

## URBAN REGENERATION – INDICATORS FOR MONITORING AND EVALUATING THE PROCESS

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**ABSTRACT:** *This article aims, in a first step, to identify the indicators used by different scientific publications to evaluate and monitor the complex process of urban regeneration. Starting from this inventory, in a second stage, the analyzes carried out aim to identify the most relevant indicators available in Romanian statistics, at the level of urban localities, in order to outline a possible system of indicators for the evaluation and monitoring of urban regeneration. As result were identified 112 indicators which capture defining elements of the urban regeneration process, which can be an important support for decision-makers in organizing the process.*

**Keywords:** *urban regeneration, urban strategy, sustainable development, case studies, monitoring indicators*

**JEL Classification:** *O18; R51; J18.*

### 1. INTRODUCTION

Urban regeneration must start with a vision and include broad and integrated measures to identify and solve problems affecting the area under review. This will improve the economic, physical, social and environmental conditions of the neighborhood, city and region. The process of improving the quality of life in areas identified by local actors as degraded, as well as brownfields, historically destroyed or damaged areas, is known as urban regeneration.

According to the scientific literature, urban regeneration is based on three main pillars: physical, economic and social. Interventions are proposed for each of the three pillars by creating an urban regeneration plan after the assessment of the respective area and according to the results. Also, an integrated approach to economic, social, demographic and environmental issues is the only way to guarantee the success of urban regeneration projects, as well as ensuring sustainable urban development.

Interventions for urban regeneration must respect the following principles: maintaining the uniqueness and specificity of the place; economic and sustainable revitalization of built

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heritage; establishing and/or developing a local partnership; integrated planning of operations aiming at sustainable development and regeneration.

In the context of the complexity of the urban regeneration process, its monitoring and evaluation involves the selection of a set of indicators, extremely diverse, which provide an image of the whole, but also the interconnections between its various components.

Starting from a synthetic characterization of the urban regeneration process, this article aims to identify the indicators used so far in the evaluation and monitoring process in other countries, as a first step in building a set of indicators for the evaluation of the urban regeneration process in Romania, taking into account the statistical information available at city level from different official sources.

## **2. MONITORING AND EVALUATION OF THE URBAN REGENERATION PROCESS**

As economic development consumes renewable or less renewable resources, it influences the ecological balance of the environment. In this context, the goal of sustainable development and regeneration is to find a development model that balances the pillars of sustainable development: economic and technological, social and human.

Sustainable urban regeneration and development can be achieved in a variety of ways, using a variety of interventions, which are needed by different communities and different types of people. These needs can be communicated to the public administration in different ways.

Solutions for urban intervention programs are difficult to identify and apply. Usually, these intervention methods involve well-defined processes, but do not include the possibility of unforeseen situations from the perspective of local dynamics (Valente, 2013). Innovative programs must include tracking and evaluation mechanisms. Others, on the other hand, require the creation of their own indicators to measure the impact of urban regeneration interventions.

Decision-makers have an important task to measure, track and evaluate urban regeneration, as these actions are usually carried out in partnership with the local community and it is essential to demonstrate the benefits of the projects. If it is found that the actions do not lead to the expected results, monitoring through a system of collecting and reporting the results of the interventions helps to correctly estimate them and to take remedial measures effectively. Thus, timely new steps can be taken to reorient interventions to achieve desired outcomes.

Ministers laid the foundations of a tool for creating integrated and sustainable urban policies, a Reference Framework for Sustainable Communities (CRCS) (European Commission, 2019) at the time of the creation of the Leipzig Charter. The CRCS helps to define the integrated interventions that are essential for an integrated urban regeneration. Through a system of indicators, this interactive web facilitates discussions about integrated and sustainable urban development. It also provides a tool for qualitative assessment.

This framework is designed to support the achievement of objectives that are organized around the four pillars of support: economy, social, environment and administration. This tool helps track the progress of urban revitalization plans over time (Winter, 2018).

## **3. INDICATORS USED IN THE EVALUATION AND MONITORING OF THE URBAN REGENERATION PROCESS**

The aim of urban regeneration is to solve urban problems and bring long-term physical, social, economic and environmental improvements to an area in need of change.

Indicators must be identifiable, measurable and easily understood elements that measure the elements considered essential to the urban regeneration process. They must be

correlated with the objectives of the process, the way the activities are carried out, the calendar, the resources, the target group and other elements identified by the analysis techniques used.

To build the system of monitoring indicators, it is necessary to find the information that is needed to determine the level of performance of a program. This is done using sound analysis methods and in relation to the needs that have been identified through the SWOT analysis.

The process of selecting indicators for evaluating the performance of regeneration on sustainability criteria is directly affected by their use. Regeneration actions can be evaluated and analyzed using indicators that are relevant to the community. An indicator should be measured systematically. Debts should be collected by independent entities that are not directly involved in the process. Data may come from a variety of different sources. These include the project or program documents containing the theory and the funding request, as well as inputs, the program schedule and primary sources such as official statistics, reports and research, as well as observations, sociological surveys and interviews.

The general purpose of indicators is to provide reasonable, measurable and verifiable information about the current situation. In order to monitor and report conditions and processes more effectively, as well as to improve data collection and storage capacity, indicator systems were needed.

There are several trends in the development of indicator systems that can be identified based on the current literature. First of all, they involve redefining the concepts of socio-economic development, standard of living and quality of life. The frequent re-evaluation and reconstruction of the composite indices, as well as the introduction of new indices when necessary, constitute a second line of development (Pronk, J. and Haq, M., 1992).

The development of cities will determine the future of Europe, according to the EU's Urban Agenda. This is because the complex process of urban regeneration requires cooperation with a variety of regional and national policies, as well as the use of local energy and experiences generated by non-conventional actors of urban development (European Investment Bank, 2005).

In social terms, sustainable urban regeneration means the compatibility of economic efficiency with social equity, which are characteristics of the competitive market, and the equitable distribution of benefits from environmental protection activities.

Urban regeneration helps to achieve the environmental objectives of the European Union by creating cities where the environment is protected (with efficient energy, clean water, clean air, accessible and livable open spaces). To maintain socioeconomic cohesion, as imbalances occur at different levels, including urban functional areas, cities and urban regions; obvious economic disparities are obstacles to economic progress in general, regardless of the size of the region in which they occur. For this reason, engines must be developed to propagate the methods identified by local actors to improve the quality of life.

The use of indicators to assess change in social studies has spread worldwide since the early 1990s (Wong, 2006). The systematic progression of indicators from abstract notions to particular and tangible measures to provide policy information is the foundation of their value as a type of knowledge. Over the last generation, the idea of monitoring changes in certain indicators has been continuously explored to evaluate the results of initiatives (Reeve et al, 2008). Based on the features that the research framework highlighted, a subset of circumstances was identified to allow for a full assessment.

Unlike other forms of intervention, which prioritize only the value of the land and preserve it through traumatic demolitions and by replacing the rest of the entire urban capital and, most regrettably, the social one, an integrated urban regeneration operation "aims to optimize, conserve and revalue the whole existing urban capital (social, built environment, heritage, etc.)".

To meet the expectations of everyone, regardless of financial level, "measures should be taken to make cities attractive again", and the fulfillment of these objectives can only be determined by the local community. Questionnaire is one of the methods of analysis that distinctly defines the requirements of the community. The findings of this analysis technique "should encourage all levels of government to consider these imbalances in all urban sector policies that are part of integrated urban regeneration strategies" (Committee of Regions, 2010).

The needs of the local community can be examined using a questionnaire to ensure that all variables contributing to the decline of the study area are taken into account.

Depending on the interpretations of the results of the application of this questionnaire, it is possible to precisely identify the area that needs to be revitalized, for which to develop specific programs of urban regeneration, to identify creative ways of using the available space, to improve the quality of the services offered by the city and to solve the problems identified on the 3 levels of major importance for the development of the city; economic, social and environmental.

A comparative indicator of life expectancy, literacy, education and living standards is the human development index (HDI). It is a useful tool to compare the development levels of nations, other than GDP per capita, which only considers material well-being and ignores other socio-economic indices. Mahbub ul Haq, a Pakistani economist, created this index. Each year, the United Nations Development Program updates the human development index for most UN members, which is then published in the Human Development Report. In 2016, the latest Human Development Index was created using projections from 2015. The HDI divides nations into four index categories: extremely high, high, medium, and poor (Mărginean, 2019).

Such a tool would also be extremely useful at the level of urban localities. But the lack of city-level statistical information is an important constraining factor.

#### **4. OUTCOME INDICATORS FOR THREE CASE STUDIES - MODELS OF URBAN REGENERATION**

The result indicators of the urban regeneration project can take different forms depending on the specifics of the project, objectives and funding sources. The following example shows the outcome indicators for three urban regeneration models that have succeeded in the EU Member States.

##### **3.1 The London Docklands (1981-1998)**

The 2,200 ha of land was surrounded by the East London urban grid, which included 710 ha of brownfields and 180ha of water.

After they were contaminated, the docks were removed. On site, 40,000 employees lived in outdated and inconvenient housing. To create "a new city within the city", all industrial or sea activities were stopped or relocated.

For the development and implementation of the project, the state selected Docklands Corporation (LDDC) as the main contractor.

The method was largely empirical and had no plan or strict zoning. LDC had a conversation with developers whose proposals were accepted by most people. Emphasis was placed on developing multiple functions, preserving as many existing buildings as possible, such as renovated warehouses, and preserving all of the sea-related heritage of the past. Additionally, 150,000 trees were planted as part of the project.

Global raters:

- The population grew to 80,000 and was largely revitalized by the emergence of the new middle class. 7,700 houses were renovated and 19,000 new homes were built and sold;
- The local economy underwent a complete transformation as 2.3 million cubic meters of industrial space was built for light industries such as printing and service activities, as well as 1 million cubic meters of office space on Canary Wharf.
- A higher education institution was built and established.
- A lot of hotels were built and established.
- Compared to the 27,000 jobs proposed by the project, 100,000 jobs were created in total.

Sufficient urban mobility and rail traffic were weak points, but these issues have been resolved.

### **3.2 Barcelona (1979-2003)**

The regeneration of Barcelona took place in extremely different areas, all with different interventions from complete renovation operations to specific rehabilitation programs.

First of all, the area that was revitalized was the former port, which had 56 hectares of platforms, docks and piers where activity had been suspended for a long time. The aim of the urban regeneration project was to build public spaces as well as commercial and leisure areas. Following the Olympics, defunct industrial land was used to build 150 ha of sports buildings and housing for athletes. These properties are now fully owned, as well as a marina and 40 ha of public space.

In the old working-class neighborhood of Barceloneta, the urban regeneration project was also implemented there. Authorities helped landlords renovating rental properties with government funds. This helped to maintain the population.

The old town is now under a new urban regeneration project. A plan for the rehabilitation of 17,000 homes was drawn up and 4,200 obsolete buildings were demolished and others were turned into cultural centers.

Other districts of the city are still undergoing the urban regeneration project, which includes the construction of new universities and libraries.

### **3.3 Marseilles – Euromediterranean (1995-2010)**

The operation began in 1995 and took 15 years to consolidate and economically revitalize the 310 ha area in the city center, which included old housing, port areas, warehouses, railways and a high-speed train station.

A public organization, which receives financial support from the state and local authorities, was appointed as the main contractor by the state. The organization was able to meet the demands and needs of the autonomous port development project which is still ongoing by the local authority.

According to the initial assessment, changes are needed on several levels:

1. new activities focusing on cultural (Palais de la Méditerranée) and artistic aspects (transformation of a tobacco factory);
2. new structures built to house high-tech centers, offices and business locations;
3. creating large public open spaces to meet the requirements of port authorities;
4. rebuilding areas that have been affected and turned into ghettos;
5. the development of a stronger central area and an upgraded high-speed train (TGV) station.

The newly built area should be able to accommodate twice its original population of 30,000 people and provide 30,000 jobs, according to the urban regeneration plan.

As a result of the non-heterogeneity of the Euro-Mediterranean territory, the interventions were carried out in eight strategic locations.

## 5. AN ASSESSMENT AND MONITORING OF URBAN REGENERATION IN ROMANIA. CASE STUDY

Urban regeneration is a process that addresses urban problems and ensures a long-term improvement of the economic, physical, social and environmental aspects of the area. Urban regeneration is a challenging process because it must address multiple dimensions to successfully respond to social issues that are becoming increasingly urgent in Romania's cities and regions, such as urban sustainability, climate change, innovation and digitalization.

In this context, it is important to identify strategies at the local level that are intended to address the various challenges that the community is currently facing. These approaches must take into account development principles and local development priorities, as well as be included in integrated strategies that will later be found in investment programs and accompanying projects.

A managerial process known as strategic planning has the role of creating and maintaining a real correspondence between the objectives, resources and available possibilities of the city. Urban regeneration aims to improve living conditions, organize public space, provide sustainable solutions for urban mobility, increase quality of life, etc. in difficult urban regions.

A dynamic economy, strengthening urban resilience to natural disasters and the effects of climate change, as well as protecting and promoting built heritage are tasks that can be more easily managed when connected to the desired effects established through the local strategic framework.

In this complex context, in Table 1 we have summarized the indicators available in Romanian statistics regarding different components of urban regeneration.

**Table:** List of available indicators at city level in the statistic of Romania

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
1.	Equipment of the territory	DER109A - Amount of drinking water distributed to consumers for domestic use that returns on average per inhabitant (Cubic meters/inhabitant)	2000-2021	eDemos database, National Institute of Statistics
2.	Equipment of the territory	DER110A - The amount of natural gas distributed for domestic use that returns on average per inhabitant (Cubic meters/inhabitant)	2000-2021	eDemos database, National Institute of Statistics
3.	Equipment of the territory	DER103A - Capacity of drinking water production facilities per inhabitant (Cubic meters per day/inhabitant)	2000-2021	eDemos database, National Institute of Statistics
4.	Equipment of the territory	GOS107A - Capacity of drinking water production facilities - Cubic meters per day	2000-2021	eDemos database, National Institute of Statistics

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
5.	Equipment of the territory	GOS111A - Flow rate of stations in operation for wastewater treatment - Cubic meters per day	1993-2000	eDemos database, National Institute of Statistics
6.	Equipment of the territory	GOS111A - Flow rate of stations in operation for the treatment of residual water - Cubic meters per day	1993-2000	eDemos database, National Institute of Statistics
7.	Equipment of the territory	GOS109A - Distributed thermal energy - Gigacalories	1993-2021	eDemos database, National Institute of Statistics
8.	Equipment of the territory	GOS105A - Length of modernized city streets - Km	1990-2021	eDemos database, National Institute of Statistics
9.	Equipment of the territory	GOS110A - Simple total length of sewage pipes - Km	1990-2021	eDemos database, National Institute of Statistics
10.	Equipment of the territory	GOS106B - The total length of the simple drinking water distribution network- Km	1990-2021	eDemos database, National Institute of Statistics
11.	Equipment of the territory	GOS104A - Length of city streets - Km	1990-2021	eDemos database, National Institute of Statistics
12.	Equipment of the territory	GOS116A - Total length of gas distribution pipelines - Km	1990-2021	eDemos database, National Institute of Statistics
13.	Equipment of the territory	GOS116A - Total length of gas distribution pipelines - Km	1990-2021	eDemos database, National Institute of Statistics
14.	Equipment of the territory	GOS102A - Urban area of municipalities and cities - hectares	1993-2021	eDemos database, National Institute of Statistics
15.	Equipment of the territory	GOS103A - Area of green spaces (municipalities and cities) - hectares	1993-2021	eDemos database, National Institute of Statistics
16.	Equipment of the territory	DER139A - Share of the length of modernized streets in the total length of city streets (%)	1990-2021	eDemos database, National Institute of Statistics
17.	Equipment of the territory	DER141A - Proportion of the length of city streets with sewer network in the length of city streets (%)	1990-2021	eDemos database, National Institute of Statistics
18.	Equipment of the territory	DER142A - Share of the length of city streets with gas network in the length of city streets (%)	1990-2021	eDemos database, National Institute of Statistics
19.	Equipment of the territory	DER140A - Share of the length of city streets with water network in the length of city streets (%)	1990-2020	eDemos database, National Institute of Statistics
20.	Equipment of the territory	DER145A - Area in municipalities and cities covered with green spaces per capita (square meters/inhabitant)	1993-2021	eDemos database, National Institute of Statistics

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
21.	Equipment of the territory	DER157A - Cars registered per 1,000 inhabitants (Cars/ 1000 inhabitants)	2015-2021	eDemos database, National Institute of Statistics
22.	Equipment of the territory	WEB21 - Cars - natural persons (Number)	2015-2021	eDemos database, National Institute of Statistics
23.	Culture and art	DER146A - Visitors to museums and public collections per 1000 inhabitants (Visitors/1000 inhabitants)	2005-2021	eDemos database, National Institute of Statistics
24.	Culture and art	ART121A - Personnel employed in libraries - number of people	2015-2021	eDemos database, National Institute of Statistics
25.	Culture and art	ART104A - Museums and public collections - number	2005-2017	eDemos database, National Institute of Statistics
26.	Culture and art	ART103B - Institutions and companies of performances or concerts	1990-2017	eDemos database, National Institute of Statistics
27.	Culture and art	DER143A - Degree of access of the population to means of information and culture (Libraries/ 1000 inhabitants)	1995-2021	eDemos database, National Institute of Statistics
28.	Culture and art	DER114A - Providing local communities with volumes available to the general public (Volumes/ 1000 inhabitants)	2015-2021	eDemos database, National Institute of Statistics
29.	Culture and art	DER144A - Active readers per 1000 inhabitants (Persons/ 1000 inhabitants)	2015-2021	eDemos database, National Institute of Statistics
30.	Workforce	FOM104D - Average number of employees	1991-2021	eDemos database, National Institute of Statistics
31.	Workforce	DER125A - Average number of employees in active non-agricultural enterprises per 1,000 inhabitants (Employees/ 1,000 inhabitants)	2010-2021	eDemos database, National Institute of Statistics
32.	Workforce	DER126A - Average number of employees in active non-trade enterprises per 1,000 inhabitants (Employees/ 1,000 inhabitants)	2010-2021	eDemos database, National Institute of Statistics
33.	Workforce	DER112A - Registered unemployed returning on average per 100 employees (unemployed per 100 employees)	2010-2021	eDemos database, National Institute of Statistics
34.	Population	DER111A - Infant mortality rate (Deaths under 1 year/ 1000 live births)	1990-2021	eDemos database, National Institute of Statistics
35.	Population	DER153A - Natural population increase (Persons)	1990-2021	eDemos database, National Institute of Statistics



No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
36.	Education	DER113A - Students from primary and secondary education (including special education) returning on average to one teaching staff (Students/teacher)	1992-2021	eDemos database, National Institute of Statistics
37.	Education	DER158A - The workload of a preschool teacher (Preschoolers/teacher)	1992-2021	eDemos database, National Institute of Statistics
38.	Education	DER136A - Gross enrollment rate of children in preschool education (%)	1992-2021	eDemos database, National Institute of Statistics
39.	Economic development	DER127A - Entrepreneurial capacity (Newly created enterprises/ 1000 inhabitants)	2010-2020	eDemos database, National Institute of Statistics
40.	Economic development	DER131A - Turnover per capita in non-trade businesses (lei/employee)	2010-2021	eDemos database, National Institute of Statistics
41.	Economic development	DER124A - Density of active non-trade enterprises (Enterprises/ 1000 inhabitants)	2010-2021	eDemos database, National Institute of Statistics
42.	Economic development	DER123A - Density of active enterprises (Enterprises/ 1000 inhabitants)	2010-2021	eDemos database, National Institute of Statistics
43.	Economic development	DER117A - Tourist arrivals per inhabitant on average (Number)	2005-2021	eDemos database, National Institute of Statistics
44.	Economic development	DER128A - Natural growth of enterprises (‰)	2010-2020	eDemos database, National Institute of Statistics
45.	Safety and public order	WEB3 - Crimes investigated and solved by the police (Number)	2015-2021	eDemos database, National Institute of Statistics
46.	Safety and public order	WEB3 - Crimes investigated and solved by the police (Number)	2015-2021	eDemos database, National Institute of Statistics
47.	Safety and public order	JUS105C - Convicted/permanently sanctioned persons in penitentiaries (including detention centers and educational centers)	2015-2021	eDemos database, National Institute of Statistics
48.	Safety and public order	JUS105C - Convicted/permanently sanctioned persons in penitentiaries (including detention centers and educational centers)	2015-2021	eDemos database, National Institute of Statistics
49.	Control of administrative activity	WEB19 - The existence of an independent web page	2015-2021	eDemos database, National Institute of Statistics
50.	Control of administrative activity	DER155A - The degree of trustworthiness of the web page (if any) as assessed by PageRank (Rating from 0 (absence) to 10 (maximum trust))	2015-2021	eDemos database, National Institute of Statistics

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
51.	Control of administrative activity	DER120A - Residents returning on average to an employee from the local public administration (Residents/employee from the local public administration)	2015-2021	eDemos database, National Institute of Statistics
52.	Control of administrative activity	WEB5 - Employees from the local public administration (Persons)	2015-2021	eDemos database, National Institute of Statistics
53.	Health protection	DER2002 - Population access to the dentist (Residents/dentist)	1993-2021	eDemos database, National Institute of Statistics
54.	Health protection	DER2001 - Access of the population to the doctor - exclusively dentist (Residents/ doctor)	1992-2021	eDemos database, National Institute of Statistics
55.	Health protection	DER154A - Access of the population to permanent medical services (Units/1000 inhabitants)	2015-2021	eDemos database, National Institute of Statistics
56.	Health protection	DER138A - Access of the population to dental services/dental medicine (Cabinets/1000 inhabitants)	2005-2021	eDemos database, National Institute of Statistics
57.	Health protection	DER151A - Prevalence of cardiovascular diseases (patients/ 1000 inhabitants)	2015-2021	eDemos database, National Institute of Statistics
58.	Local finance	WEB13 - Total expenses (execution of the local budget) (Lei)	2015-2021	eDemos database, National Institute of Statistics
59.	Local finance	WEB15 - Total expenses with investments from the local budget (Lei)	2015-2021	eDemos database, National Institute of Statistics
60.	Local finance	DER147A - Budget deficit/surplus (%)	2015-2021	eDemos database, National Institute of Statistics
61.	Local finance	DER150A - The degree of realization of own revenues at the local budget (%)	2015-2021	eDemos database, National Institute of Statistics
62.	Local finance	DER149A - Share of investment expenses in total expenses in the execution of the local budget (%)	2015-2021	eDemos database, National Institute of Statistics
63.	Local finance	DER148A - Share of own revenues in total local budget revenues (%)	2015-2021	eDemos database, National Institute of Statistics
64.	Local finance	WEB14 - Own revenues obtained at the local level (Lei)	2015-2021	eDemos database, National Institute of Statistics
65.	Local finance	WEB16 - Forecast own revenues of the budget at the local level (Lei)	2015-2021	eDemos database, National Institute of Statistics

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
66.	Local finance	WEB20 - Total revenues to the local budget (Lei)	2015-2021	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
67.	Local finance	Total revenues (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
68.	Local finance	Own revenues (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
69.	Local finance	Dividends from income tax (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
70.	Local finance	Amounts allocated from the income tax quotas for balancing local budgets (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
71.	Local finance	Amounts broken down from VAT for the financing of decentralized expenses at the level of communes, cities, municipalities, sectors and the municipality of Bucharest (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
72.	Local finance	Amounts broken down from VAT for roads (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
73.	Local finance	Amounts broken down from VAT for balancing local budgets (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
74.	Local finance	Amounts broken down from VAT for the financing of the Program for the development of infrastructure and sports facilities in rural areas (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
75.	Local finance	Amounts broken down from the value added tax for the financing of accredited private or confessional education (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
				at the level of UAT (lei)
76.	Local finance	Subsidies (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
77.	Local finance	Amounts received from the EU/other donors on account of payments made and pre-financing (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
78.	Local finance	Amounts received from the EU/other donors on account of payments made and pre-financing (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
79.	Local finance	Other income (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
80.	Local finance	Total expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
81.	Local finance	Personnel expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
82.	Local finance	Expenditure on goods and services (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
83.	Local finance	Interest expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
84.	Local finance	Expenditures with subsidies (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
85.	Local finance	Expenditure on projects with financing from non-reimbursable external funds (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
86.	Local finance	Social welfare expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
87.	Local finance	Other expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
88.	Local finance	Capital expenditure (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
89.	Local finance	Payments made in previous years and recovered in the current year (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
90.	Local finance	Expenditure on general public services (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
91.	Local finance	Defense, public order and national security expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
92.	Local finance	Education expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
93.	Local finance	Health expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
94.	Local finance	Expenditures for culture, recreation and religion (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
				at the level of UAT (lei)
95.	Local finance	Insurance and social assistance expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
96.	Local finance	Expenditure on housing, services and public development (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
97.	Local finance	Environmental protection expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
98.	Local finance	Fuel and energy expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
99.	Local finance	Transportation expenses (lei)	1999-2020	Ministry of Public Finance database - Revenues and expenses at the level of UAT (lei)
100.	Agriculture, forestry, environment	DER101A - Current expenses from the local budget for environmental protection, per inhabitant (Lei/ inhabitant)	2015-2020	eDemos database, National Institute of Statistics
101.	Agriculture, forestry, environment	DER102A - Investments from the local budget for environmental protection per inhabitant (Lei/ inhabitant)	2015-2020	eDemos database, National Institute of Statistics
102.	Agriculture, forestry, environment	DER106A - Amount of household and assimilable waste collected per inhabitant (Kilograms/ inhabitant) – population and economic units, mixed	2015-2020	eDemos database, National Institute of Statistics
103.	Agriculture, forestry, environment	DER107A - Recovery rate of household and assimilable waste (%) - population, mixed	2015-2020	eDemos database, National Institute of Statistics
104.	Agriculture, forestry, environment	DER106A - Amount of household and assimilated waste collected per inhabitant – collected separately (Kilograms/ inhabitant)	2015-2020	eDemos database, National Institute of Statistics
105.	Agriculture, forestry, environment	DER106A - Amount of household and assimilated waste collected per	2015-2020	eDemos database, National Institute of Statistics

No. crt.	Territorial indicator category	Indicator name	The period for which it is available	Data source
		inhabitant - bulky waste (Kilograms/inhabitant)		
106.	Agriculture, forestry, environment	DER107A - Recovery rate of household and assimilable waste (%) - unit ec, in mixture	2015-2020	eDemos database, National Institute of Statistics
107.	Agriculture, forestry, environment	DER107A - Recovery rate of household and assimilable waste (%) – unit ec, bulky waste	2015-2020	eDemos database, National Institute of Statistics
108.	Agriculture, forestry, environment	DER2000 - Degree of cover with forests and other types of forest vegetation (%)	2010-2014	eDemos database, National Institute of Statistics
109.	Life quality	Poverty	2018	MMJS-SIPOCA database 4
110.	Life quality	Working poverty	2018	MMJS-SIPOCA database 4
111.	Life quality	Existing social services	2018	MMJS-SIPOCA database 4
112.	Life quality	Social services required	2018	MMJS-SIPOCA database 4

## 6. CONCLUSIONS

Urban regeneration is the process by which local authorities collaborate with partners – private organizations, public organizations and civil society organizations – to improve the quality of life of the local community, improve the local business environment and create the conditions for economic growth and place-making for work. This is beneficial to both local communities and the environment at the local level

Many global elements support regeneration and sustainable development, but local efforts are also affected. Studies have shown that people who are an important part of the local or regional community tend to invest only when local circumstances are favorable.

Investors are interested in a number of "localized" factors when choosing a country for the year to invest. These include market linkage, availability of human resources, land and basic infrastructure, cooperating local public authorities, high quality local services, standard of living that would motivate management and employees to want to live near their company, etc. Local actions have an impact on many of these factors (European Commission, 2017).

Urban regeneration plans must be implemented independently and will necessarily include a series of actions with different clear implementation deadlines. The results of the urban regeneration process can be tracked using the previously mentioned indicators to evaluate the impact of this process on the sustainable development of the studied area, through the composite indicator Urbanization Index, which consists of individual indicators that together reflect the state of the study area and the most important, a signal to the local authorities to mark the moment when it is important to start these urban regeneration actions, and to determine local development and to help the local community by attracting investors, by defining new specializations that create places of specialized work and to keep the workforce in the community.

A cross-sectoral response that includes government employment, skills and economic development policies is often required as local issues become more complex. The local level is where government policies can be successfully applied to solve specific problems.

Indicators must be identifiable, measurable and easily understood elements that measure the elements considered essential to the urban regeneration process. They must be correlated with the objectives of the process, the way the activities are carried out, the calendar, the resources, the target group and other elements identified by the analysis techniques used.

To build the system of monitoring indicators, it is necessary to find the information that is needed to determine the level of performance of a program. This is done using sound analysis methods and in relation to the needs that have been identified through the SWOT analysis.

The process of selecting indicators for evaluating the performance of regeneration on sustainability criteria is directly affected by their use. Regeneration actions can be evaluated and analyzed using indicators that are relevant to the community.

In addition, the funding proposals available today can support workers through the digital and green transition by investing in skills opportunities that will enable them to succeed in a more digital, climate neutral and inclusive society. The crisis response system for future emergencies is another aspect that can be influenced by the urbanization indicator, so that actions are adapted to future needs.

The development of cities will determine the future of Europe, according to the EU's Urban Agenda. This is because the complex process of urban regeneration requires cooperation with a variety of regional and national policies, as well as the use of local energy and experiences generated by non-conventional actors of urban development (European Investment Bank, 2005).

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