

Urban biodiversity and the city – 2. the importance of conserving urban biodiversity in the City of Pančevo (Serbia)

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ABSTRACT

In the future, it will almost be impossible to conserve biodiversity by applying an approach using isolated protection of critical natural areas. Promotion of biodiversity needs a complex action – globally and locally – focusing on extension of areas available for natural habitats and their interconnectivity. Cities may play a significant role in the conservation of global biodiversity through protection and management of urban biodiversity on their territories. Furthermore, conserving urban biodiversity may be crucial in conserving local and / or regional species. At a time of increasing urbanization, conserving biodiversity in urban areas becomes very important for the well-being and quality of life for future generations. This is especially true for inhabitants living in the cities that face heavy air pollution, environmental degradation, deteriorated infrastructure, etc. Having that in mind, the authors of this paper aimed to explore the extent to which (urban) biodiversity conservation and its promotion across the entire territory of the Municipality of the City of Pančevo has been performed during the review period (2007-2016) by the local government in Pančevo.

Keywords: Urban biodiversity conservation, environmental protection, Pančevo, Serbia.

Introduction

Environmental protection and sustainable development on the territory of the Republic of Serbia is guaranteed by the Constitution of the Republic of Serbia. In Article 74 of the Constitution, it is established that everyone shall have the right to a healthy environment and the right to be timely and fully informed about the environmental conditions of the Republic of Serbia. In addition, Article 74 of the Constitution establishes that sustainable development, continuous protection and improvement of the environment – and flora and fauna as well – shall be regulated and provided by the Republic of Serbia. The competences of the autonomous provinces to organize and provide environmental protection on their territory and in accordance with the law are also defined through the Article 183 of the Constitution. Finally, according to Article 190 of the Constitution, some important competences in the field of environmental protection are given to the municipalities, as local self-governments.

The actual Law on Environmental Protection represents a framework law in the field of environmental protection in the Republic of Serbia, which guarantees an integral system of environmental protection on its territory and ensures the basic human rights for the citizens of the Republic of Serbia to live and develop in a healthy environment, as well as a balanced correlation between economic growth and the environment. In the first chapter of this law, eleven basic principles of environmental protection are defined including the Principle of Nature Conservation / Natural Value Preservation which defines geo- and biodiversity protection, protection of natural goods, landscapes and the like.

According to Article 64 of the Law on Environmental Protection, the planning and management of environmental protection is secured and provided by implementation of the National Environment Protection Program, adopted by the Serbian Government for the period of ten years (March

23, 2010). The Program is aimed to increase environmental and the quality of life for the population in the Republic of Serbia. As a strategic document, the Program stands as an instrument of resolving priority problems in the field of environmental protection in the country.

The fields of biodiversity conservation and nature protection in Serbia are more precisely defined by the Law on Nature Conservation, which precisely regulates the protection and conservation of nature, biological, geological and landscape diversity as an integral part of the environment. In order to improve the field of biodiversity conservation in Serbia, the National Assembly of the Republic of Serbia has also adopted several important by-laws, creating better opportunities for management of protected natural areas / natural resources (e.g., Decree on Ecological Network, Decree on the protection regimes, Code on the content and manner of keeping the register of protected natural areas, Code on the categorization of protected natural areas, Code on conditions to be met by the managing authority of protected area, Code on declaration and protection of strictly protected and protected wild species of plants, animals and fungi, etc.) (see: Institute for Nature Conservation of Serbia).

Several very important strategies and environmental programs have also been recently adopted by the Serbian Government, giving a strategic framework and the management tools for solving problems in biodiversity conservation in Serbia (e.g., National Strategy for Sustainable Use of Natural Goods and Resources, Biodiversity Strategy of the Republic of Serbia for the period 2011-2018, The National Program of Environmental Protection, etc.). A dozen of important international conventions on nature protection were also ratified by Serbian authorities during the last 15 years: The Law on Ratification of the Convention on the Conservation of Migratory Species of Wild Animals, The Law on Ratification of the Convention on the Conservation of European Wild Flora and Fauna and Natural Habitats, The Law on Ratification of the Convention on Biological Diversity, The Law on Ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, etc.

Local governments in Serbia have legal rights to establish protected areas of local significance in their territories, unless the area contains land or objects which are the property of the Republic of Serbia. Local governments also have the right

to initiate protection of an area for which the competence of establishment is granted to the Republic of Serbia. Regardless of the protection regime or category of the protected natural area in the procedure of establishment, during the development of the protection study, the Institute for Nature Conservation of Serbia is obliged to cooperate with local governments and communities, as well with the owners and users of the area subject to the protection study (Kujundžić, 2013).

Since the Law on Local Self-Government transfers numerous jurisdictions for implementing environmental protection / biodiversity conservation in the Republic of Serbia, from national and provincial levels to the local governments, it is important to analyse how much has the local government in Pančevo done in order to achieve its objective of nature protection and (urban) biodiversity conservation across the entire territory belonging to the Municipality of the City of Pančevo, while having in mind that the City of Pančevo is one of the most gravely jeopardized urban industrial areas not only in Serbia, but also in the Southeastern Europe.

Materials and methods

The content analysis method for the period of ten years (2007-2016) was employed in this study (Miljević, 2007). In addition to the content analysis, several other research methods were also used in this study, e.g. observation / observational research, narrative inquiry, and comparative analysis of the relevant documents (Miljević, 2007). Since this study investigates one particular ecological / environmental phenomenon within the real-life context, i.e. within one particular local community in Serbia – the Municipality of the City of Pančevo, we may agree the case study methodology was also used in this research (Yin, 1984). The Annual Reports of the City of Pančevo Environmental Protection Secretariat (see: Annual Reports of the City of Pančevo Environmental Protection Secretariat for the year: 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, and 2015; the last Annual Report was issued on June 28, 2016), the Annual Protection Program of the Environmental Protection Fund for the year 2014 (see: Official Gazette of the City of Pančevo, Nos. 3/14, 18/14, and 27/14.), and the Annual Protection Program of the Environmental Protection Fund for the year 2017 (see: Official Gazette of the City of Pančevo, No. 1/17) were given special attention.

Governance of nature protected areas in the City of Pančevo

Based on a detailed content analysis on the Annual Reports of the City of Pančevo Environmental Protection Secretariat, an official website of the Municipality of the City of Pančevo, and other resources as specified, it was found that the Municipality of the City of Pančevo protects five natural areas on its municipal territory, namely: (1) the Nature Park "Ponjavica" (In Serbian: Park prirode „Ponjavica“); (2) the Nature Monument "Ivanovačka Ada" (In Serbian: Spomenik prirode „Ivanovačka ada“); (3) the Nature Monument "Two Ash Trees near Dolovo" (In Serbian: Spomenik prirode „Dva stabla belog jasena kod Dolova“); (4) the Nature Monument "Ćurčin Horse-Chestnut Tree in Pančevo" (in Serbian: Spomenik prirode „Divlji kesten Ćurčina u Pančevu“); and (5) the Nature Monument "Red Leaf European Beech Tree in Omoljica" (in Serbian: Spomenik prirode „Stablo crvenolisne bukve u Omoljici“).

The management of these protected nature areas in Pančevo is entrusted to different public enterprises, namely: (1) the Public Water Supply Enterprise "Tamiš-Dunav", Pančevo (→The Nature Park "Ponjavica", until Mid-2015); (2) the Forest Management Unit "Banat", Pančevo (→The Natural Monument "Ivanovačka Ada"); (3) the Public Utility Enterprise "Dolovi", Dolovo / Pančevo (→The Natural Monument "Two Ash Trees near Dolovo"); (4) the Public Utility Enterprise "Zelenilo", Pančevo (→The Natural Monument "Ćurčin Horse-Chestnut Tree in Pančevo" and the Nature Monument "Red Leaf European Beech Tree in Omoljica"; the Nature Park "Ponjavica" is managed since Mid-2015).

Protected natural areas in Serbia have been managed by the government and have thus tended to rely almost exclusively on government coffers. In some Serbian cities, however, these arrangements are changing and new models of financing have emerged. According to the Law on Nature Conservation, different sources are available for financing the protected areas in Serbia, e.g. the state budget, the budget of the autonomous province, the budget of local governments, donations, etc.

In order to appraise, at least roughly, the share of the funds from the budget of the City of Pančevo in financing of the protected natural areas in the

Pančevo municipal territory, we analysed the financial aspects of the Annual Protection Program of the Environmental Protection Fund for the year 2014 (see: Official Gazette of the City of Pančevo, Nos. 3/14, 18/14, and 27/14) and the Annual Protection Program of the Environmental Protection Fund for the year 2017 (see: Official Gazette of the City of Pančevo, No. 1/17). In this context, we also analysed the decisions on the budget of the City of Pančevo for the year 2014 / 2017 (see: Official Gazette of the City of Pančevo, No. 29/13 and Official Gazette of the City of Pančevo, No. 37/16).

By virtue of the Decision on the Budget of the City of Pančevo for the year 2014 (see: Official Gazette of the City of Pančevo, No. 29/13), earnings and revenues, including the undrawn amounts carried forward from previous years, have been reported in accordance with the budgetary classification and identified in the total amount of 5,459,901,277.00 Serbian Dinars (44,059,887.64 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia).

Analyses of the Annual Protection Program of the Environmental Protection Fund for the year 2014 (see: Official Gazette of the City of Pančevo, Nos. 3/14, 18/14, and 27/14) show that the Municipality of the City of Pančevo was apportioned only 2,465,000.00 Serbian Dinars (19,891.86 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia) for the needs of co-financing the protection and maintenance of the existing protected natural areas in Pančevo municipal territory in 2014. This exceptionally small amount of money represents only 0.0451% of the total budget of the Municipality of the City of Pančevo for 2014.

This amount of assets, provided by the Municipality of the City of Pančevo for protection and maintenance of the four protected natural areas on its territory, has been distributed as follows: (1) for co-financing of the guard service / nature park keepers in the Nature Park "Ponjavica" – 2,000,000.00 Serbian Dinars (16,139.44 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); (2) for co-financing of the guard service / natural monument keepers in the Natural Monument "Ivanovačka Ada" – 200,000.00 Serbian Dinars (1,613.94 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); (3) for maintenance of two ash trees and the environment of the Natural Monument "Two Ash Trees near Dolovo" – 160,000.00 Serbian Dinars (1,291.15 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); and (4) for maintenance of one horse-chestnut tree and the

environment of the Natural Monument "Ćurčin Horse-Chestnut Tree in Pančevo" – 105,000.00 Serbian Dinars (847.32 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia).

Although this Program had undergone certain amendments and supplements (see: Amendments and Supplements of the Program of Use of the Assets of the Budgetary Environmental Protection Fund of the City of Pančevo for 2014 [see: Official Gazette of the City of Pančevo, No. 1/15]), budget assets for 5.2, 5.3, 5.4 and 5.5 in the Section 5 of the Annual Protection Program of the Environmental Protection Fund for the year 2014 – "Protected Natural Areas" (In Serbian: „Zaštićena prirodna dobra"), were not changed and were worth of 2,465,000.00 Serbian Dinars for 2014 (19,891.86 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia).

By virtue of the Decision on the Budget of the City of Pančevo for the year 2017 (see: Official Gazette of the City of Pančevo, No. 37/16), earnings and revenues, including the undrawn amounts carried forward from previous years, have been reported in accordance with the budgetary classification and identified in the total amount of 5,251,653,113.00 Serbian Dinars (42,379,382.77 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia).

Analyses of the Annual Protection Program of the Environmental Protection Fund for the year 2017 (see: Official Gazette of the City of Pančevo, No. 1/17) show that the Municipality of the City of Pančevo was apportioned 12,700,000.00 Serbian Dinars (102,485.47 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia) for the needs of co-financing the protection and maintenance of the existing protected natural areas in the Pančevo municipal territory in 2017. This extremely small amount of money represents only 0.2418% of the total budget of the Municipality of the City of Pančevo for 2017.

This amount of assets provided by the Municipality of the City of Pančevo for protection and maintenance of the five protected areas in its territory, has been distributed as follows: (1) for co-financing the maintenance of the Nature Park "Ponjavica" – 12,000,000.00 Serbian Dinars (96,836.66 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); (2) for co-financing the maintenance of the Natural Monument "Ivanovačka Ada" – 100,000.00 Serbian Dinars (806.97 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); (3) for co-financing the maintenance of

the Natural Monument "Two Ash Trees near Dolovo" – 300,000.00 Serbian Dinars (2,420.92 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); (4) for co-financing the maintenance of the Natural Monument "Ćurčin Horse-Chestnut Tree in Pančevo" – 200,000.00 Serbian Dinars (1,613.94 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia); and (5) for co-financing the maintenance of the Nature Monument "Red Leaf European Beech Tree in Omoljica" – 100,000.00 Serbian Dinars (806.97 Euros / February 17, 2017 Euro exchange rate of the National Bank of Serbia).

These assets (2,465,000.00 Serbian Dinars: 19,891.86 Euros / Year 2014 and 12,700,000.00 Serbian Dinars: 102,485.47 Euros / Year 2017) – intended for protection and maintenance of four / five protected natural areas in Pančevo – are insufficient / minimal. Therefore it is not surprising that in the period observed, the Municipality of the City of Pančevo did not initiate a single specific action dedicated to the complex studies of biodiversity in its territory, monitoring the state of urban biodiversity in already existing protected natural areas in Pančevo (besides a sporadic trunk inspections of protected trees), collecting the necessary information / documents and the like by virtue of which the protection would be planned and implemented in respect of new areas and / or natural structures, which can be deemed significant in terms of conservation of biodiversity in Pančevo (see: Annual Reports of the City of Pančevo Environmental Protection Secretariat for the years 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, and 2015).

The total area of the five protected natural treasures in the territory of the Municipality of the City of Pančevo is roughly 140 ha, meaning that only a small city area is under the protection regime, i.e. 0.19% of the total municipal territory of this city (see: Annual Reports of the City of Pančevo Environmental Protection Secretariat for the years 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, and 2015). If we use the data on the area size of the so-called adjoining protected areas incorporated in this calculation, the total area that is protected in the territory of the City of Pančevo amounts to ca. 204 ha, i.e. 0.27% of the total municipal territory of this city (see: Annual Reports of the City of Pančevo Environmental Protection Secretariat for the years 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, and 2015). It is obvious in both cases that the area of the City of Pančevo under the protection regime is unacceptably low (0.19-0.27% of the total municipal territory) or, in

other words – a so-so protection of urban biodiversity in the territory of the City of Pančevo is being implemented within unacceptably small areas of the protected natural resources.

This fact is all the more upsetting if we consider the evident extent of the environmental disaster in Pančevo (Jelinčić and Djurović, 2009), that lasted for more than 5 decades for the attenuation of which very little has been done by the local, as well as the provincial and national authorities.

This is also supported by the fact that there has been no systematic research on (urban) biodiversity on the territory of the Municipality of the City of Pančevo since January 1, 2004. Moreover, the issues in (urban) biodiversity conservation are not addressed in any of the Annual Reports of the City of Pančevo Environmental Protection Secretariat analysed (see: Annual Reports of the City of Pančevo Environmental Protection Secretariat for the years 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, and 2015).

The Forest Management Unit "Banat", Pančevo, conducted the only concrete analysis of biodiversity in the Special Nature Reserve "Deliblatska Peščara" / "Deliblato Sands" (In Serbian: Specijalni park prirode „Deliblatska peščara“), issuing several publications on the topic. Apart from these publications, there is no further information about the state of biodiversity protection in Pančevo and its surroundings, the activities to preserve wild flora and fauna and about endangered plant and animal species in the territory of the Municipality of the City of Pančevo. All the more so because the Law on Nature Conservation stipulates that the protection of an area or a natural resource may be proposed and initiated by legal entities and individuals. If an area, tree, geological site, natural history collection, that is, all the categories of natural resources determined by the Law, meet the criteria of representation, preservation, authenticity and other determined criteria, it may be referred to the Institute for Nature Conservation of Serbia (Belgrade) with the proposal to establish the grounds for initiating the legal protection procedure (see: Institute for Nature Conservation of Serbia).

There are neither nature parks nor special nature parks on the territory of the Municipality of the City of Pančevo. However, the Special Nature Reserve "Deliblatska Peščara" / "Deliblato Sands" – which is located at the territories of 4 Vojvodinian municipalities (Alibunar, Bela Crkva, Kovin, and Vršac) – is managed by the Forest Management Unit

"Banat", Pančevo, the branch of Public Enterprise "Vojvodina Forests", Petrovaradin [In Serbian: JP „Vojvodinašume“ Petrovaradin).

Over the past decades, there has been a significant change in the governance of protected areas world-wide, from exclusively state-run protected areas, to those managed by local governments and the private sector (see: IUCN SEE E-Bulletin, Volume 22). A wealth of shared-governance arrangements are also well documented (see: IUCN SEE E-Bulletin, Volume 22).

The field of nature conservation in Serbia is regulated by the Law on Nature Conservation, which legislates the protection and conservation of nature, as well as biological, geological and landscape diversity. Providing the natural area with the protection status involves many types of considerations that are ecological, naturalistic, aesthetic, scientific, cultural, political and educational in their nature. The Article 52 of the Law on Nature Conservation prescribes the obligation managers of protected areas in Serbia have so as to adopt effective management plans for the period of 10 years, if the act on protection does not require a different term. However, for these 10-year plans, it is necessary to develop annual implementation plans which are also subject to the approval. Management plans for protected areas established by the Republic of Serbia should be approved by the Ministry of Agriculture and Environmental Protection (Belgrade), and those – for protected areas established by the Autonomous Province of Vojvodina or local governments – should be approved by the competent body for nature protection of the province or local government.

Only the sound management of protected natural areas provided by trained professionals and certain citizen support will ensure the maintenance of these important areas which anchor the success of nature conservation into the 21st century. Unfortunately, the country's economic and political instability for many years, as well as the institutional weaknesses of governmental bodies, agencies and institutions involved in biodiversity conservation in Serbia, cause that certain strategies, laws, by-laws and plans have only been partially implemented.

Ensuring effective management and securing sufficient financial resources are vital for the maintenance of protected natural areas (Phillips, 2000). However, financial resources are often a constraining factor in the effective management of protected areas, falling well short of the needs. Protected natural areas have to compete with

pressing demands from other sectors, such as education, defence, health, etc. For various reasons, these other demands often prove more effective than protected areas at capturing government revenue. The result is that the proportion of public funding going into investment in protected areas is in decline in many countries or is insufficient (Phillips, 2000). Just like biodiversity conservation, protected natural areas are important for other significant reasons. They ensure the continued flow of ecosystem services, such as the provision of clean water and the protection of soil resources (Phillips, 2000). They provide significant economic benefits to surrounding communities and contribute to spiritual, mental and physical well-being. Protected areas also help fulfil an ethical responsibility to respect nature and provide opportunities to learn about nature and the environment. Each of these values pertaining to protected areas are important and should be taken into account in developing a financial plan (Phillips, 2000).

Serbian nature is characterized by a high diversity of flora and fauna, and is an important part of the wealth and diversity of the European natural heritage (see: Institute for Nature Conservation of Serbia).

During the last 6 decades, a region of protected areas in Serbia reached 529,631 ha or 5.99% of the territory of the Republic of Serbia (see: Institute for Nature Conservation of Serbia). According to the Law on Spatial Plan of the Republic of Serbia for the Period 2010-2020, almost 12% of Serbian territory is planned to be protected in some way, by the year 2021 (see: Institute for Nature Conservation of Serbia).

Out of 529,631 ha of the protected territory in Serbia, 20,280 ha is subject to Category I protection (3.83%), which means that any construction and any other human activity are prohibited in that area (except for scientific, research and educational activities). This territory is mostly owned by the state.

If we know that almost three times as much territory is protected in the countries of the European Union, one can simply conclude that Serbia will be faced with a significant work in the field of biodiversity conservation / nature protection on the way to achieve the high standards applied in this sector in the EU (see: New UNEP report unveils world on track to meet 2020 target for protected areas on land and sea and Natura 2000 network).

According to the data of the Institute for Nature Conservation of Serbia (Belgrade), there are 461 natural resources protected in Serbia: 5 national parks, 17 nature parks, 20 landscapes of exceptional features, 68 nature reserves, 3 protected habitats, 310 natural monuments, and 38 areas of cultural and historical significance – that were protected according to the former versions of the Law on Environmental Protection and the Law on Protection of Cultural Heritage. The management of 461 protected natural resources in Serbia is mainly entrusted to public enterprises / state-owned enterprises, but the care of Serbian natural treasures is also given to private companies, tourist and non-governmental organizations, hunting clubs and individuals, including the Serbian Orthodox Church (see: Institute for Nature Conservation of Serbia).

Most of the protected natural resources in Serbia have been entrusted to the management of the Public Enterprise "Serbian Forests" in Belgrade (In Serbian: JP „Srbijašume“ Beograd), which takes care of 92 protected natural treasures, having the total area of 244,122 ha of protected areas, representing 46.09% of the total protected area in Serbia. In addition, a large area of protected natural treasures in Serbia is under the administration of the public enterprises established pursuant to the Law on National Parks – "Tara", "Kopaonik", "Djerdap", "Fruška Gora" and "Šar-planina" (see: Institute for Nature Conservation of Serbia).

Besides protected natural resources, 1,760 strictly protected and 868 protected wild species of plants, animals and fungi are also protected in Serbia by the Law on Nature Conservation and in accordance with the Book of Regulations on the Designation and Protection of Strictly Protected and Protected Wild Species of Plants, Animals and Fungi – which contains lists of strictly protected and protected wild species as well as the protection measures. Species in Serbia that may be threatened by overharvesting and uncontrolled gathering from nature are also placed under certain protection (see: Institute for Nature Conservation of Serbia).

Conclusion

Although the legal framework in Serbia gives autonomy to the local government in Pančevo to proclaim protected natural areas on its territory, as well to manage or contribute to the management of protected areas, in practice it seems that the role of local authority in Pančevo is quite limited and based

only on the maintenance co-financing and / or short-term cooperation with higher-ranked authorities on development and adoption of protected natural area management plans, annual implementation plans and the like.

Before anything is done, due to securing necessary funds and building institutional capacities aimed to increase the number / total area of protected natural areas on the territory belonging to the Municipality of the City of Pančevo, a local government in Pančevo should conduct systematic research to foster assessment of (urban) biodiversity on the territory of the Municipality of the City of Pančevo for the purpose of providing more quality and complex biodiversity conservation within the protected natural areas that already exist. This research should be initiated in terms of understanding the impacts of severely degraded environments – like this one in Pančevo – on ecosystems and therefore give valid outputs about – why, how, and where should (urban) biodiversity conservation be organized in Pančevo. Special attention should be given to research initiatives focusing on the effects severe air pollution in Pančevo has on (urban) biodiversity in this city. This data will certainly help in improving the management of protected natural areas in Pančevo, but may be also used for promoting the idea of the importance of (urban) biodiversity conservation and evidencing how (urban) biodiversity and its continuous promotion, support human well-being and the quality of life for future generations.

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This information about the state of (urban) biodiversity / biodiversity conservation in Pančevo should be shared with diverse target groups, from students of all levels of education to the policy-makers, and nature lovers. It should help – as it is stated in the EU Biodiversity Strategy to 2020 – in understanding that “biodiversity conservation is not just about protecting species and habitats for their own sake. It is also about maintaining nature’s capacity to deliver the goods and services that we all need, and whose loss comes at a high price.” (EC, 2011).

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Biodiverzitet urbanih sredina – 2. značaj zaštite biodiverziteta u urbanim sredinama grada Pančeva (Srbija)

SAŽETAK

U budućnosti će biti gotovo nemoguće (za)štititi biodiverzitet primenom pristupa kojim se štite isključivo veoma ugrožena područja prirode. Promovisanje zaštite biodiverziteta je više od toga i zahteva sprovođenje složenih mera, na globalnom i lokalnom nivou, s ciljem uvećavanja površina na kojima su sačuvane odlike prirodnih staništa a čiji su delovi ostali međusobno povezani. Gradovi mogu imati značajnu ulogu u zaštiti biodiverziteta i na globalnom nivou unapređivanjem urbanog biodiverziteta na svojim teritorijama. Štaviše, zaštita urbanog biodiverziteta može biti ključna za zaštitu vrsta na lokalnom i / ili regionalnom nivou. U vremenu koje karakteriše ubrzana urbanizacija, zaštita biodiverziteta u urbanim područjima od presudnog je značaja za kvalitet života i dobrobit budućih generacija. To se svakako odnosi na stanovnike u gradovima sa izrazitim aerozagađenjem, degradiranom životnom sredinom, narušenom infrastrukturom, itd. Imajući to na umu, u ovom smo radu pokazali koliko je lokalna vlast u gradu Pančevu učinila na polju zaštite (urbanog) biodiverziteta i njegovoj promociji na celoj teritoriji grada Pančeva tokom posmatranog perioda (2007-2016).

Ključne riječi: Degradirana životna sredina, zaštita životne sredine, Pančevo, Srbija.