households had a sewerage installation in their homes in rural areas in 2011 (in urban areas they had 92.59%)</li> </ul>	<ul style="list-style-type: none"> <li>5% of ATUs that are not served by centralized public water networks in 2027</li> <li>20.67% of communes are not served by the sewerage network in 2027</li> <li>80% communes that are not served by the gas network in 2027</li> <li>65% of homes have a sewerage installation in their homes in rural areas in 2027</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>3.2. Increasing the quality, functionality and accessibility of health infrastructure at county level by rehabilitating and modernizing existing infrastructure or creating new infrastructure by 2027 (including the development of telemedicine infrastructure) so that at least</i>	<ul style="list-style-type: none"> <li>Citizens satisfaction with medical services</li> </ul>	<ul style="list-style-type: none"> <li>57% of the inhabitants of the county are satisfied or very satisfied with the medical services,</li> </ul>	<ul style="list-style-type: none"> <li>70% of the inhabitants of the county are satisfied or very satisfied with the medical services, according to the</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	<i>70% of the county's residents are satisfied or very satisfied with medical services.</i>		according to the <i>Study on the Quality of Life in Bihor County, 2021</i>	<i>Study on the Quality of Life in Bihor County, 2027</i>		
	<i>3.3. Increasing the quality, functionality and accessibility of cultural infrastructure by rehabilitating and modernizing existing infrastructure and/or creating new units by 2027, so that at least 45% of the county's inhabitants are satisfied or very satisfied with cultural activities.</i>	<ul style="list-style-type: none"> <li>● Citizens satisfaction with cultural activities</li> </ul>	<ul style="list-style-type: none"> <li>● 33% of the inhabitants of the county are satisfied or very satisfied with the cultural activities, according to the <i>Study on the Quality of Life in Bihor County, 2021</i></li> </ul>	<ul style="list-style-type: none"> <li>● 45% of the inhabitants of the county are satisfied or very satisfied with the cultural activities, according to the <i>Study on the Quality of Life in Bihor County, 2027</i></li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>	
	<i>3.4. Increasing the quality, functionality and accessibility of infrastructure and social services by rehabilitating and modernizing existing infrastructure and / or creating new units by 2027, so that at least 50% of the county's residents are satisfied or very satisfied with social services.</i>	<ul style="list-style-type: none"> <li>● Citizens satisfaction with social services</li> </ul>	<ul style="list-style-type: none"> <li>● 38% of the inhabitants of the county are satisfied or very satisfied with the social services, according to the <i>Study on the Quality of Life in Bihor County, 2021</i></li> </ul>	<ul style="list-style-type: none"> <li>● 50% of the inhabitants of the county are satisfied or very satisfied with the social services, according to the <i>Study on the Quality of Life in Bihor County, 2027</i></li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>	
	<i>3.5. Development of opportunities and leisure facilities in OMA and in the urban localities in the county, so that at least 55% (compared to 43%, as in 2021) of the inhabitants to declare themselves satisfied or very satisfied with the recreation/leisure facilities free at county level until 2027.</i>	<ul style="list-style-type: none"> <li>● Citizens satisfaction with the opportunities for recreation and leisure</li> </ul>	<ul style="list-style-type: none"> <li>● 43% of the inhabitants of the county are satisfied with the opportunities to spend their free time, according to the <i>Study on the Quality of Life in Bihor County, 2021</i></li> </ul>	<ul style="list-style-type: none"> <li>● 55% of the inhabitants of the county are satisfied with the opportunities to spend their free time, according to the <i>Study on the Quality of Life in Bihor County, 2027</i></li> </ul>		

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	<i>3.6. Development of the non-governmental sector in priority areas (social economy, culture, civic participation, education, environmental protection), by financing dedicated programs at county level with minimum annual allocations of at least 150,000 lei starting in 2023.</i>	<ul style="list-style-type: none"> <li>Annual value of allocations for the non-governmental sector in priority areas (social economy, culture, civic participation, education, environmental protection)</li> </ul>	<ul style="list-style-type: none"> <li>0 lei in 2021</li> </ul>	<ul style="list-style-type: none"> <li>150,000 lei yearly starting 2023</li> </ul>		
4. Developing sustainable tourism BASED on local identity, heritage and heritage resources	<i>4.1. Achieving a sectoral strategy for tourism development in Bihor County by 2023.</i>	<ul style="list-style-type: none"> <li>Sectorial strategy in the field of tourism</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>1 sector strategy in the field of tourism developed by the end of 2023</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>4.2. Creation or reorganization by 2023 of a body responsible for monitoring the performance of tourism in Bihor County, analysis of statistical data, as a catalyst for regional tourism.</i>	<ul style="list-style-type: none"> <li>Body responsible for monitoring tourism performance in Bihor County</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>Body responsible for monitoring tourism performance in Bihor County starting 2023</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>4.3. Improving the urban planning and land management system by creating by 2023 a framework to prevent unsustainable real estate development and environmental degradation in areas with tourist potential</i>	<ul style="list-style-type: none"> <li>County legal framework to prevent unsustainable real estate development and environmental degradation in areas with tourist potential PATJ will be completed in 2022</li> </ul>	<ul style="list-style-type: none"> <li>Outdated PATJ since 2021</li> </ul>	<ul style="list-style-type: none"> <li>Updated PATJ starting 2022</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>4.4. Creating a tourist brand of Bihor County until 2024.</i>	<ul style="list-style-type: none"> <li>Tourist brand of Bihor County</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>Tourist brand of Bihor County starting 2024.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	4.5. 30% increase in the number of tourists by 2027, compared to 2019.	● Number of tourist arrivals in tourist accommodation units in the county	● 540,675 arrivals in 2019	● Over 702,800 arrivals in 2027	●	
	4.6. Increasing the efficiency of the use of tourist accommodation structures, respectively increasing the occupancy rate to 55% by 2027 (from 44.2% in 2019).	● Occupancy rate of tourist accommodation structures	● 44.2% in 2019	● 55% in 2027	●	
5. Development of the pre-university and university education system in relation to the strategic priorities of the county	5.1 Construction of an Educational Hub in the county, in the next 4 years.	● Educational Hub	● 0 in 2021	● 1 in 2025	●	
	5.2 . Creating/operationalizing a center of excellence in the next 5 years.	● Center of excellence	● 0 in 2021	● 1 in 2026	●	
	5.3 Creation of 5 dual education programs in 5 high schools in the county until 2026.	● Dual education programs	● 0 in 2021	● 5 in 2026	●	
	5.4. Support the development of a functional system to stimulate the performance of pupils, students and teachers.	● annual inter-school competitions in priority areas	● 0 in 2021	● 1 starting 2024	●	
	5.5. Digitization of schools in municipalities and cities in the county until 2027.	● % digitized schools in municipalities and cities	● 0% in 2020 (out of 95 units)	● 75% in 2027	●	
	5.6. Development and modernization of the educational infrastructure by creating a school campus in the county by 2026.	● No. of school campuses	● 0 in 2021	● 1 in 2026	●	
	5.7. Establishment by 2026 of a county center for school and professional guidance in order to facilitate the market insertion of graduates.	● county centers for school and professional guidance	● 0 in 2021	● 1 in 2026	●	
	5.8. Digitization of the county library network until 2027.	● % digitized libraries	● 10% in 2021	● 80% in 2027	●	
6. Development of the	6.1. Carrying out a census of the situation of the cultural heritage in the county until 2024.	● Census of cultural heritage in the	● 0	● 1 Census of cultural heritage in the	●	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
cultural sector and creative industries in connection with the valorization of cultural heritage		county		county by 2024		
	6.2. Encourage the development of the creative industries sector so that its share in the local economy reaches 5% of turnover and 7% of the total number of employees by 2026.	<ul style="list-style-type: none"> <li>The value and share of turnover and the number of employees in the creative industries sector</li> </ul>	<ul style="list-style-type: none"> <li>CA - 2,1% in 2018</li> <li>Employees – 3,3% in 2018</li> </ul>	<ul style="list-style-type: none"> <li>CA – 5 % in 2027</li> <li>Employees– 7% in 2027</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
7. Increasing the administrative capacity at the level of local administrations and county administration	7.1. Implementing a GIS system at county level to provide transactional digital services to citizens and companies by 2025.	<ul style="list-style-type: none"> <li>IS system implemented, functional</li> <li>The share of CC's GIS-based digital transactional services</li> </ul>	<ul style="list-style-type: none"> <li>GIS system not implemented and not working in 2021</li> <li>0% transactional digital urban services of the CJ in 2021</li> </ul>	<ul style="list-style-type: none"> <li>GIS system implemented at county level until 2025</li> <li>40% of GIS services are digital by 2025</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	7.2. Increase the percentage of urban documents submitted digitally from about 10% in 2020, to over 40% by 2024, through a dedicated digital service.	<ul style="list-style-type: none"> <li>Percentage of urban planning documents submitted digitally or requested online by citizens</li> </ul>	<ul style="list-style-type: none"> <li>about 10% of documents submitted online in 2020</li> </ul>	<ul style="list-style-type: none"> <li>40% of urban planning documents submitted or received by citizens online in 2024</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	7.3. Increasing the number of town halls in the county that use a digital document management system from 11 to 50 by 2025.	<ul style="list-style-type: none"> <li>Number of town halls that use the digital document management system</li> </ul>	<ul style="list-style-type: none"> <li>11 City Halls out of 101 use the digital document management system (in 2020)</li> </ul>	<ul style="list-style-type: none"> <li>50 City Halls that use the digital document management system from 2025</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	7.4. Enrollment of all town halls in the county in ghiseul.ro until 2025.	<ul style="list-style-type: none"> <li>Percentage of town halls registered in ghiseul.ro</li> </ul>	<ul style="list-style-type: none"> <li>5% in 2020</li> </ul>	<ul style="list-style-type: none"> <li>All ATU town halls (101) allow the payment of taxes and fees through ghiseul.ro</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	<i>7.5. Continuous improvement of the digital competencies of the employees of the local public administration in the county, through the annual participation of at least 10% of the officials from the local public institutions in training courses (cyber security, digitization, GDPR, data analysis, etc.).</i>	<ul style="list-style-type: none"> <li>Percentage of employees who have taken training courses in the digital field</li> </ul>	<ul style="list-style-type: none"> <li>0% in 2020</li> </ul>	<ul style="list-style-type: none"> <li>10% of LPA officials attend training courses annually</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
8. Balancing territorial development at county level	<i>8.1. Reduction by at least 10% by the end of 2027 of the development gap between urban and rural localities of Bihor County.</i>	<ul style="list-style-type: none"> <li>Composite index for local development such as IDSL or IDUL</li> </ul>	<ul style="list-style-type: none"> <li>IDUL urban 2018- 55.8</li> <li>Rural IDUL 2018- 50</li> <li>Minimum ID - Drăgești - 32.4</li> <li>IDUL Maxim - Oradea - 70.4</li> </ul>	<ul style="list-style-type: none"> <li>IDUL urban 2027- 65</li> <li>IDUL rural 2027- 61</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>8.2. Increasing the quality of living conditions in all urban and rural communities in the county. By the end of 2027, the increase of 15% of the number of thermally rehabilitated buildings and of 5% of the living space per capita will be pursued. It will also aim to increase by 10% the degree of satisfaction of the inhabitants towards the living space.</i>	<ul style="list-style-type: none"> <li>Living space/inhabitant (sqm/inhabitant)</li> <li>The level of satisfaction of the inhabitants with the living space</li> </ul>	<ul style="list-style-type: none"> <li>Living space/inhabitant in 2020 - 19.91</li> <li>The level of satisfaction of the inhabitants towards the living space in 2020 - 80%, of which 43% are very satisfied and 37% are satisfied.</li> </ul>	<ul style="list-style-type: none"> <li>Living area/inhabitant in 2027 - 20.90</li> <li>The level of satisfaction of the inhabitants towards the living space in 2027 –90%, of which 55% are very satisfied and 35% are satisfied.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	
	<i>8.3. Emphasizing the coordinating and guiding role of Bihor County Council in spatial planning and urban/ rural development processes.</i>	<ul style="list-style-type: none"> <li>Nr. pilot projects/coordination and guidance activities</li> </ul>	<ul style="list-style-type: none"> <li>0 in 2021</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 4 until by 2027</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
9. Increasing internal and international connectivity (road, railway, airport, digital)	9.1. 30% increase in passenger volume on domestic air traffic and 35% on external routes by 2027, compared to 2018.	<ul style="list-style-type: none"> <li>Annual number of passengers at the airport by categories - domestic flights and external flights</li> </ul>	<ul style="list-style-type: none"> <li>93,368 passengers domestic flights in 2018</li> <li>126,644 passengers foreign flights in 2018</li> </ul>	<ul style="list-style-type: none"> <li>Over 121,300 passengers domestic flights in 2027</li> <li>Over 164,600 passengers foreign flights in 2027</li> </ul>	•	
	9.2. Improving the county roads in Bihor County by increasing to 95% the percentage of county roads modernized by 2027.	<ul style="list-style-type: none"> <li>% modernized county roads</li> </ul>	<ul style="list-style-type: none"> <li>85% in 2021</li> </ul>	<ul style="list-style-type: none"> <li>95% in 2027</li> </ul>	•	
	9.3. Development and improvement of local public transport systems in Bihor County so that the number of passengers will increase by 2027 by 30% compared to 2019.	<ul style="list-style-type: none"> <li>Number of ATUs with public transport in the county</li> <li>The number of passengers using public transport in the county</li> </ul>	<ul style="list-style-type: none"> <li>6 ATUs with public transport in 2021</li> <li>12370 tram passengers in 2020</li> <li>9845 passengers by bus and minibus in 2020</li> </ul>	<ul style="list-style-type: none"> <li>6 ATUs with public transport in the county 2027</li> <li>Over 16,000 tram passengers in 2027</li> <li>More than 12,500 bus and minibus passengers in 2027</li> </ul>	•	
	9.4. Development in small towns (at least in 3 cities by 2027) of bicycle infrastructure as an alternative to public transport and cars such as	<ul style="list-style-type: none"> <li>Km existing bike path, on ATUs</li> <li>The annual number of people using the bike-sharing system</li> </ul>	<ul style="list-style-type: none"> <li>60 km of bike path in the county (in OMA) in 2021</li> </ul>	<ul style="list-style-type: none"> <li>100 km of bike path in the county in 2027</li> </ul>	•	
	9.5. Construction of the bypass of Beiuș, Aleșd and the Oradea-Arad express road until 2026.	<ul style="list-style-type: none"> <li>Bypass belts</li> <li>Express roads</li> </ul>	<ul style="list-style-type: none"> <li>1 bypass belt in 2021</li> <li>0 express roads in 2021</li> </ul>	<ul style="list-style-type: none"> <li>3 in 2027</li> <li>1 express road in 2027</li> </ul>	•	
10. Developing a performing agricultural sector, based on association and modern and ecological	10.1. Developing and consolidating entrepreneurship and forms of association/partnership in agriculture so that the turnover in agriculture in 2025 will double that of the existing one in 2018	<ul style="list-style-type: none"> <li>Turnover in the Agriculture sector</li> <li>Number of agricultural cooperatives in the county</li> </ul>	<ul style="list-style-type: none"> <li>CA in agriculture in 2018 - 1.48 billion lei in 2019</li> <li>43 agricultural cooperatives in the county in 2020</li> </ul>	<ul style="list-style-type: none"> <li>CA in agriculture in 2027 - 2.96 billion lei in 2027</li> <li>50 agricultural cooperatives in the county in 2027</li> </ul>	•	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
approaches, able to bring great added value						
11. Conservation, improvement of environmental factors and adaptation to climate change	11.1 Re-engineering of classic energy production systems, by stimulating the use of alternative energy sources and optimizing and modernizing road transport, so that the number of exceedances of air parameters will decrease by 25% by 2026.	•	•	•	•	
	11.2 Increase by 2027 by at least 30% the energy efficiency of the buildings belonging to the Bihor County Council	• % Increasing the energy efficiency of CC's buildings	• 0 in 2021	• With 30% higher in 2027	•	
	11.3 Implementation of the strategy on energy efficiency and security of Bihor County by 2026.	• Strategy on energy efficiency and security of Bihor County	• 0 in 2021	• 1 in 2026	•	
	11.4 Improving air quality monitoring systems by setting up 4 more automatic stations in the county by 2026	• Air quality monitoring systems	• 4 in 2021	• 8 in 2026	•	
	11.5 Increasing the share of the county's population connected to sewage systems with wastewater treatment from 41.3% in 2020 to 60% by 2027	• % Population connected to sewage systems with wastewater treatment	• 41% in 2020	• 60% in 2027	•	
		• Number of ATUs with urban profile with mechanical-biological and tertiary treatment plants	• 3 in 2015	• 7 in 2027	•	
	10.6 Increasing the share of population connected to centralized drinking water	• % Population connected to	• 59% in 2019 (88% in urban areas and	• 80% in 2027 (96% in urban areas and	•	

Strategic objectives	Key-specific objectives	Monitoring indicators	Value at the beginning of the period/to which it relates	Target value	Value at the end of the year monitored	Comments and recommendations
	<i>systems from 59% in 2019 to 80% in 2027.</i>	centralized drinking water systems	33% in rural areas)	60% in rural areas)		
	<i>11.7 Development of the selective waste collection system so that the degree of selective collection will reach from 45% in 2021 to 65% in 2027.</i>	● % Selective waste collection	● 45% in 2021	● 65% in 2027	●	
	<i>11.8 Implementation of a digitalized measurement system for household waste collection to ensure the principle "pay as you throw away" by 2024.</i>	● Digitized measurement system for household waste collection	● 0 in 2021	● 1 in 2024	●	

### Appendix 2: Criteria for prioritizing strategic projects from the Integrated Sustainable Development Strategy of Bihor County 2021 – 2027

#### Final version

Measuring scale: 1 - 5

- 1. Existence of funding source:** mostly external source - EU grants - 5 points; mostly external source - national non-reimbursable funds - 4 points; majority own budget - 3 points; without identified source of funding - 1 point.
  - **Weight: 20%**
- 2. Number of beneficiaries/target group of the project:** the entire population of the county - 5 points; population of more than 6 ATUs - 4 points; population of 4 - 5 ATUs - 3 points; population of 2 - 3 ATUs - 2 points; population of an ATU - 1 point.
  - **Weight: 15%**
- 3. Degree of maturity of the project:** signed contract - 5 points; SF/DALI/business plan - 4 points; opportunity study - 3 points; project sheet - 2 points; project idea - 1 point.
  - **Weight: 10%**
- 4. Environmental policy/Positive impact on the environment:** has a high positive impact on the environment, significantly contributing to the reduction of CO<sub>2</sub> and pollutants and the increase of energy efficiency - 5 points; has a medium positive impact on the environment, contributing to the reduction of CO<sub>2</sub> and pollutant emissions and to the increase of energy efficiency - 3 points; has no positive impact on the environment - 1 point.
  - **Weight: 10%**
- 5. Correlation with the development strategy (specific objectives to which the project contributes):** contributes to the achievement of more than 3 specific objectives - 5 points; contributes to the achievement of 2 specific objectives - 3 points; contributes to the achievement of a single specific objective - 1 point.
  - **Weight: 25%**
- 6. Urgency and importance of solving the problem:** it is urgent and very important - 5 points; it is urgent and important - 4 points; it is important, but not urgent - 3 points; it is neither urgent nor important - 1 point.
  - **Weight: 20%**

**Other possible criteria, in case of an equal score:**

- **Responds to the needs of citizens** (highlighted in the opinion poll on quality of life and in the minutes of debates): yes - 5 points; no - 1 point.
- **Meets the needs of the economic environment** highlighted in the opinion poll (on quality of life and in the minutes of the debates): yes - 5 points; no - 1 point.
- **Contributes to increasing social inclusion**: yes - 5 points; no - 1 point.
- **Maintenance and upkeep costs**: requires low maintenance and upkeep costs - 5 points; requires average maintenance and upkeep costs - 3 points; requires high maintenance costs - 1 point. requires maintenance and maintenance costs after completion of the project - yes - 1 point, no - 5 points.

## Appendix 3

Appendix 3: Prioritized list of strategic projects of Bihor county for the period 2021 - 2027

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
1	17	Environment	Extension and consolidation of the integrated waste management system in Bihor County (SMID II)	5	5	2	5	3	5	4.2
2	22	Environment	Development of ecological septic tanks in the mountain area	5	5	2	5	3	5	4.2
3	10	Energy efficiency	Energy efficiency - CC headquarters Republicii street	5	5	5	5	1	5	4
4	32	Environment	Arrangement of four waste collection points located in Beiuș, Salonta, Marghita and Aleșd	5	5	5	5	1	5	4

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
5	11	Energy efficiency	Increasing energy efficiency at Nucet Psychiatric Hospital	5	5	4	5	1	5	3.9
6	58	Administrative capacity	Elaboration of the Improvement Plan for the territory of Bihor County	5	5	5	3	1	5	3.8
7	15	Tourism	Integrated project for the promotion of mountain tourism in Bihor	3	4	2	1	5	5	3.75
8	13	Transport and mobility	Purchase of non-polluting means of transport	5	5	2	5	1	5	3.7

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
9	23	Road infrastructure	Oradea-Arad Expressway	5	5	4	3	1	5	3.7
10	24	Road infrastructure	Aleşd belt	5	5	4	3	1	5	3.7
11	25	Road infrastructure	Beiuş belt	5	5	4	3	1	5	3.7
12	27	Transport and mobility	Airway access to Oradea Airport Cargo Terminal and Oradea Airport Cargo Terminal	5	5	4	3	1	5	3.7
13	28	Transport and mobility	Development and modernization of airport infrastructure at Oradea Airport	5	5	4	3	1	5	3.7
14	29	Transport and mobility	Increasing the degree of security and safety at Oradea airport	5	5	4	3	1	5	3.7

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
15	9	Health	Health facilities and facilities - Integrated project on Medical Services and Emergency Services in Bihor County	5	5	2	3	1	5	3.5
16	67	Tourism	Restoration of wooden churches - historical monuments	5	4	2	3	3	3	3.45
17	21	Transport and mobility	Stations for public transport	5	5	5	3	1	3	3.4
18	1	Economy	Establishment of Aleşd Industrial Park	5	4	2	3	1	5	3.35
19	2	Economy	Establishment of Marghita Industrial Park	5	4	2	3	1	5	3.35

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
20	3	Economy	Establishment of Beiuș Industrial Park	5	4	2	3	1	5	3.35
21	4	Economy	Establishment of Ștei Industrial Park	5	4	2	3	1	5	3.35
22	12	Transport and mobility	Arrangement of bicycle tracks in Bihor county	5	5	2	5	1	3	3.3
23	59	Transport and mobility	Development and optimization of the public transport system in Bihor County	5	5	2	5	1	3	3.3
24	60	Energy efficiency	Increasing the energy efficiency of the Gheorghe Șincai County Library	5	5	2	5	1	3	3.3
25	5	Education	Digitization of school networks in the municipalities and cities of Bihor County	5	5	2	1	1	5	3.3

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
26	6	Administrative capacity	Digitization of public services offered by CC Bihor and subordinate institutions	5	5	2	1	1	5	3.3
27	20	Economy	Dairy factory	5	5	2	1	1	5	3.3
28	57	Education	Establishment of the Bihor County Center for School and Vocational Guidance	5	5	2	1	1	5	3.3
29	61	Education	Increasing the degree of digitalization of the library network in Bihor County	5	5	2	1	1	5	3.3

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
30	19	Tourism	Aquapark Beiuș	5	4	2	1	3	3	3.25
21	33	Road infrastructure	Capital repairs and restoration of bridges on DJ 792 A Beliu-Tinca-Leș, km 24+987-67+696	5	4	5	3	1	3	3.25
32	36	Road infrastructure	Modernization of DJ 768 A Șoimi-Suplacu de Tinca-Capilna	5	4	5	3	1	3	3.25
33	37	Road infrastructure	Slope stabilization, DJ 108K Bulz-Remeți	5	4	5	3	1	3	3.25
34	38	Road infrastructure	Northern Transylvania Regional Route; Apuseni Road; Rehabilitation and modernization of DJ 764A, DJ 104J L	5	4	5	3	1	3	3.25

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
			total=43,375km, Bihor county							
35	39	Road infrastructure	Modernization of DJ 797A Bicaciu-Ianoșda, km 2+993-km 8+321.88, L=5.328 km	5	4	5	3	1	3	3.25
36	40	Road infrastructure	Modernization DJ795A Oșand-Sumugiu	5	4	5	3	1	3	3.25
37	41	Road infrastructure	Arrangement of intersection and drainage works on DJ108I in Telechiu locality, Țețchea commune	5	4	5	3	1	3	3.25
38	42	Road infrastructure	Road connecting Oradea and Sânmartin commune	5	4	5	3	1	3	3.25
39	44	Road infrastructure	Rehabilitation and modernization of DJ 795 Salonta-Tinca, sector from km 0+000 to km 23+320, L=23,320 km	5	4	5	3	1	3	3.25
40	49	Road infrastructure	Bridge on DJ 764 H in Nimăiești	5	4	5	3	1	3	3.25

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
41	51	Road infrastructure	Increasing accessibility on county roads in the Oradea Metropolitan Area Lot 1 - Oșorhei, DJ Oșorhei - Copăcel	5	4	5	3	1	3	3.25
42	52	Road infrastructure	Increasing accessibility on county roads in the Oradea Metropolitan Area Lot 2 -	5	4	5	3	1	3	3.25
43	66	Tourism	Arrangement of fortresses in Bihor county	5	4	2	1	3	3	3.25
44	31	Education	School Campus in Oradea	5	5	5	1	1	3	3.2
45	35	Road infrastructure	Rehabilitation and modernization of DJ 767: DN76 (Saturday) -Dobrești, sector from km 0+000 to km 9+332 and DJ 767C: DJ 767 (Dobrești)- Luncașprie - DJ 764, sector from km 0+000 to km 11+672, L total=20,964 km	4	5	5	3	1	3	3.2

Ranking	No.	Domain	Title/project description	Funding source - 20%	Number of beneficiaries/target group of the project - 15%	The degree of maturity of the project - 10%	Framing in environmental policies/Positive impact on the environment - 10%	Correlation with the development strategy (specific objectives to which the project contributes) - 25%	The urgency and importance of solving the problem - 20%	Total score
46	63	Economy	Business development program	3	4	1	1	3	5	3.15
47	43	Road infrastructure	Bridge and connecting road to DJ 768A	5	4	4	3	1	3	3.15
48	45	Road infrastructure	DJ 767D upgrade; Vîrciorog-Călățeș (DJ 764); km2+100-10+550, L=8.45 km	5	4	4	3	1	3	3.15
49	46	Road infrastructure	Modernization DJ763 Padiș - Ic Ponor km 35+100-44,845, L=9,745 km	5	4	4	3	1	3	3.15
50	47	Road infrastructure	Rehabilitation of DJ 795 A, Șumugiu-Mierlău sector - DJ 768 km 11+744-km 19+956, L=8,212 km	5	4	4	3	1	3	3.15

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51	48	Road infrastructure	Rehabilitation of DJ 190 G Almaşu Mare Intersection - Sălaj County Boundary, km 8+950 - km 12+350, L=3,400 km	5	4	4	3	1	3	3.15
52	50	Road infrastructure	Bridge over the sewer on DJ 797A	5	4	4	3	1	3	3.15
53	18	Tourism	Bihor Village Museum - Traditional Crafts	5	5	4	1	1	3	3.1
54	30	Energy efficiency	Building repation on Moscovei street no. 5	4	5	2	5	1	3	3.1
55	34	Road infrastructure	Rehabilitation and modernization of DJ 764, Beiuş-Roşia-Aştileu, sector from km 31+000 to km 64+655, L= 33,655 km	4	4	5	3	1	3	3.05

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56	14	Road infrastructure	Ensuring traffic safety conditions in Bihor county - Intervention equipment on county roads	3	5	5	1	1	4	3
57	53	Road infrastructure	Increasing the accessibility on the county roads in the Oradea Metropolitan Area Lot 3 (Bypass of Biharia locality)	5	4	2	3	1	3	2.95
58	54	Road infrastructure	Oradea metropolitan road ring	5	4	2	3	1	3	2.95
59	55	Road infrastructure	Bypass on DJ 792A - Tinca locality	5	4	2	3	1	3	2.95
60	56	Road infrastructure	County Road DJ 764L; Delani (DJ764) -Beiuș (DN76)	5	4	2	3	1	3	2.95
61	7	Transport and mobility	Realization of the county public transport dispatcher Operational Command Center for the Public Passenger Transport Service in Bihor County	5	5	2	1	1	3	2.9

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62	8	Transport and mobility	Integrated e-ticketing system Țării Crișului Museum	5	5	2	1	1	3	2.9
63	26	Tourism	Multifunctional Cultural Center - Romanian-Hungarian cross-border cultural laboratory	5	5	2	1	1	3	2.9
64	16	Tourism	Cave arrangement in Bihor County	3	4	2	1	3	3	2.85
65	62	Tourism	Development of cultural tourist routes in Bihor County	5	4	2	1	1	3	2.75

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66	64	Social	NGO sector development program	3	4	1	1	1	5	2.65
67	65	Social	Social development program	3	4	1	1	1	5	2.65