

ANALYSIS OF ENVIRONMENTAL PROJECTS AND GREEN SPACES IN URBAN CENTERS OF ROMANIA. CASE STUDY: SOUTH MUNTENIA DEVELOPMENT REGION

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Abstract

Nature is an indispensable component of life, through the many benefits it offers, especially in the case of green spaces inside cities where the level of pollution is extremely high, and the desire to escape from everyday urban life is growing. The cities from South Muntenia development region of Romania are located in a plain unit, where there is a high need for afforestation to increase the level of green spaces according the European standards, which imposes the need to create environmental projects for the local authorities. In order to carry out the study, the sustainable development strategies of the main urban centers within the South Muntenia region were analyzed. The main objective is to analyze the purpose of projects related to green spaces and environment, which are the main sources of project financing, but also if they are related to leisure or increasing the quality of life in those areas. The central goal of the study is to raise awareness of the need to maintain a balance between urbanization and green spaces inside cities, but also around it, all for a high quality of life and for the development of the relationship between people and nature in urban areas.

Key words: pollution, nature, sustainability, ecology, renewable energy

Introduction

Sustainable development projects are extremely important for creating optimal climates, whether it is economic, social, cultural or natural environment, to maintain a balance necessary for the beneficial evolution of urban centers or the entire county. It is important to note that sustainable development strategies are documents that set strategic objectives, sources of funding for projects, implementation period, and optionally the costs or benefits of projects. For the balanced development of an urban center or a county, the main existing dysfunctions must be identified, by consulting the local population, which can highlight the main directions for which funds or projects should be redirected later, mainly for a period of at least 5 years. To carry out the study, two counties were chosen from the territory of the South-Muntenia Development Region, which is composed of the counties of Arges, Calarasi, Dambovita, Giurgiu, Ialomita, Prahova and Teleorman. In order to make a balanced parallel, two counties were chosen that have a geographical position and an approximately similar budget, for which the Danube River is extremely representative in everyday life, namely Giurgiu and Calarasi counties. Giurgiu and Calarasi counties are recognized for their annual agricultural production capacity and intense port activities, especially on the Bulgaria - Romania route, in the vicinity of the Bulgarian cities of Ruse or Silistra. The development of the counties was achieved permanently under the sphere of influence of the Municipality of Bucharest, through the desire of the local businesses to sell their products on the markets of the Romanian capital. (Allard-Poesi et al., 2022; Ducman et al., 2021; Teodorescu et al., 2021; Toxopeus & Polzin, 2021)

Material and methods

The research was conducted by analyzing and collecting data from the Sustainable Development Strategies of Giurgiu and Calarasi counties, where the central objective was to analyze all projects related to environmental quality, including green space management, waste management, biodiversity conservation and endangered species. but also projects related to environmental awareness or greening campaigns. The analyzed sustainable development strategies are still in progress, with project implementation deadlines between 2021 and 2027, which allowed a balanced comparison of the two official documents. The centralization of the data was done through the Microsoft Office bundle, especially Microsoft Excel, as well as the creation of graphics. The inkScape 0.91 software was used to create the location map of Calarasi and Giurgiu counties on a national and regional level.



Fig. 1: Localization map of Giurgiu and Calarasi counties (at regional and national level)

Results and Discussions

A first surprising aspect is that Giurgiu County pays the most attention to awareness campaigns on the need to address a more environmentally friendly attitude, where we identify five projects, including three cross-border, which are carried out with the local administration of Ruse, Bulgaria. The Danube River is an important factor in the development of Giurgiu County, which is why the projects related to biodiversity in the Danube Meadow are extremely important for the county administration, where three cross-border projects were proposed, carried out with the same Bulgarian city, mentioned above. The three projects related to green spaces propose the development of parks on the territory of Giurgiu Municipality, but also the creation of new green spaces on the territory of the county seat, while the waste collection projects aim at creating a waste collection center, in terms of recycling, in Giurgiu Municipality, which will serve the entire county, but also for the purchase of special vehicles for waste collection. The Giurgiu County Administration proposes an afforestation project, where the citizens will be involved, but also a project for the recovery of some previously unused lands, for recreational purposes. (Figure 2)

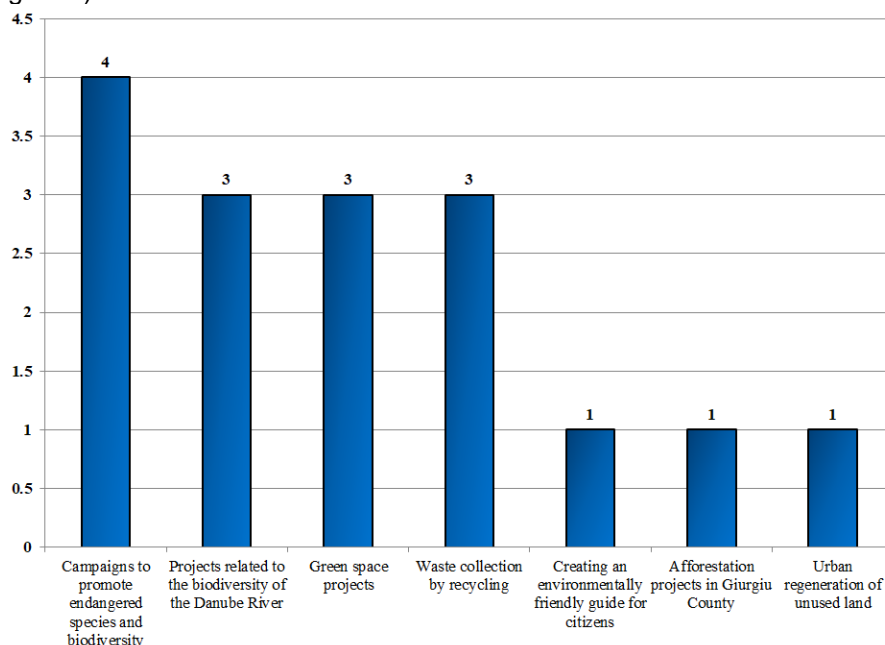


Fig. 2: The main typologies of environmental projects in Giurgiu County (2021 - 2027)
Source of data: Giurgiu County Sustainable Development Strategy (2021 - 2027)

Calarasi County proposes most projects in the field of combating pollution, especially for monitoring water pollution in the county, by the presence of the Danube branches in a large area, with a total of three projects, mainly carried out in public-private partnership or in partnership with the Inspectorate for Emergency Situations. The sectioning of the Danube into two arms, on the territory of Calarasi County, produces the need for permanent cleaning of the two watercourses, which are extremely

important for agriculture, fishing, but also for daily life in rural areas in Calarasi County, which imposed the implementation of two projects for this field. Calarasi County also proposes increased attention for renewable energy projects, which could not be identified in the Sustainable Development Strategy of Giurgiu County. The projects related to renewable energies aim at supplying public institutions with eco-friendly electricity, the establishment of a park of photovoltaic panels on the territory of Calarasi County, but also awareness campaigns on the need to embrace solar or wind energy. Mosquito control is an important issue for the ecosystem in Calarasi County, which is why a long-term mosquito control project has been submitted. At the same time, in the Sustainable Development Strategy of Calarasi County (2021 - 2027) we identify a project of green spaces (maintenance of existing parks in large cities in Calarasi County), projects to protect endangered species, but also projects of urban regeneration. (Figure 3)

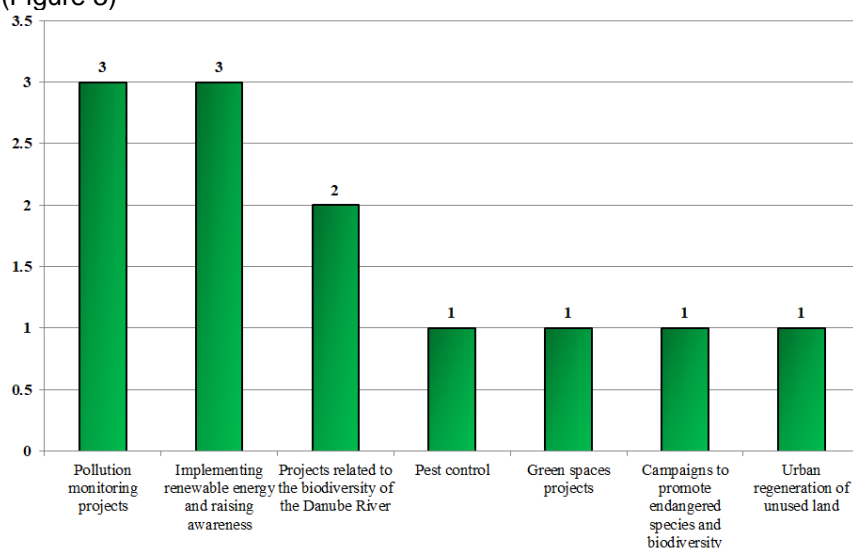


Fig. 3: The main typologies of environmental projects in Calarasi County (2021 - 2027)
Source of data: Calarasi County Sustainable Development Strategy (2021 - 2027)

The main sources of financing for environmental and green space projects in Giurgiu County is the local budget, which is provided by the local authority of Giurgiu Municipality, as the large number of projects serving the city of Giurgiu are supported from their own budgets. Cross-border projects are extremely useful because they are cost-effective, supported by both cities, namely Giurgiu, Romania and Ruse, Bulgaria, which guarantees a much easier implementation and a much faster working time, by combining the forces of both urban centers. 37.5% of environmental and green space projects in Giurgiu County are supported by the partnership with the Bulgarian city of Ruse, while 6.25% of projects are supported by the local administration, together with a number of NGOs or foundations with activity in the field of environmental protection or waste management. (Figure 4)

The local budget of the Calarasi County Council is the main source of financing for environmental and green spaces projects, as most of the promoted projects are carried out on the territory of Calarasi Municipality, but also along the Borcea and Danube watercourses, totaling 66.6% of projects. The three projects carried out by the Calarasi County Council and the Inspectorate for Emergency Situations represent 25% of the total projects submitted and are generally aimed at awareness campaigns on the need to protect the environment. 8.4% of projects are carried out through public-private partnerships. (Figure 5)

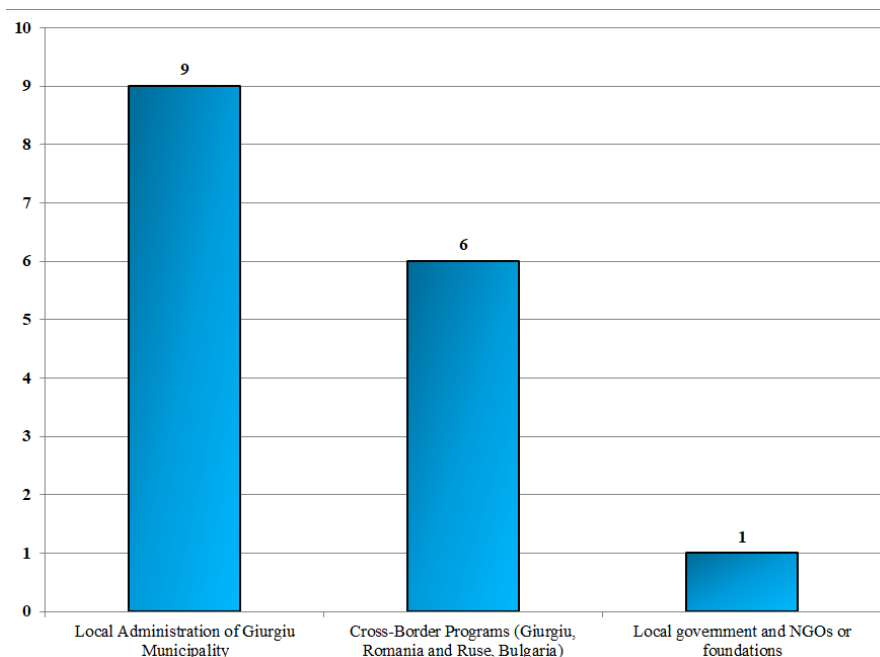


Fig. 4: Sources of financing for environmental and green spaces projects in Giurgiu County (2021 - 2027)

Source of data: Giurgiu County Sustainable Development Strategy (2021 - 2027)

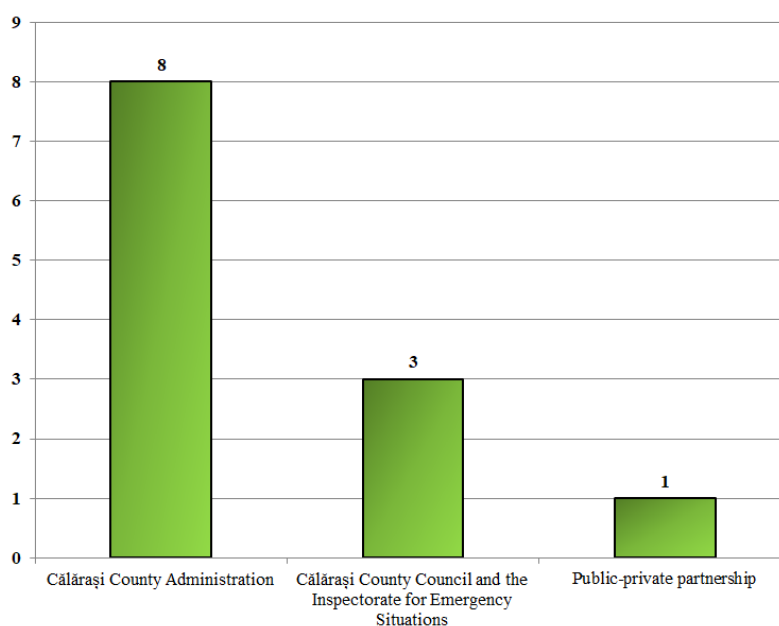


Fig. 5: Sources of financing for environmental and green spaces projects in Calarasi County (2021 - 2027)

Source of data: Calarasi County Sustainable Development Strategy (2021 - 2027)

Conclusion

The research managed to identify which are the main directions of evolution of the environment and green spaces projects, but also which are the common elements or the differences between Giurgiu County and Calarasi County. The common points between the two counties are the interest for biodiversity and the proper use of the Danube River on their territory, through projects aimed at cleaning the river banks or protecting biodiversity in the area, but also the desire of the two counties to raise awareness of the need to protect the environment, especially among young people. The large number of partnerships with NGOs, foundations or public institutions are common to both analyzed counties. An important difference between the two counties is the special attention that Calarasi County pays to the implementation of renewable energy in the public sector, but also for the creation of a photovoltaic park on its territory, which could be a viable solution for Giurgiu County. At the same

time, Giurgiu County scores through a large number of projects that promote waste recycling and waste management. The research met all the established objectives and managed to produce an objective comparison between two counties located in the South-Muntenia development region, which have many economic, geographical or social similarities.

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Souhrn

Příroda je nepostradatelnou součástí života díky mnoha výhodám, které nabízí, zejména v případě zelených ploch uvnitř měst, kde je míra znečištění extrémně vysoká a kde roste touha uniknout z každodenního městského života. Města z rozvojového regionu Jižní Muntenie v Rumunsku se nacházejí v rovinatém celku, kde je vysoká potřeba zalesnění, aby se zvýšila úroveň zelených ploch podle evropských norem, což ukládá místním orgánům vytvářet ekologické projekty. Za účelem provedení studie byly analyzovány strategie udržitelného rozvoje hlavních městských center v regionu Jižní Muntenie. Hlavním cílem je analyzovat účel projektů souvisejících se zelení a životním prostředím, které jsou hlavním zdrojem financování projektů, ale také to, zda souvisejí s volným časem nebo zvyšováním kvality života v těchto oblastech. Hlavním cílem studie je zvýšit povědomí o potřebě udržovat rovnováhu mezi urbanizací a zelenými plochami uvnitř měst, ale i v jejich okolí, to vše pro vysokou kvalitu života a pro rozvoj vztahu mezi lidmi a přírodou v městských oblastech.

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