

EUROPEAN UNION FUNDING SUPPORT TO LATVIAN MUNICIPALITIES FOR DEGRADED AREAS REVITALIZATION

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Abstract

The formation and existence of degraded areas is one of the consequences of civilization, which has a negative impact on both the environment and economic development in the municipality. The problem of degraded areas has been faced by all countries worldwide, including Latvia, when as a result of the change of the state political system in the 1990s after the collapse of the Soviet system, a large number of inactive production companies appeared, resulting in a significant number of polluted / degraded areas. To solve the existing problem, local governments in Latvia use European Regional Development Fund (ERDF) funding under the Operational Program 'Growth and Employment' 5.6.2, specific support objective 'Revitalization of territories by regenerating degraded areas in accordance with local government integrated development programs' (SSO 5.6.2) to ensure the sustainable development of the territory by revitalizing degraded areas. In the implementation of projects, local governments must ensure the fulfilment of the indicators planned in the projects in the following groups of indicators: the area of degraded areas has been renewed, adapted for the location of new businesses or expansion of existing businesses in order to promote employment and economic activity in local governments; new jobs created in supported areas; non-financial investments made by businesses located in the supported territory in their own intangible investments and fixed assets. Therefore, it is necessary to evaluate the indicators of the implemented projects in order to be able to draw conclusions about the financial aspects of the project implementation and the progress of the project implementation.

Key words: degraded area, revitalization, municipality, EU fund.

Introduction

Across Europe, including Latvia, the existence of degraded areas is a challenge for municipalities in developing spatial improvement plans and planning funding for their return to the economy. In order to find solutions, the municipality must include these areas in its development planning documents and draw up a plan for their renewal or revitalization. The term "revitalization" has been studied in the theoretical literature in connection with the restoration and redevelopment of degraded areas, the return of derelict land to green areas and the elimination of soil pollution. The analysis of theoretical aspects of the revitalization of urban degraded areas shows that the concept of 'revitalization' has become particularly relevant in recent years and is often used for changes in urban planning and the environment defined as operations, including rehabilitation, reconstruction and modernization aimed at transforming, for economic and social purposes, a building, site or city that has been destroyed or abandoned, creating new, usable values (Wilkosz-Mamcarczyk & Wilczkeiwicz, 2015).

Urban planning is focused on the principles of sustainable development, in the implementation of which the municipality has to face various challenges: to be able to meet the needs of all stakeholders in the field of land use, address environmental issues, address real estate availability, and promote business development (Cappai, Forgues, & Glus, 2019). Development planning in local governments is aimed at solving current problems in the territory of a particular local government with the funds at

its disposal, as well as using Europe Union (EU) structural funds. By including degraded areas in their development programs, the municipality commits to investing in the revitalization of these areas.

Latvian municipalities can apply for support from EU funds by implementing the SSO 5.6.2 project program, which aims at revitalization of territories, regeneration of degraded areas in accordance with municipal development programs, ensuring environmentally friendly and environmentally sustainable territorial growth and job creation (Ministry Cabinet Regulation No.645, 2015). In accordance with the EU Council Decision on the EU Multiannual Framework for 2014-2020, Latvia has received 4.4 billion Euros (EUR 4,418.233) for the implementation of Cohesion Policy objectives through EU funds (ERDF, ESF and CF) (Ministry of Finance of the Republic of Latvia, 2022), including revitalization of degraded areas. In order to be able to provide recommendations to local governments in the future work in the process of revitalization of degraded areas, it is necessary to evaluate the project indicators achieved during the EU funds planning period 2014-2020.

The aim of the article is to study the available EU support for the revitalization of degraded areas for Latvian municipalities and to analyse the indicators of municipal projects.

Materials and Methods

The following research methods were used in the research: first, analysis of theoretical literature sources. The authors chose this method because it

provides an opportunity to analyse theoretical aspects of the revitalization of degraded areas, as well as the role of the municipal planning process in the revitalization of degraded areas, using the sources of scientific literature. An analytical approach was used in the study of theoretical literature sources, resulting in collection of the obtained data. The analysis of theoretical literature sources is based on scientific publications, conference proceedings, and project management books. Second, the authors used the method of statistical data analysis in the research to analyse the results of the projects by determining their arithmetic mean by groups of indicators, the standard deviation for each group of indicators and checking the data with the Mann Whitney Test. This method makes it possible to determine the dispersion rate of projects submitted by municipalities, providing a statement on the level of homogeneity of projects. The statistical data used were the results of SSO 5.6.2 projects compiled by the Ministry of Environment Protection and Regional Development (MEPRD), as well as publicly available statistical information on the total acquisition of ERDF funding by municipality (Ministry of Finance of the Republic of Latvia, 2020). To determine how ERDF funding correlated with project indicators, the authors used the correlation method to calculate the Pearson Correlation Coefficient project performance indicators in terms of absorbed ERDF funding and total project funding. As a result, it is possible to determine which of the project performance indicators correlates more significantly with the project finances. The study analysed all Latvian municipalities that implement projects within the framework of SSO 5.6.2 (one municipality could submit several project applications in the period from 2016-2020, as project selection takes place in 3 rounds). The authors have set a long-term goal in future research to study the existing situation in the management of degraded areas in three Latvian cities – Daugavpils, Liepaja and Jelgava - therefore, in this study, the authors decided to launch part of a comprehensive study identifying the three cities as a sample in order to gain clarity on the performance and progress of the projects in these three cities. Consequently, the indicators of the sample are compared with the indicators of other municipal projects in order to find out whether there are significant statistical differences. Third, visualization of research data in a bar chart to show the relationship of the variables and comparison with other variables. Within the framework of this method, project indicators have been selected that reveal the progress of project implementation: what are the planned indicators in numerical form when submitting the project, and what is the progress of their achievement as of 08.02.2022.

Results and Discussion

After the collapse of the Soviet Union in the early 1990s, the Baltic States underwent structural changes not only in their policies but also in their economies. As a result of the changes, more and more abandoned, unused territories were created, where no economic activity took place, and their existence caused not only damage to the aesthetic image of the city, but also pollution and threats to population (Kotval, Tohvri, & Tintera, 2014). Such spots are called degraded areas, and their existence is a problem not only faced by post-Soviet countries, but also in Europe, the United States and on a worldwide scale. In the Czech Republic, for example, the existence of degraded areas became relevant with the privatization and economic restructuring processes, which mostly affected industrialized zones in cities. It can therefore be concluded that degraded areas have become one of the main constraints on the development of the area, and their existence tends to have a negative impact on the whole city, not only because of direct impact but also because of other aspects, such as rising unemployment, economic and environmental problems (Kuda, Techmann, & Szeligova, 2021).

In order to solve the problem of degraded areas, the attention and activities of urban planners should be focused on their reorientation towards the reintegration of degraded areas into economic circulation or the return of economic activity to them. Economic theorists define the term “land” as a resource that serves as an object of economic activity, infrastructure, housing, as a soil for agricultural production, and an area for social recreation (Bergh & Hubacek, 2005). To ensure its sustainability, it must be ensured that the land is used in the most efficient way (Science of Environmental Policy, 2013). The return of degraded areas for re-use is possible if a revitalization process is implemented, which in the theoretical literature means ‘the initiative of economic regeneration of degraded areas, ensuring its development potential’ (Nathanail & Pahlen, 2006). The term ‘revitalization’ is used not only to describe changes in urban planning and the landscape, but also to describe the various processes of transformation, both in architecture and in the social sciences and economics. The need for revitalization can be justified by its long-term benefits: an increase in the urban development index, a reduction in public health threats, an improved environment, and added value for business development (Dry, 2002). For the functioning of the spatial development system that ensures the revitalization of degraded areas, Adams, De Sousa and Tiesdell (2010) identified the following sequence of actions:

- 1) identification of degraded areas (their definition – typology, definition of perception criteria, database as records or register);

2) identification of potential and risks of degraded areas (analysis of conditions), environmental rehabilitation, vision of comprehensive recovery;

3) planning of the revitalization of degraded areas, development of an implementation plan, implementation of the plan, its monitoring and achievement of the objective.

Consecutive observance of the above-mentioned activities will ensure more efficient implementation of development principles for local governments. Urban development issues in municipalities are addressed in relation to the basic principles of sustainable development, which include the integration of environmental, social and economic aspects into development programs, ensuring a balanced approach to the sustainable development of urban areas (Grodac, 2011).

In this process, the municipality must find a compromise between various goals of sustainable development: the creation of the city structure, the use of land, combining it with environmental and social factors. In accordance with Section 15, Paragraph 13 of the Law on Local Governments of 9 June 1994, local governments are obliged to ensure the improvement of their administrative territory and sanitary cleanliness. According to the data of the official statistical database of Latvia, the highest concentration of population is observed in Latvian cities, which indicates that there is more economic activity than in the periphery; therefore, when planning urban development, special attention should be paid not only to economic factors but also environmental quality aspect.

By introducing a wide range of financial, fiscal, legal, regulatory and policy incentives, a municipality can ensure a successful, competitive position in degraded areas. Such incentives are particularly needed for degraded areas redevelopment to attract the attention of potential investors, as investors are largely reluctant to invest in degraded areas redevelopment based on lack of confidence about the benefits and potential risks (location, unavailability of infrastructure, reduced real estate value), uncertain investment volume (Mert, 2019). In view of the above, it can be concluded that the primary task of the municipality is to ensure favourable conditions for attracting the widest possible attention of stakeholders to the regeneration of degraded areas in order to invest their resources in the development of the area. Municipal budgets are limited and must primarily provide funding for operational needs, but successful strategic planning can provide a way to raise the interest of potential investors about investment opportunities. Thus, it can be concluded that the limited financial resources within the existing budget are one of the biggest obstacles to the revitalization of degraded areas. It should be noted that the possibilities of loans

to local governments tend to be limited, as the risk of liability associated with the repayment of the loan increases. As a result, it can be concluded that without state intervention, degraded areas are not economically competitive in the field of business development with 'green' areas (Kotval & Meitl, 2017).

Studying the international experience in countries such as the USA, the Czech Republic and Germany, which deal with the issues of the revitalization of degraded areas, the authors conclude that each of the above countries has a different approach to the use of various financial instruments. For example, the United States has established an Environmental Protection Agency (EPA), which deals with environmental issues, including the development of regulations and revitalization programs for degraded areas, environmental research, and funding for the restoration of degraded areas. According to the information published on the official website of the EPA www.epa.gov, the EPA, based on the developed rehabilitation program of degraded areas, provides financial support for:

- the assessment of degraded areas to determine the condition of the degraded area (up to USD 500,000.00 per applicant), to carry out the inventory of the site, to assess it, as well as to develop site-specific restoration plans and promote public involvement in the restoration of degraded areas;
- working capital grants to provide funding to the beneficiary in the form of loans and grants for decontamination activities in degraded areas. These grants help to strengthen the market and encourage stakeholders to attract resources for clean-up and rehabilitation of degraded areas. When the loans are repaid, the loan amount is returned to the fund and re-lent to other borrowers, providing a permanent source of capital for the society;
- degraded areas decontamination grants for privately owned areas;
- multifunctional grants to provide funding for assessment and clean-up activities in degraded areas through multi-city cooperation;
- employment grants to enable non-profit organizations, local authorities and other organizations to recruit, train workers and integrate them into the labour market in areas affected by the presence of degraded areas;
- comprehensive compensation for public bodies to enable the prevention, assessment, restoration and re-use of degraded areas in the context of sustainable development.

The above suggests that the US provides comprehensive funding opportunities not only for local governments but also for public organizations

and private owners. Such an approach creates opportunities not only for the return of degraded areas to economic circulation, but also for the public to participate in the elimination of degraded areas.

The situation in Germany is characterized by the fact that the management of degraded areas is regulated by the Federal Environment Agency. As in Latvia, the public sector is facing the challenges of today's economy, and urban budgets are becoming increasingly limited, so Germany is using public-private partnerships to revitalize degraded areas (Stadt Dortmund, 2004). Funding is provided by a variety of funding sources: EU funds (ERDF funding), the German Federal Finance Programs, the Land and Property Fund, and local funding programs such as the Social City Action Plan. Beneficiaries are municipalities, state and public organizations (Kwon & Zabel, 2020). The issues of the revitalization of degraded areas in the Czech Republic are handled by the Ministry of Regional Development, the Ministry of the Environment and the Ministry of Industry and Trade. In order to implement the revitalization projects for degraded areas, project promoters can use various loan programs with reduced interest rates, EU structural funds and various state programs for the renovation of abandoned buildings. In the Czech Republic, CZK 2 billion has been allocated from the state budget for the rehabilitation of degraded areas for 2017-2023 (Skrabal, 2018).

In Latvia, the revitalization of degraded areas is based on development planning documents developed by local governments, which take place in accordance with the Development Planning System Law (Development Planning System Law, 2009). Under the influence of this law, the local government, which implements the functions assigned to it, subordinates its development plans hierarchically to regional and national level planning documents. In Latvia, revitalization of degraded areas, based on development planning documents developed by local governments, takes place in accordance with the Development Planning System Law (Development Planning System Law, 2009). In the light of this law, the local government, which implements the functions assigned to it, subordinates its development plans hierarchically to regional and national level planning documents. For the development of the territory, local governments implement a policy aimed at growth and economic development, in the implementation of which local governments use the support of EU funds. Since Latvia became a member of the European Union, it has received EU subsidies for projects in various areas: regional and urban development, employment and social inclusion, agriculture and rural development, maritime and fisheries policy, research and innovation, and more.

Thus, it can be concluded that the main instrument for the sustainable development of the municipal territory is the projects of the EU funds, as well as the projects financed by other financial instruments, which ensure the implementation of the objectives defined in the municipal development strategies and programs. The implementation of projects is directly related to the development of the municipality in order to ensure not only the well-being of the inhabitants of its territory and the improvement of living conditions, but also to increase the attractiveness of the business environment and achieve competitive territory ratings. In order to avoid a situation when the resources available to the municipality are used for purposes other than its development and growth, it must be ensured that the municipality is able to assess the potential of the areas at its disposal, taking into account not only the physical condition and location of the land, but also by assessing the benefits that the resource can provide if it is included in the economic cycle (Stepina & Pelse, 2021). Therefore, it is necessary to set priorities in the use of resources and include solutions to the identified situations in development and investment plans.

By including degraded areas in its development plans, the municipality undertakes to take all necessary actions to return them to economic circulation. Carrying out such activities is possible by attracting the support of EU funds intended for local governments as recipients of funding. The implementation of projects takes place within the framework of the SSO 5.6.2 Operational Program, and the aim of this measure is the revitalization of territories by regenerating degraded areas in accordance with municipal development programs, ensuring environmentally friendly and environmentally sustainable territorial growth and job creation (Ministry Cabinet Regulation No. 645, 2015). As a result, municipalities will be able to invest in the rehabilitation of degraded areas and prevent pollution risks or eliminate existing pollution. In this way, the accessibility of the territory for business will be promoted and the number of newly created jobs in companies will be increased. The announcement of projects envisages 4 rounds, and the implementation of the project must achieve three outcome indicators: 1. the area of degraded areas has been renovated, adapted to accommodate new businesses or expand existing businesses in order to promote employment and economic activity in municipalities; 2. new jobs have been created in the assisted areas; 3. businesses located in the assisted area have made non-financial investments in their own intangible assets and fixed assets. The values of the output indicators are applicable if they are related to businesses that have benefited from the infrastructure investments made within the project (Ministry Cabinet Regulations No. 645, 2015). Revitalization projects for degraded areas

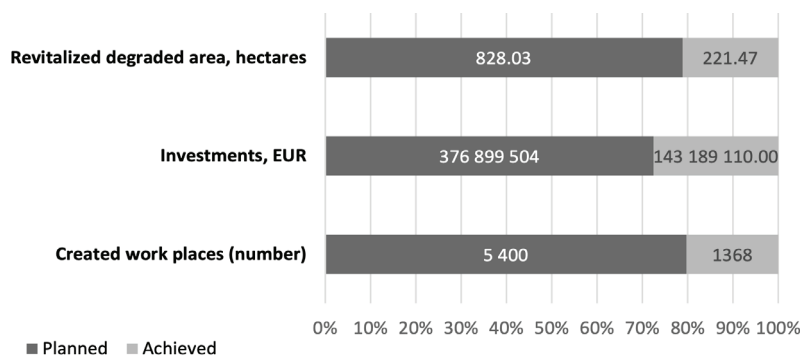


Figure 1. Execution of project indicators.

Source: author's created by MEPRD information until 08.02.2022.

are implemented in the policy area 'Environmental Protection', which is one of the areas of activity of the Operational Program "Growth and Employment".

The values of the project indicators are analysed taking into account the project results that are relevant as of 08.02.2022, according to the information provided by the MEPRD. As some of the projects are still in the implementation stage, adjustments are possible in the indicators and as a result of the projects, because in accordance with the Cabinet Regulation No. 645, the project result indicators will be achieved by 1 December 2023. According to the SSO of the EU fund Managing Authority's (Ministry of Finance) division into areas of operational support, SSO 5.6.2 is included in the field of environmental protection, but its purpose and results are of an economic

nature – creation of new jobs and attraction of non-financial investments (Figure 1).

The information in Figure 1 confirms that results of the projects planned for the moment have not been achieved to the extent that the municipalities had originally proposed. In total, 221.47 ha of degraded areas have been revitalized out of the planned 828.03 ha, 1388 job places have been created out of the planned 5400, and the amount of non-financial investments made by businesses is 1 431 879 EUR of the planned 376 899 504 EUR.

When analysing the project statistical data, the authors summarized the results of the analysis in Table 1. As mentioned above, using the method of statistical analysis, the authors investigated whether the results of three Latvian national cities' projects

Table 1
Analysis of statistical data of revitalization project indicators in the period from 2016 to 2022

Project outcome indicator	Municipality	Statistical indicators			
		n	Mean	Std. Deviation	Mann Whitney test, sig (2-tailed)*
Area of revitalized degraded areas adapted for the location of new businesses or expansion of existing businesses to promote employment and economic activity in municipalities (ha)	Jelgava, Liepaja, Daugavpils	18	10,04	9,89	0,29
	Other municipalities	95	6,36	6,42	
Number of new jobs created in supported areas (number)	Jelgava, Liepaja, Daugavpils	18	73,83	82,95	0,21
	Other municipalities	95	38,27	35,58	
Non-financial investment in intangible assets and fixed assets by merchants located in the assisted area (EUR)	Jelgava, Liepaja, Daugavpils	18	4541138,56	5976495,40	0,36
	Other municipalities	95	2448430,09	2379854,36	

*According to the results of the Kolmogorov-Smirnov test, the data do not correspond to the normal distribution.

Source: created by the authors based on Ministry of Environment and Regional Development information until 08.02.2022.

Table 2

Correlation of project indicators in the period from 2016 to 2022

Project outcome indicator	Pearson Correlation coefficient R	
	ERDF funding (EUR)	Total funding (EUR)
Area of revitalized degraded areas adapted for the location of new businesses or expansion of existing businesses to promote employment and economic activity in municipalities (ha)	0,615*	0,558*
Number of new jobs created in supported areas (number)	0,682*	0,806*
Non-financial investment in intangible assets and fixed assets by merchants located in the assisted area (EUR)	0,475*	0,561*

*Correlation is significant at the 0.01 level (2-tailed).

Source: created by the authors based on Ministry of Environment and Regional Development information until 08.02.2022.

differ significantly from the results of other municipal projects and what is the significance level of these differences (Table 1).

The indicator 'n' in the table is the sample size or number of projects. This indicates that the number of projects in the sample is 18 in the study period, while in other municipalities it is 95. The results of the analysis show that by determining their arithmetic mean value by indicator groups, it is possible to determine the standard deviation. The context of this data analysis shows that the variance of the data from the arithmetic mean is large, but the projects are heterogeneous: there are projects where the area to be regenerated is 1 ha and there are those where 15 ha are regenerated. All calculations were verified with the Mann Whitney Test. In the context of this study, the test does not show a statistically significant difference between the indicators.

In order to find out the relationship between the two project indicators, the authors performed a correlation analysis (Table 2).

With the performed correlation calculations, the authors found out how the ERDF and total funding correlate with project indicators: renewed degraded area, number of newly created jobs and non-financial investments made by businesses with their own intangible assets and fixed assets. Correlation values can range from -1 to 1; and the closer the indicator is to 0, the link between indicators tends to be nonexistent. According to the results of the study, it can be concluded that the link between the indicators is strong: the indicator "Newly created jobs" and "Restored degraded areas" are most strongly correlated. It shows that the investments made within the framework of all municipal projects are primarily based on the number of newly created jobs, and the area of restored degraded areas indicates the significance of these indicators in the context of the project.

Conclusions

1. Municipality activity of project program SSO 5.6.2. can be assessed as a high level, which shows that the long-term goals of local governments include the conditions for sustainable development and municipality are actively solving the problems caused by degraded area in their territory;
2. It is possible to attract EU funding for the revitalization of degraded area if the local government includes degraded area in municipality development planning documents, which comply with the definition of Ministry Cabinet Regulation No. 645;
3. Studying the international experience in the revitalization of degraded territories, the authors conclude that each country uses different financial support instruments to solve the revitalization of degraded territories – support from EU funds, state budget resources, comprehensive funding opportunities for public organizations and private owners;
4. MEPRD compiled data on the progress of project indicators, the project indicators planned by local governments were not fulfilled in total, as the municipality had put forward when submitting project applications for support from EU funds. Taking into account the fact that the term of project implementation in accordance with the Cabinet Regulation No. 645 has been set until December 1, 2023, the planned indicators in their numerical expression must be achieved within the set term. In order to carry out a detailed analysis at the end of the period, the reasons for the changes in the project that led to the risks of non-compliance should be examined;
5. The content of the submitted projects is not homogeneous, which is confirmed by the analysis of statistical data, which indicates that the project is implemented only by large municipalities in

terms of territory, but also by small municipalities. According to the Mann Whitney test, the heterogeneity of projects is a considerable as insignificant, which shows that the sample groups that include Jelgava, Liepaja and Daugavpils project indicators do not differ from the general group – all municipalities that have submitted project applications;

6. The calculations of the correlation analysis show that the link between the project indicators and the funding provided for the project is close – the indicator ‘Newly created jobs’ and ‘Restored degraded area’ are the most strongly correlated.

The above shows that the investments made within the framework of all municipal projects are primarily based on the number of newly created jobs and the area of restored brownfields, which indicates the significance of these indicators in the context of the project;

7. The investments made in the revitalization of municipal degraded area not only ensure the development of entrepreneurship, but also create an aesthetic urban environment and address environmental issues, ensuring the sustainable development of the territory.

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