SERBIA ACCELERATING INNOVATION AND GROWTH ENTREPRENEURSHIP (SAIGE) PROJECT

Program PRISMA

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future (RePOS)

Associated project:

Pilot Project for Redesign of Public Open Space
in a Multi-family Residential Neighbourhood
in Niš
(RePOS Pilot Project)

FINAL DOCUMENT

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ABBREVIATIONS AND ACRONYMS

ESMF - Environmental and Social Management Framework

ESMP - Environmental and Social Management Plan

ESS - World Bank's Environmental and Social Standard

SAIGE - Serbia Accelerating Innovation and Growth Entrepreneurship

SF - Science Fund

SRO - Scientific and Research Organization

PI - Principal Investigator

PIU - Project Implementation Unit

TM - Team Member

GAFUN - Faculty of Civil Engineering and Architecture, University of Niš

UBFA - Faculty of Architecture, University of Belgrade

WP - Work Package

RePOS Pilot Project - Pilot Project for Redesign of Public Open Space in a Multi-family Residential Neighbourhood in Niš

1 - EXECUTIVE SUMMARY

This draft Environmental and Social Management Plan (ESMP) has been prepared for the PRISMA Program, funded by the Science Fund of the Republic of Serbia. The draft ESMP document is prepared for the *"Pilot Project for Redesign of Public Open Space in a Multi-family Residential Neighbourhood in Niš" (RePOS Pilot Project)* as the *associated project* of the PRISMA project "Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future" (RePOS). The environmental and social checklist screening carried out during the evaluation of the project is consistent with the ESMF classification and ranked the project RePOS as of moderate risk. The screening result showed that the project has low risk considering ethics and moderate considering the environment, due to planned Associated Facilities/ Activities which must meet ESSs requirements. The document is prepared in accordance with Environmental and Social Management Framework (ESMF) for SERBIA ACCELERATING INNOVATION AND GROWTH ENTREPRENEURSHIP (SAIGE) PROJECT.

RePOS project addresses the problem of urban decay of public open spaces (POS) in inherited housing estates, and almost complete POS disappearance in new multi-family residential areas in former socialist cities, which urban planning policy and practice still fails to address. Therefore, RePOS project aims to reintroduce public open spaces into residential areas of Serbian cities through a novel integrated planning and design approach. It aims to develop systemic guidance directives for urban planning and design with an all-inclusive toolset to support innovative solutions in POS (re)creation, as well as specific guidelines for participation and implementation. The devised theoretical framework will be tested at a pilot project scale in the City of Niš with multiple stakeholders through the *RePOS Pilot Project* as the associated project. The RePOS Pilot Project is developed through participatory process and is expected to improve the environmental quality, functionality, safety, visual appearance and long-term usability of the selected public open space through small-scale innovative solutions. In addition to its direct local benefits, the project has broader demonstration value, as it can serve as a practical and transferable example of small-scale regeneration of public open spaces in inherited multi-family housing estates.

Besides expected benefits of the implementation of the RePOS Pilot Project, potential negative social and environmental impacts may occur. The purpose of the Environmental and Social Management Plan is to highlight them and to set out specific mitigation, monitoring, and institutional measures to be taken to eliminate adverse environmental and social impacts, offset them or reduce them to acceptable levels. Taking into account the nature and scale of the RePOS pilot project, it can be concluded that the implementation of the project activities on site will not adversely affect the quality of surface/ground water or soil, while the impact on greenery, microclimate and land use is expected to be positive. Special attention should be given to the waste management and community and workers health and safety as the areas of the moderate risk during construction phase. Although no hazardous wastes will be generated, temporary and localised waste, noise and air pollution may occur due to construction works and transport activities. Besides that, unauthorized and accidental use of the construction site may endanger the safety of residents, which should be prevented. Social risks should be avoided or mitigated through the early commitment to pilot project from all stakeholders, and through participatory activities and events that enable education and mediation of various interests to ensure project's long-term sustainability. The key components of The Environmental and Social Management Plan are: Plan for the mitigation of adverse impacts on the environment and social

surrounding and Plan for monitoring the impact on the environment and social surrounding, including documents provided in ANNEX 1-11. All the activities related to preparation, design, construction and operation phase of the Project will be carried out in accordance with the relevant laws and/or management strategies of the Republic of Serbia.

2 - POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1 Relevant Institutions

The Ministry of Environmental Protection of the Republic of Serbia is responsible for producing and implementing the environmental policy. Other relevant institutions for environmental and social management for the associated RePOS Pilot Project are:

- Ministry of Environmental Protection of the Republic of Serbia;
- Ministry of Construction, Transport and Infrastructure of the Republic of Serbia;
- Serbian Environmental Protection Agency;
- Ministry of Labour, Employment, Veteran and Social Affairs of the Republic of Serbia;
- Labour Inspectorate;
- Occupational Safety and Health Administration;
- City of Niš Local Government;
- City of Niš – City Administration for Property, Economy and Environmental Protection;
- City of Niš – City Administration for Planning and Construction;
- City Municipality of Medijana;
- Public Utility Company "Medijana" Niš;
- Institute of Public Health Niš, where applicable;

2.2 Existing Serbian Legislation

All planning, design, procurement, implementation and maintenance activities related to the RePOS Pilot Project will be carried out in accordance with the relevant laws, by-laws, strategies and local decisions of the Republic of Serbia and the City of Niš. The legal framework relevant for the project includes, but is not limited to, the following:

- The Constitution of Serbia ("Official Gazette of RS" No. 98/06, 16/22)
- The Constitution of Serbia ("Official Herald of the Republic of Serbia", Nos. 98/2006 and 115/2021)
- The National Strategy for Sustainable Development ("Official Gazette of RS" No. 72/09, 81/09)
- Law on Science and Research ("Official Gazette of RS" No. 49/19, 108/25)
- Law on environmental protection ("Official Gazette of RS" No. 135/04, 36/09, 72/09, 43/11, 14/16, 76/18, 95/18 and 94/2024)
- Law on Planning and Construction ("Official Gazette of RS" No. 72/09, 81/09, 64/2010, 24/2011, 121/2012, 42/2013, 50/2013, 98/2013, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019, 9/2020, 52/2021, 62/2023 and 91/2025);
- Law on Housing and Building Maintenance (,,Official Gazette of the Republic of Serbia'', no. 104/16 and 9/20, 9/22 (Decision of the Constitutional Court)
- Law on Communal Activities (Official Gazette of the Republic of Serbia, no. 88/2011, 104/2016, 95/2018, 94/2024)
- Law on Local Self-Government ("Official Gazette of RS" No. br. 129/2007, 83/2014 - - other laws, 101/2016 - - other laws, 47/2018 i 111/2021 - - other laws)
- Law on Local Self-Government Financing (Official Gazette of the Republic of Serbia no. 62/2006, 47/2011, 93/2012, 99/2013 - harmonized, 125/2014 - harmonized din. izn., 95/2015 - harmonized din. izn., 83/2016, 91/2016 - harmonized, 104/2016 - other law, 96/2017 - harmonized, 89/2018 - harmonized din. associate degree, 95/2018 - other law, 86/2019 - harmonized, 126/2020 - harmonized, 99/2021 -

harmonized, 111/2021 - other law, 124/2022 - harmonized din. izn., 97/2023 - harmonized and 85/2024 - harmonized)

- Law on Occupational Safety and Health ("Official Gazette of RS", no. 35/23)
- Law on Waste Management (“Official Gazette of RS”, No. 109/25)
- Law on Noise Protection in the Environment (“Official Gazette of RS”, No. 96/21)
- Rulebook on the special type of facilities and the special type of work for which it is not necessary to obtain an Act from the competent authority, as well as the types of facilities that are built, regarding the types of work that are performed, based on the decision on approval for the performance of work, as well as the scope and content and control of the technical documentation to be attached to the request and the procedure carried out by the competent authority ("Official Gazette of RS", no. 102/2020, 16/2021 and 87/2021)
- Rulebook on General Rules for Parcelling, Regulation and Construction. Official Gazette of the Republic of Serbia, no. 22/2015.
- Rulebook on personal protective equipment ("Official Gazette of RS", No. 23/2020),
- Rulebook on preventive measures for safe and healthy work at the workplace ("Official Gazette of RS", Nos. 21/20109 and 1/2019),
- Rulebook on the provision of signs for safety or health at work ("Official Gazette of RS", Nos. 95/2010 and 108/2017)
- Rulebook on preventive measures for safe and healthy work when using work equipment ("Official Gazette of RS", Nos. 23/2009, 123/2012, 102/2015, 101/2018 and 130/2021),
- Rulebook on the procedure for inspecting and checking work equipment and testing working environment conditions ("Official Gazette of RS", No. 15/2023)
- Rulebook on records in the field of safety and health at work ("Official Gazette of RS", Nos. 62/2007 and 102/2015)
- Law on protection of personal data ("Official Gazette of RS", No. 87/2018
- Law on Free Access to Information of Public Importance ("Official Gazette of RS", Nos. 120/2004, 54/2007, 104/2009, 36/2010 and 105/2021).

2.3 Urban Planning Framework for the City of Niš

- City of Niš. Development Plan of the City of Niš 2021-2027. Official Gazette of the City of Niš, No. 36/2021
- City of Niš. Decision on the Communal Order of the City of Niš. Official Gazette of the City of Niš, no. 13/23
- City of Niš. Decision on Maintenance of Public Green Areas. Official Gazette of the City of Niš, no. 89/05, 38/10, 18/17 and 115/22
- Plan of general regulation of the City Municipality of Medijana (Official Gazette of the City of Niš, no. 72/12)
- First amendments and supplements to the Plan of general regulation of the City Municipality of Medijana (Official Gazette of the City of Niš, no. 105/2015)
- Third amendments and supplements to the Plan of general regulation of the City Municipality of Medijana (Official Gazette of the City of Niš, no. 129/2021)

For the planned project activities at the RePOS pilot project site, it is not necessary to obtain an Act from the competent authority, according to the:

- Article 144 of the *Law on Planning and Construction (“Official Gazette of RS” No. 72/09, 81/09, 64/2010, 24/2011, 121/2012, 42/2013, 50/2013, 98/2013, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019, 9/2020, 52/2021, 62/2023 and 91/2025)*, and

- Article 2 of the *Rulebook on the special type of facilities and the special type of work for which it is not necessary to obtain an Act from the competent authority, as well as the types of facilities that are built, regarding the types of work that are performed, based on the decision on approval for the performance of work, as well as the scope and content and control of the technical documentation to be attached to the request and the procedure carried out by the competent authority ("Official Gazette of RS", no. 87/2023, 16/2024 i 16/2026)* (7. - footpaths, furniture (benches, etc.) and landscaping)

Permits are not required, but the **Consent for arrangement of public open space from the City of Niš** as the land owner is needed. Therefore, the Letter of support from the City of Niš is also provided, to demonstrate the commitment of the City to RePOS project.

ANNEX 1 _Letter of support City of Nis; ANNEX 2_Consent of the land owner and extract from the real-estate cadastre

3 - PROJECT DESCRIPTION

INSTITUTIONAL & ADMINISTRATIVE	
Country	Republic of Serbia
Project	**SERBIA ACCELERATING INNOVATION AND GROWTH ENTREPRENEURSHIP (SAIGE) PROJECT**
Subcomponent title	Science Fund of the Republic of Serbia
Program	Program PRISMA
Sub-program:	Engineering and technological sciences
Project Title:	**Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future**
Acronym:	**RePOS**
Participating Scientific and Research Organization (SRO) and address	1) Faculty of Civil Engineering and Architecture, University of Niš (GAFUN) 14 Aleksandra Medvedeva, Niš, Serbia 2) Faculty of Architecture, University of Belgrade (UBFA) 73 Bulevar kralja Aleksandra, Belgrade, Serbia
Principal Investigator (PI) (Name and contacts details):	Dr Milena Dinić Branković, Associate Professor at the Faculty of Civil Engineering and Architecture, University of Niš (GAFUN) milena.dinic@gaf.ni.ac.rs
The duration of the project	36 months
Number of researchers	9/nine (PI+ 8 researchers)

The environmental and social checklist screening carried out during the evaluation of the RePOS project is consistent with the ESMF classification and ranked the project RePOS as of moderate risk. The screening result showed that the project has low risk considering ethics and moderate considering the environment, which is related to Associated Facilities/Activities. The Associated project must meet ESSs requirements, including conducting environmental and social assessment of the proposed associated RePOS Pilot Project*.

*** Note 1:** Construction works involving the development of a rain garden and instalment of urban equipment at the pilot project site are not funded by the Project within the PRISMA program. However, the purchase of a smart bench with solar panel and three outdoor solar lamps for parterre is funded from the Project within the PRISMA program.

1 - RePOS Project Components

RePOS project aims to reintroduce public open spaces (POS) into residential areas of Serbian cities through a novel integrated planning and design approach. RePOS will develop systemic guidance directives for urban planning and design with an all-inclusive toolset to support innovative solutions in POS (re)creation, as well as specific guidelines for participation and implementation. The devised theoretical framework will be tested at a pilot project scale in the City of Niš with multiple stakeholders as the associated RePOS project ("Pilot project for redesign of public open space in a multi-family residential neighbourhood in Niš"- RePOS Pilot Project)

The RePOS project involves conducting semi-structured interviews with the local community and survey with city officials in **WP1** (work package), in order to identify existing issues in residential public open spaces exploitation and determine the key barriers to a more tenant-friendly approach to their design. The project also involves classifying existing public open spaces in residential areas, to guide future (re)development. It also includes the development of systemic guidelines for legislation framework, urban planning and design, leading the way towards sustainable residential public open spaces and towards the establishment of measures for the implementation of urban plans and projects, and for the improvement of the overall participatory process (in **WP2** and **WP3**).

Given the complexity of the investigated issue, RePOS research will apply a holistic approach to generate solutions to the listed challenges that residential POS are facing, and to enhance the scientific and practical echo of research findings. This involves the use of integrated urban planning as the "umbrella" concept. Aside from the contribution to solving the wicked problem of climate change through (re)creating sustainable public open spaces, RePOS research also aim to incorporate the following elements of trans-disciplinarity: (1) including multidisciplinary academic research, (2) engaging stakeholders as societal actors outside of the academy in the process, (3) focusing on a specific, complex and societally relevant, real-world problem of residential environment, (4) working in a transformative manner to propose practical guidance for envisioning, creating and implementing POS, (5) orientation toward the common good in POS, involving public health and resilient environment, and (6) reflexivity throughout the Project.

The developed RePOS guidelines and toolset for urban planning and design will be tested at a demonstration site in the City of Niš (**WP4**). At a pilot scale, RePOS will (re)create, develop and implement an urban design RePOS pilot project***** with innovative solutions for residential POS. The project will be created in line with the established urban planning and design framework, with various stakeholders involved in the participatory process. Thus, the envisioned urban design solution for POS will be compatible with a broad range of stakeholders' needs and expectations. This should ease the pathway of implementation, which will rely on established partnerships between residential community, public sector, project financing and NGO funders. This urban design project will serve as a showcase for planning professionals and local communities in Serbian cities on how to integrate innovative solutions into urban planning practice and development.

Research outputs will inspire updating of legislation and planning regulations, help local governments with decision-making, assist planners in guiding POS (re)development process and benefit local communities by enhancing the quality of housing.

2 - RePOS Pilot Project

At a demonstration site in the City of Niš, RePOS aims to (re)create, develop and implement an urban design project with innovative solutions for residential POS in WP4 as associated project: "Pilot project for redesign of public open space in a multi-family residential neighbourhood in Niš"- RePOS Pilot Project. Project activities have so far involved preparing and designing one public open space, and will be followed by arranging and landscaping this POS during the realization segment of activities. The site of the pilot project was selected through analysis of natural and development characteristics of the site, in cooperation with the city officials, and based on residents' interest and motivation. Pilot project redevelopment area is a small-scale public space that is common open and recreational space of a group of residential units. Local community was informed of planning and design practices that promote sustainability and resilience through lectures and discussion meetings, in order to foster their social and ecological awareness. Education of citizens on current trends was necessary for raising their social and ecological awareness, and was performed through lectures and discussion meetings. The needs and preferences of citizens were established by conducting a survey** in WP4. Then, an urban design project was created for the selected site that incorporates innovative solutions and is aligned with the newly established urban planning and design framework. By using ENVI-met software, outdoor microclimate at the pilot project site was simulated in two scenarios: (1) existing urban setting and (2) urban setting of the proposed urban design project. Next, the urban design project was published on the digital platform to inform all stakeholders and encourage them to take part in co-creating their residential POS by providing their input. The envisioned urban design solution for POS is going to be implemented with the support from residential community, public sector, project financing and NGO funders. All works at the pilot project site will be carried out in compliance with the relevant standing regulations.

Realisation of the WP4 of the RePOS pilot project includes the following tasks, which have all been completed so far:

Task 4.1. POS pilot project context was set up through the following activities:

> 4.1.1. Land for POS was provided in cooperation with the public sector and private owners, in line with the systemic improved approach
>
> 4.1.2. Sitting tenants were educated on the principles of sustainable planning and design of POS and their input was obtained, in order to raise ecological and social awareness and to foster tenant motivation to participate in POS (re)development

Task 4.2. Urban design project with innovative solutions for residential POS in Niš was created, grounded in the established urban planning and design framework and with the application of the proposed toolset

Task 4.3. Outdoor microclimate at the pilot project site was simulated in "before" and "after" scenarios, by using ENVI-met software

Task 4.4. The process of POS co-creation was administered by involving all stakeholders, focusing on community involvement and fostering tenant input

Task 4.5. Partnerships between residential community, public sector and civil society were established in order to implement the co-created urban design project for POS

** **Note 2:** All surveys/interviews were anonymous with no personal data collection, and they did not involve children or potentially vulnerable individuals or groups. The participants in the interviews were random volunteers and they were informed about the aims, methods and implications of the project activity.

4 - REPOS PILOT PROJECT SITE INFORMATION AND BASELINE DATA

The selected pilot project site is the part of the large housing estate Krive livade, built in 1980s. It includes the eastern part of the cadastral plot No 175/1, cadastral municipality Niš – Ćele Kula (see figure 1), and represents a common space for buildings in Branka Krsmanovića street (no. 19, 21, 23, 25, 27, 29, 31), and Pariske komune street (no. 19, 21, 23, 25), where approximately 1,300 people live. This location was chosen as typological representative of public open space in large housing estates that suffer from degraded green surfaces, lack of functional urban equipment, and vulnerability to storm water retention. The site offers an optimal testing ground for the integration of innovative and sustainable solutions aligned with the RePOS theoretical framework.

Figure 1 - PILOT PROJECT SITE (marked by red dotted line) and micro-location. Source: https://a3.geosrbija.rs/

A) BASELINE DATA for the RePOS pilot project site are further presented:

Population

The pilot project is located within the residential neighborhood of Krive Livade, situated in the City Municipality of Medijana. According to the *Early Public Inquiry for the General Urban Plan of Niš 2025-2040* and the *Study of Public Open Spaces*, this area represents a dense urban core characterized by socialist-era multi-family housing, with an extremely high population density exceeding 1,000 residents per hectare. Despite recent spatial transformations, it remains a highly attractive residential location due to excellent pedestrian and vehicular connectivity with the city center. The immediate zone of influence directly encompasses approximately 1,300 residents who utilize the central public

open space, maintaining a complex public-private delineation in their daily spatial practices and interactions.

Health and Safety

The current state of the public open space poses minor public health and safety risks. As noted in the *Study of Public Open Spaces*, while general maintenance by the public utility company is satisfactory, the urban equipment and furniture largely date back to the original construction period and suffer from physical degradation. Furthermore, the high percentage of impervious concrete surfaces exacerbates local heat stress, while inadequate structured stormwater drainage leads to localized ponding near entrance areas, creating potential biological hazards that highlight the necessity for integrated regeneration.

Geology and Soil

Based on the geological data from the *General Urban Plan of Niš 2010-2025*, the pilot site is situated on the lower alluvial terrace of the Nišava River basin, characterized by Quaternary alluvial deposits consisting predominantly of gravel, sand, and clayey-silty sediments. The local soil profile within the housing block has been heavily altered by anthropogenic activities during the initial construction, resulting in a technogenic soil layer covered by urban pavements. There are no indicators of deep structural soil contamination resulting from current residential land use.

Climate

The macro-location features a moderate continental climate. However, local micro-climatic variations are heavily influenced by the dense urban morphology of the Medijana municipality. The combination of high thermal mass from multi-story concrete buildings and extensive asphalt surfaces triggers a pronounced urban heat island (UHI) effect. The open public space currently lacks optimized vegetative structures to mitigate these micro-climatic extremes, underscoring the need for micro-climate modeling (via ENVI-met) and the implementation of Nature-based Solutions (NbS).

Seismology

According to the seismic macro-zoning maps integrated into the *General Urban Plan of Niš 2010-2025*, the wider territory of the city, including the municipality of Medijana, is located in a seismically active zone capable of experiencing earthquakes with a maximum intensity of VII and VIII degrees on the European Macroseismic Scale (EMS-98). While the alluvial substratum slightly amplifies seismic waves, the planned micro-scale landscape interventions and lightweight smart urban equipment pose no risk to the seismic stability of the site.

Air Quality

Air quality at the micro-location is continuously influenced by its urban position near major traffic arteries. According to official monitoring data from the Environmental Protection Agency (SEPA) and the Institute of Public Health Niš, the wider urban area consistently faces seasonal air pollution challenges, frequently exceeding the limit values for suspended particles (PM_{10} and $PM_{2.5}$) during the winter heating season. At the micro-location of Krive Livade, the high concentration of buildings and lack of dense vertical greenery limit the natural deposition of these airborne pollutants. The planned nature-based solutions (NbS) within the public open space aim to create local vegetative buffers to mitigate particulate dispersion and improve the immediate microclimate.

Waste

Municipal waste management at the pilot site is fully integrated into the communal system. According to the *Plan of General Regulation of Medijana*, this system is operated by the public utility company "Medijana" Niš. While standard waste containers are located along the perimeter streets, the inner public open space suffers from occasional littering due to a lack of well-distributed bins for selective waste disposal. No hazardous waste streams are generated on-site.

Water Resources

The pilot area belongs to the hydrographic basin of the Nišava River. There are no open surface water bodies within the Krive Livade housing block. The main water-related issue on the site is the management of atmospheric waters; as identified in the spatial analyses, the existing storm sewage network lacks the capacity to absorb sudden peak runoffs, directly necessitating the introduction of bioretention systems and rain gardens to manage surface water retention.

Flora and Fauna

The biological component of the site is strictly defined by its artificial, anthropogenically shaped character. The *Study of Public Open Spaces* notes that while green surfaces were originally planned as mandatory elements of collective housing, they have suffered fragmentation due to recent spatial transformations. However, the study also highlights significant existing individual actions by residents who have initiated urban gardens near the residential buildings. No protected natural habitats or endangered species are present within the boundaries of the pilot project site.

Noise

The acoustic environment of the inner residential courtyard is relatively shielded from the high-frequency traffic noise generated by surrounding primary city streets, keeping ambient noise levels within acceptable limits for residential zones. Occasional peaks in acoustic pollution occur along the block's edges due to vehicular movement, further justifying the need for structured landscape interventions that can act as soft acoustic barriers.

Cultural Heritage

Based on the protective registers established by the Institute for the Protection of Cultural Monuments and integrated into the *General Urban Plan of Niš 2010-2025*, the specific site contains no protected cultural properties, archaeological sites, or monuments of historical importance.

B) MICRO-LOCATION of The Repos Pilot Project: Existing Condition and Public Open Space Redesign Project

Next pages present the RePOS Pilot Project micro-location whithin the neighbourhood, its characteristics and problems as well as Public open space redesign project. Public open space location, photo-documentation of in-situ existing condition and innovative solutions to be implemented (chosen through workshop) are presented in Figure 2. Figure 3 presents the drawing of the existing condition of the micro-location, while the final redesign project for the selected POS is presented in Figure 4 (Conceptual urban design solution) and Figure 5 (Landscape plan). More details on Project and participatory process are given in the next Section 5 (5.1,5.2.,5.3) and in the ANNEXes 4,5,6 and 11.

PUBLIC OPEN SPACE LOCATION, EXISTING and PLANNED CONDITION (INNOVATIVE SOLUTIONS)

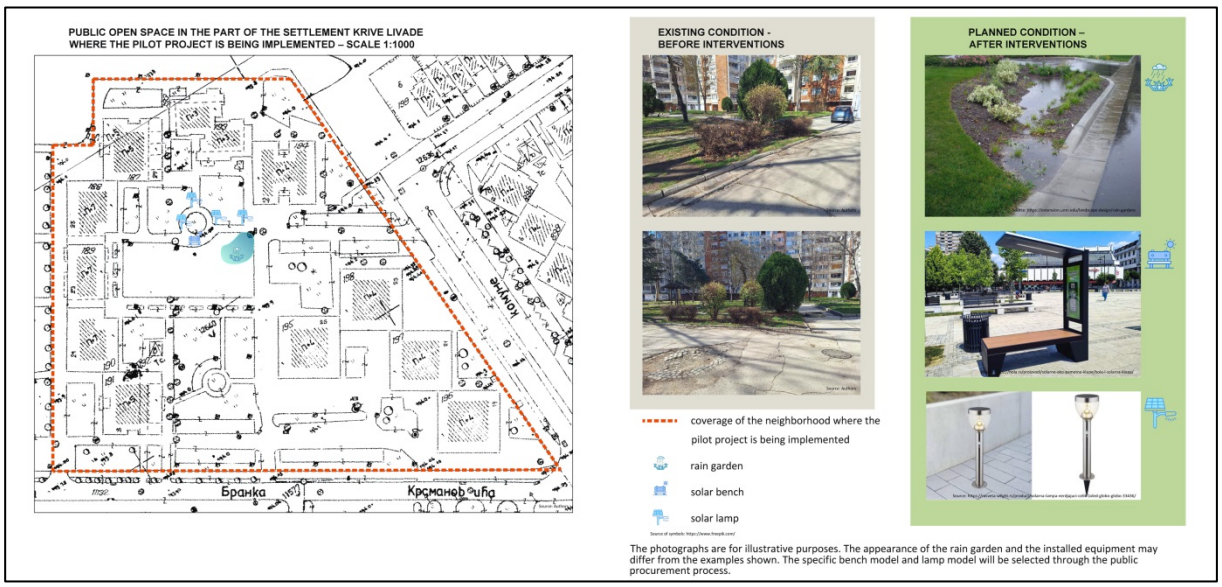

Figure 2 - PUBLIC OPEN SPACE LOCATION AND WORKSHOP RESULTS: Conceptual Urban Design Proposal with Innovative solutions

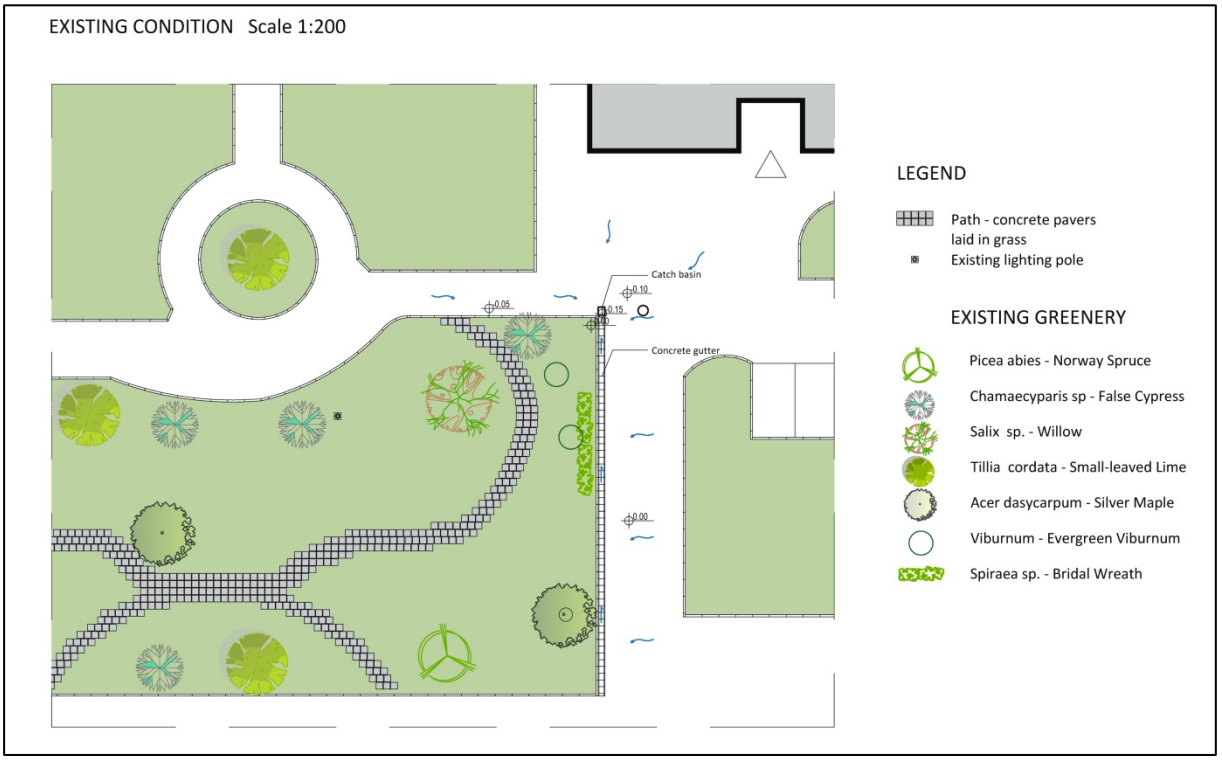

Figure 3 - EXISTING CONDITION

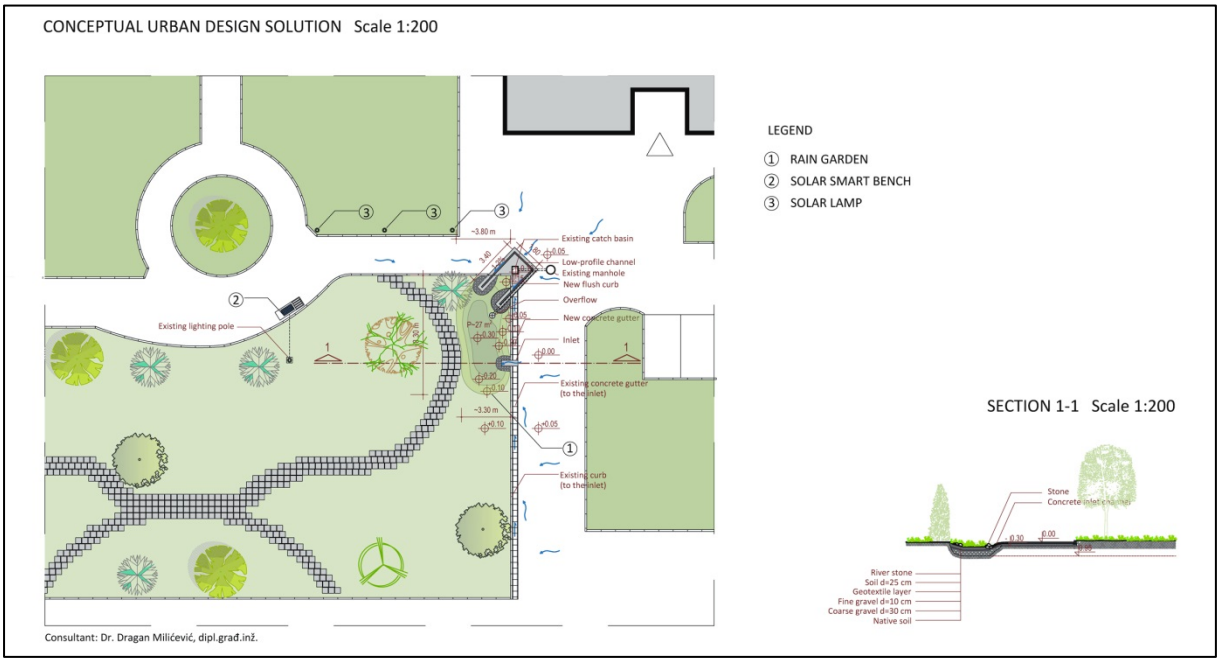

Figure 4 - CONCEPTUAL URBAN DESIGN SOLUTION

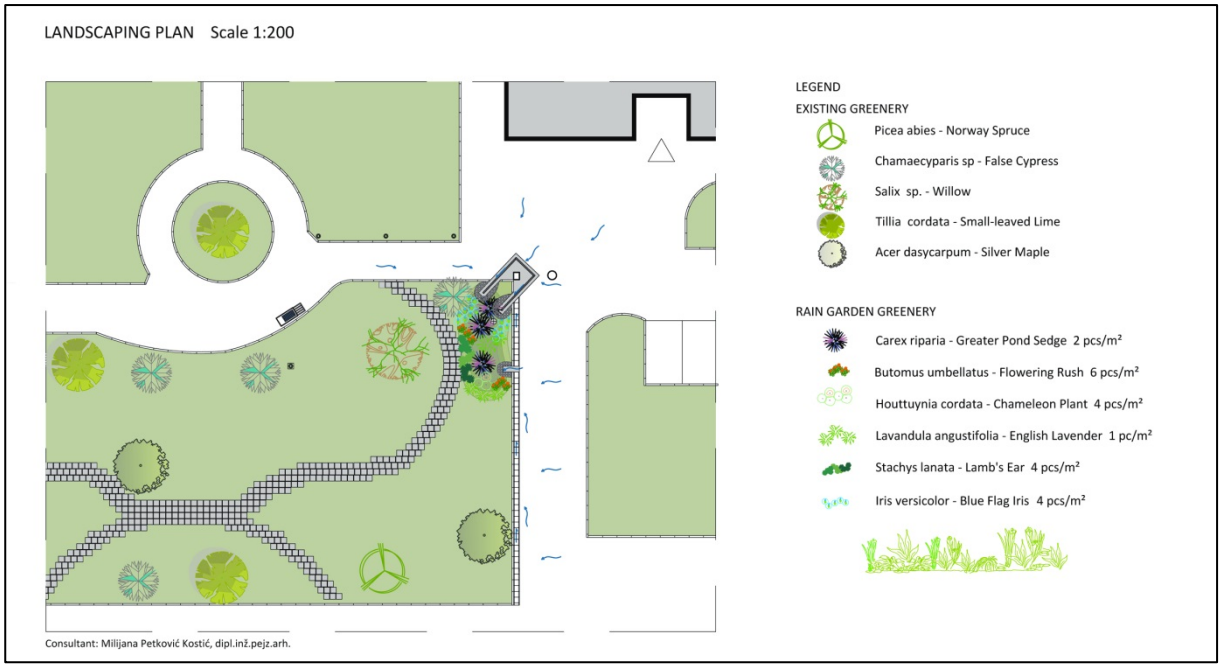

Figure 5 - LANDSCAPING PLAN

5 - ASSESSMENT OF THE POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS OF SPECIFIC ACTIVITIES OF THE REPOS PILOT PROJECT

The Objective 4 of the RePOS research project is *to demonstrate the possibilities and benefits* of the newly proposed planning and design toolset in practice by (re)developing residential POS at a micro urban scale at chosen location in a multi-family residential Neighbourhood in Niš. For that reason "Pilot Project for Redesign of Public Open Space in a Multi-family Residential Neighbourhood in Niš (*further on* RePOS Pilot Project) is planned for realisation as an *associated project* for which the assessment of the potential environmental and social impacts of specific tasks and phases is needed.

The SROs implementing the project will ensure, through abiding by the state laws and rulebooks that none of the project related activities will have a disruptive bearing of any kind on the baseline data in any of its segments, including the soil, air quality and noise, waste, water resources, flora and fauna, neither on workers' nor communities' health and safety. Besides that, potential negative social impacts and risks of the project will be taken into account and mitigation measures will be proposed.

The aim of the environmental and social impact assessment of the RePOS pilot project is to assess the environmental and social risks and impacts of the project throughout the project life cycle. It will assess, in an integrated way, all relevant *direct, indirect, and cumulative environmental and social risks and impacts* throughout the project life cycle, including those specifically identified in ESSs2–10 The environmental and social assessment will include stakeholder engagement as an integral part of the assessment, in accordance with ESS10.

As a general principle, the environmental and social assessment and the resulting Mitigation Plan follow mitigation hierarchy (as suggested by WB ESS1) and incorporate the following steps of mitigation: *Step 1: Anticipation and Avoidance*, refers to identification and evaluation of technically and financially feasible alternatives; *Step 2: Minimization*, applied where avoidance is not possible, refers to identification of specific actions to minimize or reduce adverse environmental and social risks and impacts that are likely to arise throughout the project life cycle; *Step 3: Mitigation***,** refers to identification of mitigation measures to ensure the project will meet the requirements of applicable ESSs 1- 8 and comply with relevant national laws and regulations; *Step 4: Offset or Compensation*, refer to design and implementation of measures that compensate/offset for residual risks and impacts, implemented if avoidance, minimization, or mitigation is not adequate to manage significant adverse risks and impacts *N/A in RePOS pilot project.

5.1 NATURE AND SCALE OF THE REPOS PILOT PROJECT:

RePOS Pilot project aims to improve the overall social and environmental public open space quality and address the problems of periodic flooding and storm-water management and to improve the contact with nature and social gathering at the selected micro-location of a multi-family residential estate in the city municipality of Medijana in Niš (Figure 2, 3). Implementation of the pilot project is not financed by PRIZMA Program.

Following the expressed needs and available budget, this small-scale project includes the installation of 1 solar smart bench, 3 solar lamps and rain-garden (27 m2). They should be placed in the residential public open space located in large housing estate (LHE) Krive livade, City of Niš (cadastral plot No 175/1,

Niš – Ćele Kula) that represents a common space for buildings in Branka Krsmanovića street (no. 19, 21, 23, 25, 27, 29, 31), and Pariske komune street, built in 1980s.

5.2 PHASES OF THE REPOS PILOT PROJECT IMPLEMENTATION AND REALISATION ACTIVITIES

The implementation and the realisation of this Pilot project consist of four main phases of activities: preparation, design, construction and operation phase. Each of these phases may have potential environmental and social impact which will further be analysed and assessed. In this regard, Mitigation and Monitoring plans will be presented following the same activity phase structure.

1) **PREPARATION PHASE** is related to WP4 Task 4.1. and Task 4.5. and refers to all the activities related to the timely and substantial involvement of the relevant stakeholders in order to secure adequate choice of location and the support for the project implementation and long-term maintenance (ANNEX 4_Report on preparing the pilot project context for POS re-development_D4.1)

   Environmental and social and risk and impacts related to this phase refer to:

   - Legal and adequate **choice of the neighbourhood** for pilot project implementation, coordinated and supported by local self-government and gaining support for project implementation from the civil sector to support long-term maintenance
   - Adequate **choice of micro-location** within the chosen neighbourhood for the RePOS pilot project, coordinated and supported by the local community. This support is essential in order to respond to community needs and to prevent the risk of negligence of the project during time.

   Taking this into account, principles of anticipation and avoidance should be implemented in Preparatory phase through Mitigation and Monitoring Plan.

2) **DESIGN PHASE** is related to WP4 Task 4.2, Task 4.3 and Task 4.4. and refers to conceptualisation, placement and choice of 3 key innovative solutions for POS re-design (Figures 4, 5) (ANNEX 6_Design Project: Co-created Vision for POS _D4.4).

   - 1 Solar smart bench with integrated: photovoltaic panel, battery, USB chargers / wireless charging, LED lighting and eco-sensor.
   - 3 Solar lamps - solar LED lighting fixture with pole
   - Rain-garden (27 m2)

   Environmental risks and impacts related to this phase differ between innovative solutions: Solar smart bench and solar lamps related environmental risks and impact refer to: 1 - placement of solar smart bench and solar lamps so that it does not jeopardize existing use of community open space; 2 - Certain solar smart benches and solar lamps may require more energy and raw materials to produce, or may use hazardous and harmful materials in their production, so the selection of the more durable and environmentally friendly option is preferable

   Rain-garden related environmental risks and impact refer to: 1 - placement of the rain garden so that it does not jeopardize existing use of community open space nor microclimate conditions; 2 - risking the choice of plants that do not support local pollinators and maybe invasive, so the selection of the local plants is preferable, 3 - Inadequate replacement of existing greenery with rain-garden may cause negative micro-climatic effects on residential environment

   Taking this into account, principles of anticipation and avoidance, minimisation and mitigation should be implemented in Design phase through Mitigation and Monitoring Plan.

3) **CONSTRUCTION PHASE** refers to activities related to: a) preparation of the construction site, b) earthworks related to rain-garden implementation, c) concrete works and d) solar smart bench and lighting fixture - that are presented in detail in ANNEX 7_Bill of Quantities and Cost Estimate. Each type of these activities is analysed for having the potential risk and impact on the environment.

   a) **Preparatory works** - They include: Cleaning and preparation of the site for the construction of the rain garden. Marking of boundaries according to the design, removal of existing vegetation, topsoil and waste; Removal of the existing concrete gutter and curb, and disposal of debris; Breaking up the concrete around the catch basin at the designated location for constructing the footing for the solar bench, including disposal of debris. Risks and impacts refer to temporary noise, air pollution, disposal and transport of waste, as well as to actions to prevent unauthorized and accidental use of the construction site that may endanger the safety of residents.

   b) **Earthworks** - They include: Mechanical and manual excavation of soil for the formation of the rain garden; Manual excavation of soil for the installation of the concrete gutter and for the installation of PVC pipes; Loading and transport of excavated material to a designated disposal site up to 10 km away, while retaining part of the existing soil suitable for the rain garden; Levelling the bottom of the excavation and forming the designed gradients: Supply, transport and installation of geotextile, coarse and fine gravel layer, crushed stone, PVC pipe; Supply, delivery and placement of soil suitable for the rain garden and overflow drain and decorative river stone; Supply, transport, preparation of planting spots, planting and watering of native plant species suitable for rain gardens; Risks and impacts refer to transport and work related noise and air pollution, as well as to potential risks on residents health and safety, that should be prevented through visibly marked construction site and proper waste management.

   c) **Concrete works** - They include: Construction of an inlet channel for conveying storm-water into the rain garden and a channel at the location of the existing catch basin. Construction of a lean concrete base; Supply, transport and laying of the concrete gutter, curbs, low-profile channel; Concreting of the area between the channel and the manhole with reinforced concrete. Risks and impacts refer to transport and work related noise and air pollution. They also include the possibility of producing hazardous materials waste of construction process, which should be prevented or minimized through proper management.

   d) **Solar Smart Bench and Lighting Fixture** - They include: Supply, transport and installation of a solar smart bench with integrated: photovoltaic panel, battery, USB chargers / wireless charging, LED lighting and eco-sensor; Supply, transport and installation of a solar LED lighting fixture with pole. Risks and impacts refer to potential minimal environmental risks caused by decommissioning, which should be avoided through control of equipment and consumables as well as proper and safe maintenance, monitoring and functioning of equipment.

   Taking this into account, principles of anticipation and avoidance, minimisation and mitigation should be implemented in the Construction phase through Mitigation and Monitoring Plan.

4) **OPERATION** refers to putting RePOS pilot project interventions into use

   The main environmental risks and impacts related to this phase refer to

   - Proper and safe functioning of the equipment
   - Organisational capacities and financial resources for maintenance of the project
   - Use of small amount of chemicals to clean the solar panels and lamps has no significant impact on the environment and people taking into account number of equipment elements.

- Decommissioning: small amounts of hazardous materials contained within the solar bench panel may be released in case of breaks or decommissioning of the panels, and can produce temporary waste localised on concrete surface, which can be easily removed.

Taking this into account, principles of anticipation and avoidance, minimisation and mitigation should be implemented in during Operation through Mitigation and Monitoring Plan.

5.3 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

5.3.1. Potential environmental impact

In general, The RePOS Pilot Project is expected to generate positive impacts on the selected public open space and its immediate residential surroundings. Although the intervention is limited in physical scope, it addresses several important problems identified at the pilot site, including degraded green surfaces, outdated urban equipment, a high share of impervious surfaces, localized stormwater retention and insufficient functional and aesthetic quality of the common residential open space. The project therefore has the potential to improve the environmental, spatial-functional and visual quality of the site, while also demonstrating an applicable model for similar interventions in multi-family residential neighbourhoods. But since some environmental risks and potential negative impacts may occur both positive and negative impacts will be further analysed.

Positive environmental impact

From an environmental perspective, the introduction of a rain garden/bioretention solution will contribute to more sustainable stormwater management. The intervention will enable temporary retention, infiltration and gradual absorption of atmospheric water, thereby helping to reduce localized ponding and improve the permeability of the site. In combination with native and locally adapted plant species, the rain garden can also improve the quality of greenery, support small-scale biodiversity and contribute to the ecological enhancement of the residential courtyard. Bioretention cleanses stormwater by allowing runoff to pass through layers of vegetation, soil, and gravel. Native plants absorb nutrients and pollutants, while the soil and gravel filter sediments and contaminants, improving water quality before it infiltrates into the ground, or is discharged into the sewer system.

The project is also expected to contribute to local microclimatic improvement. The introduction of vegetation and permeable landscape elements may reduce the dominance of heat-absorbing paved surfaces and improve outdoor comfort in the immediate surroundings. Although the intervention cannot eliminate wider urban heat island effects, it can provide localized benefits and demonstrate how small-scale nature-based solutions can be used to improve environmental conditions in dense residential areas.

The installation of solar lamps and a smart solar bench will promote the use of renewable energy and energy-efficient urban equipment in public open space design. These elements will improve the functionality, comfort and visibility of the space, particularly during evening hours. Improved lighting and better spatial organization can also contribute to a safer and more accessible residential environment.

The pilot intervention will also have a positive aesthetic impact on the immediate residential environment. By introducing new greenery, carefully selected plant species, contemporary urban equipment, solar lighting and a more coherent landscape design, the project can improve the visual quality, spatial identity and overall attractiveness of the residential courtyard and its surroundings.

This is particularly important in the context of inherited multi-family housing estates, where common open spaces are often characterized by physical degradation, outdated equipment, fragmented greenery and insufficient visual articulation. The aesthetic improvement of the space can contribute to a more pleasant everyday environment, strengthen residents' positive perception of their neighbourhood and support more responsible use and future maintenance of the public open space.

Environmental risk and negative impact

Potential environmental risk and negative impact will be analysed in relation to key areas of impact (SAIGE ESMF - ANNEX 06 - ESMP TEMPLATE):

a) Potential Impacts on the air quality and noise: Temporary, localised moderate air pollution will be related to dust occurrence due to project activities, machinery movement, and transportation, since pilot project construction preparation works involve breaking up the concrete around the catch basin at the designated location and transporting, and dumping small quantities of dry materials. Locally, the air quality may experience some moderate and temporary deterioration due to dust from construction equipment exhaust. The dust may settle on vegetation and pathways.

Temporary, localised moderate noise and vibrations will occur due to project activities, machinery movement, and transportation, since pilot project construction preparation works involve breaking up the concrete around the catch basin at the designated location and loading and transport of waste and excavated materials. In addition transport is needed for bringing to location the native plant species for rain gardens, construction material as well as, solar bench and lamps. Informational and organisational measures should be applied to mitigate the impact.

b) Potential Impacts on water (water protection and drainage) and soil: There is no expected negative impact on ground water, surface water and soil. Project's implementation and operation activities are in general not hazardous, and there are no open surface water bodies within the Krive Livade housing block.

c) Impact of generated waste streams: Preparation activities for the construction of RePOS pilot project include removal of the existing curb and disposal of debris, as well as earthworks and excavation related to construction of rain garden. Excavated soil is not hazardous material and part of it will be transported to the landfill.

Potential health hazards and environmental impacts can happen when installing new materials, if hazardous materials (such as concrete additives, etc.) are used. It may also happen due to improper waste management practices at the pilot project construction site. Negative impact can be avoided by choosing environmental-friendly materials, and if the use of these materials is necessary it can be mitigated through adequate waste management and by strictly following procedures prescribed in Serbian Law on Waste Management.

d) Potential impacts on health and safety workers and community:

During the construction phase, with respect to community health and safety, to avoid accidental injuries, health and safety measures will be applied to prevent the public from entering the pilot project construction area - such as appropriate fencing and signage.

Before the starting of preparation and construction work on the pilot project site, effective measures will be taken to resolve potential emergency situations, for which the Contractor and the works supervision are responsible. The person responsible for safety and health at work will ensure

implementation of safety issues and ensure the workers use proper equipment in line with national legislation (protective equipment, notification, information on environmental and hygienic protection…)

In addition to abovementioned, the environmental risk and potential negative impact was reviewed in relation to:

e) Land use and settlements: Project implementation doesn't require specific permits, but should be supported by landowners. Local placement of the new equipment should follow the existing land use of public space

f) Flora and fauna (protected areas and species) and microclimate: Construction preparatory works for the rain garden include removal of existing vegetation, topsoil and waste. Existing vegetation to be removed are two shrubs, hedge and grass area, and will be replaced with rain-garden local flora that has higher biodiversity value.

Changes in micro-climate are supposed to be positive, but this should be tested in design phase of the pilot project preparation (see: ANNEX 8_Raingarden ENVIMET: Comparison of the Outdoor Microclimate in Two POS scenarios_D4.3)

g) Cultural, heritage and religious issues: The specific site contains no protected cultural properties, archaeological sites, or monuments of historical importance

e) Risk of future neglect of the public open space: There is a potential risk of future neglect of the public open space. Therefore, the long-term organisation of residents to manage and monitor the proper and safe functioning of equipment is necessary, as well as their organisational and financial support by public and civic sector.

5.3.2. Potential social impact

Potential social impact will be analysed in relation to stakeholders included in project conceptualisation and implementation. The stakeholders of RePOS PILOT PROJECT include: City of Niš, building managers and local residents, civic society organisations. The target population are the residents of the chosen neighbourhood in Medijana city municipality of Niš. City of Niš is the land owner and as such key stakeholder in pilot project implementation. The organisations of the civil society have potential role in providing organisational and financial support for pilot project realisation. RePOS prilot project may be beneficial for both educating stakeholders on environmentally-friendly POS design solutions, aesthetic and ecological improvement of the specific multifamily neighbourhood and for building and strengthening ties between all stakeholders involved in the participation process.

Positive social impact

The RePOS pilot project is expected to provide a large positive social influence during and after project realisation. RePOS Pilot Project will possible be beneficial to local communities, vulnerable and marginalized people, or society as whole as it is aiming to introduce community building and environmentally friendly innovative solutions for reclaiming POS in multi-family housing areas to improve the environmental and societal performance of residential public open spaces .

RePOS Project will address a number of challenges related to envisioning, planning, designing, implementing, developing and maintaining POS, thus impacting a broad range of user groups. Having

in mind the main research aim – to create a safe, accessible, inclusive, resilient, green and diverse space - RePOS results will benefit primarily the *local community* gravitating towards POS. The *tenants* as the targeted end-user group will enjoy POS in their immediate residential environment that decreases health risks from air pollution and heat stress, but all urban residents will benefit from POS that mitigates adverse effects of urbanization and natural hazards, thus contributing to the overall quality of urban life. Project will be designed on an *inclusive basis*, so that all project-affected parties benefit in equitable manner from the project.

As part of the communication activities, the project team will raise awareness on environmental and social benefits of implementing innovative solutions for reclaiming POS in multifamily housing areas. All stakeholder communication activities involve only stakeholders who have agreed by signed consent to participate in project realization. The team will provide scientific information as well as project generated results to the stakeholders through presentations, talks and leaflets. All stakeholders and residents will be regularly updated on the progress of the pilot project via email, and every result will be published on a digital platform. This is done to ensure that residents are continuously informed about activities in their immediate residential environment. (ANNEX 4_Report on preparing the pilot project context for POS re-development_D4.1; ANNEX 9_REPOS WEBSITE with FORUM; ANNEX 10_PARTICIPATION PROCESS Time Line: Meetings and Activities)

All of these activities are expected to raise the level of current stakeholder knowledge and promote adoption of prevention measures to reduce the social risks and negative impact.

Social risk and negative impact

Social risk and negative impact refers to potential negative stakeholder response on RePOS pilot project implementation and realisation, such as:

- Non - acceptance of the project and project design by local community
- Neglect and lack of the maintenance of the project by local community

In order to avoid it, anticipation and avoidance mitigation step was conducted during Preparation and Design activity phase of RePOS pilot project, which refers to Pilot site selection procedure and educational and participation activities. These will be further presented in detail (for details on participation process see ANNEX 10 _PARTICIPATION PROCESS Time Line: Meetings and Activities).

a) Pilot site selection procedure and City of Niš support

As a part of demonstration activities within the RePOS project, the pilot site for the (re)development of public open space (POS) has been successfully prepared through a structured co-creation process involving various stakeholders. The preparation of the pilot context focused on awareness-raising, knowledge exchange, and comprehensive multi-stakeholder engagement, establishing a solid foundation for the next phases of RePOS pilot project development and implementation of the urban design project. The selected demonstration site is a residential POS in Branka Krsmanovića Street, City of Niš (cadastral plot No 175/1, Niš – Ćele Kula). The site was chosen in cooperation with representatives of the City and the City Municipality, and based on residents' interest and motivation to participate in the improvement of their shared environment. The process was initiated through consultations with the Chief Urban Planner of the City of Niš, ensuring the pilot project aligns with the city's broader urban planning strategies and expressed interests of local communities.

Following this initial agreement, the research team proposed several potential locations. First proposed location was confirmed by the Chief Urban Planner in coordination with the Mayor and the City's Monitoring Department, but rejected by representatives of the City Municipality of Pantelej, due to problem of insufficient cooperation between the City Municipality of Pantelej and local communities.

Then the second, final location for the pilot site was proposed in the City Municipality of Medijana and officially confirmed by the Chief Urban Planner in coordination with the Mayor and the City's Monitoring Department. Subsequently, meetings were held with representatives of the City Municipality of Medijana, where the pilot site is located, to verify interest in project implementation and its local feasibility. This was followed by a joint mobilization meeting with municipality officials and Homeowners' association managers. To ensure implementation viability, a strategic partnership was established with the Community Foundation Niš, which formally confirmed its willingness to contribute to project activities and support the realization of the pilot intervention. The selection was further socially validated through an educational workshop with residents, confirming their willingness to participate in the co-creation process, and was ultimately finalized by obtaining formal written consent from the City of Niš as the legal landowner (see ANNEXes 1, 2, 3, 4, 10).

b) Educational and participatory event: Choice of project's micro location, preliminary concept, and stakeholders' support

A participatory event was organized on February 12, 2026, at the Municipality of Medijana (17:00–18:30). The event was attended by representatives from the City of Niš, the City Municipality of Medijana, the Community Foundation Niš, local residents and the RePOS team. It consisted of two distinct phases: an educational phase and a co-design phase. The educational component aimed to increase residents' awareness of innovative and sustainable solutions in POS design, along with the presentation of smart solutions for urban equipment. The participatory segment enabled residents to actively contribute ideas regarding the positioning and conceptualization of proposed interventions within their common POS. The event was opened by Marko Aleksovski, Deputy President of the City Municipality of Medijana, who emphasized the importance of this initiative. Following him, Miljana Medarov Vujaklija, Head of the Monitoring Unit of the City Administration for Planning and Construction, addressed the attendees as the representative of the City of Niš responsible for the implementation of the pilot project. Prof. dr Ljiljana Vasilevska, a member of the RePOS team, then presented Nature-based Solutions, focusing on bioretention and rain gardens. The goal was to clarify these elements and explain their function in stormwater management and microclimate regulation. Prof. dr Milena Dinić Branković, the project Principal Investigator, introduced concepts of smart solar urban equipment, specifically smart benches and solar lighting, highlighting benefits such as energy efficiency and digital connectivity. Following the educational presentations, Filip Jovanović, Director of the Community Foundation Niš, addressed the participants to discuss the foundation's role and support in realizing the pilot project. After the educational session, the process moved to active co-creation through group work. Participants collaborated in groups to propose specific locations for the placement of bioretention/rain garden and urban equipment. The event concluded with an open discussion and a structured survey administered to the participants. The survey was designed to gather quantitative feedback on the residents' current use of the space, their perception of key spatial issues, their understanding of the proposed solutions, and their willingness to actively participate in the physical realization, future maintenance of the pilot project, as well as their overall evaluation of the

workshop and the participatory process itself. This workshop represented an important step in strengthening collaboration between residents, local authorities, and the research team. The co-creation process resulted in a jointly articulated vision for the transformation of the selected POS in the form of Conceptual Urban Design Proposal with Innovative solutions (ANNEX 5 and ANNEX 11) that was further integrated into DESIGN PROJECT (ANNEX 6_Design Project: Co-created Vision for POS _D4.4).

* Data privacy protection in conducting the survey is based on acknowledging that the protection of natural persons in relation to the processing of personal data is a fundamental right. Data protection will follow Regulation (EU) 2016/679 Of The European Parliament as well as the national Law on protection of personal data ("Official Gazette of RS", No. 87/2018).

6 - SUMMARY OF ENVIRONMENTAL AND SOCIAL IMPACT

During the preparation and implementation phase of the RePOS pilot project potential environmental impacts are listed below (Table 1)

Table 1 - Review of the impact on the environment for the duration of the project

IMPACT	RISK	COMMENT
Impact on land use and settlements	Does not exist	Project implementation doesn't require specific permits, but should be supported by landowners. Local placement of the new equipment will follow the existing land use of public space Positive impact of the improved functionality and everyday usability of the public space is possible. New equipment and better spatial organization can make the space more comfortable, accessible and useful for everyday residential use. Positive impact of the improved aesthetic quality of the residential environment is possible. New greenery, carefully selected plant species, contemporary urban equipment, solar lighting and coherent landscape design can improve the visual character, attractiveness and overall ambience of the residential courtyard and its immediate surroundings.
Ground and surface water	Does not exist	Positive impact may be expected through the improved storm-water management through rain garden/ bioretention solution. The intervention will support temporary water retention, infiltration and gradual absorption of atmospheric water, reducing localized ponding at the pilot site. Bioretention cleanses stormwater by allowing runoff to pass through layers of vegetation, soil, and gravel. Native plants absorb nutrients and pollutants, while the soil and gravel filter sediments and contaminants, improving water quality before it infiltrates into the ground, or is discharged into the sewer system. There is no expected negative impact on ground and surface water.
Air quality	Low	Temporary, localised moderate air pollution will be related to dust occurrence due to project activities, machinery movement, and transportation, since pilot project construction preparation

		works involve breaking up the concrete around the catch basin at the designated location and transporting, and dumping small quantities of dry materials. Locally, the air quality may experience some moderate and temporary deterioration due to dust from construction equipment exhaust. The dust may settle on vegetation and pathways.
Noise and vibrations	Low	Temporary, localised moderate noise and vibrations will occur due to project activities, machinery movement, and transportation, since pilot project construction preparation works involve breaking up the concrete around the catch basin at the designated location and loading and transport of waste and excavated materials. In addition, transport is needed for bringing to location the native plant species for rain gardens, construction material as well as, solar bench and lamps. Informational and organisational measures should be applied to mitigate the impact.
Flora and fauna (protected areas and species)	Low	Enhancement of greenery quality and local biodiversity may be expected from project realisation. Native and locally adapted plant species can improve the quality of vegetation and support pollinators and small urban fauna. Construction preparatory works for the rain garden include removal of existing vegetation, topsoil and waste. Existing vegetation to be removed are two shrubs, hedge and grass area, and will be replaced with rain-garden local flora that has higher biodiversity value. Changes in micro-climate may occur and this should be tested in design phase of the pilot project preparation. New vegetation and permeable landscape elements may contribute to reduced heat accumulation and improved outdoor comfort in the immediate surroundings.
Soil quality	Does not exist	There is no expected negative impact on soil quality
Waste management and management of hazardous materials	Moderate	Preparation activities for the construction of RePOS pilot project include removal of the existing curb and disposal of debris, as well as earthworks and excavation related to construction of rain garden. Excavated soil is not hazardous material and part of it will be transported to the landfill in accordance with the RS legislation. Health hazards and environmental impacts can happen when installing new materials if hazardous materials (such as concrete additives, etc.) are used. It may also happen due to improper waste management practices at the pilot project construction site. Negative impact can be avoided by choosing environmental-friendly materials, and mitigated through adequate waste management and by strictly following procedures prescribed in Serbian Law on Waste Management.

Health & Safety of the local populations and Workers	Moderate	Improved visibility and perceived safety can be expected as a positive impact of the Project. Solar lighting can improve visibility during evening hours and increase the perceived safety of the residential public open space. During the construction phase, with respect to community health and safety, to avoid accidental injuries, health and safety measures will be applied to prevent the public from entering the pilot project construction area - such as appropriate fencing and signage. Before the starting of preparation and construction work on the pilot project site, effective measures will be taken to resolve potential emergency situations. The person responsible for the Contractor for safety and health at work will ensure implementation of safety issues and ensure the workers use proper equipment in line with national legislation (protective equipment, notification, information on environmental and hygienic protection…)
Data privacy	Low	The protection of natural persons in relation to the processing of personal data is a fundamental right. Data protection will follow the national Law on protection of personal data.
Risk of future neglect of the public open space	Low	There is a potential risk of future neglect of the public open space. Therefore the long-term organisation of residents to manage and monitor proper and safe functioning of equipment is necessary, as well as their organisational and financial support by public and civic sector. Improved spatial quality and participatory preparation may encourage more responsible use and support future maintenance of the space.
Cultural, heritage and religious issues	Does not exist	The specific site contains no protected cultural properties, archaeological sites, or monuments of historical importance
Demonstration value for similar residential areas and promotion of sustainable water management, renewable energy and energy-efficient urban equipment.	Does not exist	The pilot project can serve as a practical model for similar small-scale regeneration interventions in inherited multi-family housing estates. As a positive environmental impact, solar lamps and the smart solar bench demonstrate the use of renewable energy in small-scale public open space design, while rain-garden demonstrate sustainable rainwater management.

7 MITIGATION PLAN

Mitigation Plan aims to eliminate, offset, or reduce to acceptable levels the potential adverse environmental and social impacts of a project. It translates mitigation measures into actionable steps spanning a project's preparation and design, construction, and operational phases.

MITIGATION PLAN				
Issue	**Mitigating Measure**	**Institutional responsibility during implementation**	**Cost of Mitigation (If Substantial)**	**Institutional responsibility - Supervision**
REPOS PILOT PROJECT PREPARATION / DESIGN				
Involvement of the relevant stakeholders: Choice of the neighbourhood for pilot project implementation	- Coordinating the choice of the neighbourhood for project implementation with the local self-government, including representatives of the local municipality, and providing support - Gaining support for project implementation from the civil sector - Letter of support from the City of Niš - Consent of the land owner and extract from the real estate cadastre - Letter of support from the "Community Foundation - Niš"	PI/ SROs	/	PI
Involvement of the relevant stakeholders: Choice of the pilot project site within the neighbourhood	- Coordinating pilot project site selection with the local community and municipal representatives, and providing support. - Data privacy protection - Educational and Participatory Workshop with local community and municipal representatives.	PI/ SROs	/	SROs

	- Data protection will follow the national Law on protection of personal data. Consent to participate in project realization			
The choice of location of the rain-garden, solar smart benches and solar lamps in local public spaces may have an aesthetic and functional impact on the residential environment.	- It needs to be carefully designed in accordance with residents' needs and preferences. - Careful siting of the solar smart bench / solar lamps, solar lamps and rain garden. - Coordinate placement with local communities through a participatory workshop - Ensure that there are no special instructions as to the open space use and appearance, and ensure approvals are received by all responsible local authorities- if needed.	PI	/	PI/SROs
Selection of solar lamps and smart benches	Certain solar smart benches and solar lamps may require more energy and raw materials to produce, or may use hazardous and harmful materials in their production. - They also differ in lifespan of functional parts (lights, chargers/batteries, wi-fi…), that should be regularly replaced and repaired. - Obtain sufficient information from the producer - Look for certificates or statements on how the solar smart benches/lamps are produced and how they last. - Select the more durable and environmentally friendly option. - Select adequate local native plants to biodiversity. - Variation in costs of solar smart benches and lamps may be incurred	PI	/	PI/SROs

Select local native plants	Certain rain gardens use exotic or ornamental plants (instead of local native plants) that do not support local pollinators and maybe invasive. Select adequate local native plants to support biodiversity.	PI	/	PI/SROs
A simulation of the microclimate before and after	Inadequate replacement of existing greenery with rain-garden may cause negative micro-climatic effects on residential environment Simulate the outdoor microclimate for “before” and “after” scenarios at the pilot project site within the public open space (POS) in the housing estate (EnviMet)	PI	/	PI/SROs
REPOS PILOT PROJECT EXECUTION /CONSTRUCTION				
Protection of trees and vegetation that are not intended for removal during the construction works	- Defining the "Root Protection Zone – RPZ". Minimum 1.5 m from the trunk for small trees. - Install a fence at least 1.2 m high before the start of any works (including the delivery of machinery). - No construction materials, rubble, or soil may be deposited in the RPZ, nor may equipment or construction machinery. - Drainage control (e.g., water pumping) must ensure that water does not flow into or accumulate in the tree's root zone. - Washing of concrete mixers containing fresh concrete is prohibited on the construction site, including the RPZ. - Maintenance, repair, and servicing of machinery or any oil changes are prohibited within the construction site area, including the RPZ.	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Development of Grievance mechanism	- Any individual who feels threatened or harmed by some of the specific activities related to RePOS Pilot Project can submit a complaint. Complaints, objections or comments in written form	SRO_GAFUN	/	SRO_GAFUN

	can be submitted by filling out the complaint form (.docx file) which will be available at the project website. The electronic complaint form should be filled out, saved and sent via email to contact e-mail address provided at the project website; Authorized persons of REPOS project will consider all complaints responsibly and will take timely and appropriate actions in relation to received complaints. The project will only deal with objections directly related to this pilot project. - All personal data any individual provides will be used in accordance with applicable regulations on the protection of personal data and will not be made public. We will use the contact data exclusively for future communication regarding complaint.			
Unauthorized and accidental use of the construction site may endanger the safety of residents	- Before the start of the activity, construction site will be visibly marked to localise construction activities and temporary waste disposal and ensure the safety of residents. - Notices about the construction activities will be placed in visible places for the local population.	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Safety of pedestrians and suitable crossings	- A suitable pedestrian crossing must be provided, equipped with kerb ramps that allow the use of wheelchairs, trolleys, bicycles and prams.	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Dust, noise, emissions generated during construction, activities may be a nuisance to nearby human or animal populations	- Ensure regulatory requirements to limit noise are followed, and noise is kept to the allowed working hours and intervals as per the relevant regulation - Do not allow machinery to idle. - Water down working areas to limit dust generation - Inform residents on the timetable of construction works (info-panel)	Contractor/ SRO_GAFUN	/	SRO_GAFUN

	- All trucks need to be covered - Contractor's machinery to be carefully selected - Wet truck load - Haul material at off-peak traffic hours (9-14h) - Use alternative roads to avoid main roads - Proper road signs and markings of the site, to minimise the chances of a wrong turn - Ensure the planned and safe movement of vehicles in the residential area			
Vibrations	- Limit activities to daylight working hours, - If there is material damage to the local houses, buildings and infrastructure (access roads included) caused by the works, the damage will be compensated for and will have to be rectified, - Locate the equipment for earth works as far away as possible form vibration-sensitive receptors.	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Traffic disruption during construction activities	- Traffic Management Plan with appropriate measures for traffic diversions that can be easily noted and followed, including traffic police assistance, - Traffic Management Plan which will define a speed limit for the construction vehicles and organise traffic in such a way that populated areas are avoided as much as possible, - During the works, maximum use of the existing road network. Avoid the construction of new temporary roads, - Inform the local community about the works planned	Contractor/ SRO_GAFUN	/	SRO_GAFUN

Waste management	- Improper waste management may pollute the environment and pose a threat to residents and animals in the vicinity of the site. - Introduce separate containers for inert waste (concrete, rubble), green waste (vegetation) and municipal waste in accordance with local law. - Waste should be transported exclusively by covered trucks (tarpaulins) in order to prevent spillage on roads. - All wastes generated will be disposed of at an authorised site - There will be no open burning of wastes	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Soil and water pollution from improper material storage, management and use	- Organise and cover material storage areas - Isolate the areas for washing the concrete and other equipment on the construction site - Organise the site to minimise the risk of generating sediments and accumulating wastewater, which could cause pollution of the surrounding soil - Any deposits of excess soil, stone, etc. may only be temporary until the works have been completed. After that, excess soil, stone and other waste material must be removed, and complete rehabilitation of all areas degraded by the works must be done.	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Safety of local population	- Excavation of soil for the formation of the rain garden results in drops in elevation that can pose tripping hazards for people if it is not clearly marked. - Clearly mark the construction site to prevent unauthorized and accidental use that may endanger the safety of residents	Contractor/ SRO_GAFUN	/	SRO_GAFUN
Safety of workers	- Provide workers with safety instructions and PPE	Contractor	/	Contractor

	- Provide a safe alternative traffic flow - On a daily basis, check whether workers have and use the prescribed PPE.			
Control of equipment and consumables	Ensure control of purchased equipment and consumables, and their verification before use according to responsible SRO	PI / SRO_GAFUN	/	SRO_GAFUN
Protection of cultural heritage	- The contractor will develop a Procedure for the case of "chance find" before the start of the works and will describe the process of managing cultural heritage that may be accidentally discovered during the construction process; - In case of accidental discovery, the location will be fenced off (protected), and the competent authorities will be informed within 24 hours after the discovery. - Instructions shall be given to record and register artefacts or other possible "chance finds" discovered during excavation or construction.	Contractor	/	SRO_GAFUN
SOLAR SMART BENCH AND LIGHTING FIXTURE				
Risks when installing the Solar Smart Bench and Lighting Fixture and safety against electric shock	- Incoming Materials Control**:** Before installation, perform a visual and functional inspection of the photovoltaic panel, battery, and inverter. Verify that all equipment bears the required safety certifications (CE mark) and meets the appropriate ingress protection rating (e.g., IP65) against water and dust. - Safe Installation: Installation shall be carried out exclusively by qualified electricians. During installation, ensure that all electrical connections are securely sealed and adequately protected against vandalism and adverse weather conditions. - Battery Management: Establish a strict handling protocol for lithium-ion batteries. Exposure to extreme temperatures and	Contractor/ SRO_GAFUN	/	SRO_GAFUN

	physical damage during transport and assembly is strictly prohibited. - PV Panel Transport: Transport PV panels vertically in dedicated holders with protective film. Stacking them one on top of another is forbidden. - Bench Electrical Connections: All electrical connections on the bench must be performed with the battery disconnected. Follow the proper assembly sequence: install the structure first, then the battery, followed by the panels. Leaving unprotected live cables is strictly forbidden. - Post-Installation Testing: After installation is completed, perform an insulation resistance test (or grounding continuity test) before putting the equipment into operation. - Solar LED Pole Installation (with foundation): Protect the excavation for the pole foundation with adequate fencing during digging. When concreting the foundation, position the anchor bolts precisely according to the template to avoid any need for subsequent drilling.			
OPERATION				
Proper and safe functioning of equipment	Ensure long-term organisation of residents to manage and monitor proper and safe functioning of equipment Enable public and civic-sector engagement for enabling/mediating financial support for maintaining the equipment	Maintenance City of Nis/GAFUN	/	Maintenance City of Nis/GAFUN
Use of small amount of chemicals to clean solar benches and lamps may have minimal impact on	The potential impact is minimal. Ensure compounds are evaluated for their environmental impact and potential for injury.	Maintenance City of Nis/GAFUN	May impose additional costs for more	Maintenance City of Nis/GAFUN

people and the surrounding environment			expensive eco solutions	
Plan for decommissioning (dismantling)	Create special instructions for the end of working life, which includes safe disconnection of voltage, disassembly of panels and batteries, and their separation as electronic and hazardous waste (batteries) and delivery to an authorized recycling center.	Maintenance City of Nis/GAFUN	/	Maintenance City of Nis/GAFUN
Safety of local population	Small amount of hazardous materials contained within the solar bench panel may be released in case of breaks or decommissioning of the panels, localized on the concrete surface. The potential impact is small and localised. Ensure rapid collection of wastes. Ensure workers are trained in adequate decommissioning procedures with spill control measures in place	Maintenance City of Nis/GAFUN	/	Maintenance City of Nis/GAFUN

8 MONITORING PLAN

Monitoring plan aims to ensure that the project adheres to national environmental laws, labor standards, and international safeguards as well as to track whether proposed safety, pollution, and socio-economic mitigation measures are being effectively executed on-site. Besides that, it provides a transparent framework to record community feedback and enables identifying unforeseen environmental risks and proposal of new mitigation measures.

MONITORING PLAN					
What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored (what should be measured and how)?	When is the parameter to be monitored (timing and frequency)?	Who is responsible for reporting?	Monitoring
RESEARCH PROJECT PREPARATORY PHASE					
Support for project implementation from the local self-government and civil sector	At the SRO office	Letter of support from the City of Niš Consent of the land owner and extract from the real estate cadastre Letter of support from the "Community Foundation - Niš"	Prior to procurement	PI	SROs
Support for project implementation from local community. Data privacy - consent to participate	At the SRO office	Educational and Participatory Workshop results report and documentation	Prior to procurement	PI	SROs
Careful siting of the solar smart bench / solar lamps, solar lamps and rain-garden.	At the SRO office	Design project documentation	Prior to construction works	PI	SROs

Environmentally friendly production process and durability of smart solar benches and solar lamps	At the SRO office	Through technical Specifications of smart solar benches and solar lamps- receiving and keeping all specifications	Prior to procurement	PI	SROs
Adequate local native plants to support biodiversity	At the SRO office	Through receiving and keeping all specifications	Prior to procurement	PI	SROs
Microclimate parameters change	At the SRO office	EnviMet results report	Prior to procurement	PI	SROs
PROJECT IMPLEMENTATION PHASE – CONSTRUCTION PHASE					
Visibly marked construction site for accidents prevention	On Project site	Periodically check placement of mark	Before starting preparatory and construction works and constantly during construction works	Contractor / SRO_GAFUN/PI	Contractor / SRO_GAFUN
Dust, noise, emissions and vibrations	On Project site	Periodically check sound levels at the work site to ensure it is within legal limits and as per local permitting. Through complaints (if area is populated)	During construction works constantly	Contractor / SRO_GAFUN/PI	Contractor / SRO_GAFUN
Proper waste collection and management	On Project site	Daily supervision of waste collection Ensure no open burning is taking place Keep	Daily	Contractor / SRO_GAFUN/PI	Contractor/ SRO_GAFUN

		receipts from authorized landfill			
Transport activities are regulated	On Project site	Daily supervision of transport activities	Daily	Contractor / SRO_GAFUN/PI	Contractor/ SRO_GAFUN
Control of equipment and consumables, and their verification before use	On Project site	Check of equipment and consumables	Before placement during construction works	Contractor / SRO_GAFUN/PI	Contractor/ SRO_GAFUN
Proper and safe functioning of the equipment	On Project site	Periodically check of equipment and consumables	Weekly	PI	City of Nis/GAFUN
Chemicals to clean solar benches and lamps are evaluated for their health and environmental impact	On Project site	Periodically check	Monthly	PI	City of Nis/GAFUN
Ensure workers are trained in adequate decommissioning procedures with spill control measures in place	On Project site	Certificate provided by Contractor In accordance with national regulation	Before preparation and construction works	Contractor / SRO_GAFUN/PI	Contractor/ SRO_GAFUN
OPERATION					
Rain garden maintenance	On Project site	Rain garden is largely self-sustaining once		PI during RePOS project lifecycle	

		established, but it requires: a) Vegetation and Soil Care monitoring, including periodic inspection of plants, and weed. b) Drainage and Infiltration monitoring , including inspection of inlets, outlets, and downspouts for trash, debris, or sediment blockages; c) Structural Checks, regarding gullying, soil movement, or edge erosion	Regular seasonal check of young plants, especially during the first two years. Special check in dry periods. Regular seasonal weed inspection Check of debris & sediment two times a year. Special check after heavy storms. Structural Checks after major weather events.		GAFUN during RePOS project lifecycle City of Niš after RePOS project completion

ANNEX 1-12_ LIST OF DOCUMENTS

ANNEX 1_Letter of support City of NiS

ANNEX 2_Consent of the land owner and extract from the real-estate cadastre

ANNEX 3_Letter of support Community Foundation Nis

ANNEX 4_Report on preparing the pilot project context for POS re-development_D4.1

ANNEX 5_WORKSHOP RESULTS: Conceptual Urban Design Proposal with Innovative solutions_D4.2

ANNEX 6 _Design Project: Co-created Vision for POS _D4.4

ANNEX 7_Bill of Quantities and Cost Estimate

ANNEX 8_Raingarden ENVIMET:Comparison of the Outdoor Microclimate in Two POS scenarios_D4.3

ANNEX 9_REPOS WEBSITE with FORUM

ANNEX 10_PARTICIPATION PROCESS Time Line: Meetings and Activities

ANNEX 11_WORKSHOP documentation

ANNEX 12_Grievance Form

ANNEX 1

Letter of support City of Niš

Република Србија
ГРАД НИШ
ГРАДОНАЧЕЛНИК

Број: 3674 /2023-01
Датум: 16.10.2023

Ms. Milena Dinić Branković
RePOS Principal Investigator

LETTER OF SUPPORT

This letter hereby formally confirms that the City of Niš is strongly interested in giving support to the project Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future (RePOS), which has been approved for funding within the PRISMA Program. Financing for the PRISMA Program is provided by the Republic of Serbia (Ministry of Science, Technological Development, and Innovation), through a World Bank loan with implementation support, and the European Union, through a grant contribution. The activities are part of the Serbia Accelerating Innovation and Growth Entrepreneurship Project (SAIGE Project), dedicated to strengthening innovative entrepreneurship and scientific research. RePOS project aims to re-introduce public open space into residential areas of Serbian cities through a novel integrated planning and design approach. Principal Investigator of the RePOS project is Dr Milena Dinić Branković, and the holder is the Scientific-Research Organization Faculty of Civil Engineering and Architecture Niš.

RePOS research will build on existing knowledge to create a replicable planning model of an appealing, inclusive, safe, green, resilient and sustainable public open space that implements novel digital, nature-based, multifunctionality, socio-cultural and management solutions. By using a mixed-methods approach, RePOS will develop systemic guidance directives for urban planning and design with an all-inclusive toolset to support innovative solutions in (re)creation of public open space, as well as specific guidelines for participation and implementation. The devised theoretical framework will be tested at a pilot project scale in the City of Niš with multiple stakeholders. Research outputs will inspire updating of legislation and planning regulations, help local governments with decision-making, assist planners in guiding (re)development process and benefit local communities by enhancing the quality of housing.

The City of Niš supports the planned objectives of the RePOS project, and considers the results important for addressing the current challenges in planning and designing of public open spaces. In addition, the City of Niš is willing to contribute to RePOS project by enabling the remodelling of one public open space that will be selected in cooperation with the city officials, and based on residents' interest and motivation for (re)development. In addition, we will participate in planned events, foster the dissemination of project activities and promote the use of project results in further development.

Dragana Sotirovski
Mayor

ANNEX 2

Consent of the land owner and extract from the real-estate cadastre

Реупблика Србија
ГРАД НИШ
ГРАДОНАЧЕЛНИК
Број: 387 /2026-01
Датум: 20.02.2026

САГЛАСНОСТ власника земљишта за реализацију пилот пројекта
на к.п. бр. 175/1 КО Ниш – Ћеле Кула

У складу са Писмом подршке пројекту RePOS (Одлука број 3674/2023-01 од 16.10.2023. године), Град Ниш, као власник земљишта, даје сагласност да се на катастарској парцели број 175/1 КО Ниш – Ћеле Кула реализује пилот пројекат у оквиру активности на научноистраживачком пројекту „Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future“ (акроним RePOS).

Пројекат RePOS реализује се у оквиру Програма ПРИЗМА Фонда за науку Републике Србије (број пројекта: 7572), у периоду 2024–2027. године. Носилац пројекта је Грађевинско-архитектонски факултет Универзитета у Нишу, а руководилац пројекта је др Милена Динић Бранковић, ванредни професор.

Град Ниш даје сагласност за реализацију пилот пројекта на предметној парцели, која је изабрана у договору Градоначелника Ниша, Главне градске урбанисткиње Града Ниша, Одсека за мониторинг Градске управе за планирање и изградњу, Градске општине Медијана и пројектног тима RePOS. Интервенције у оквиру пилот пројекта обухватиће уређење дела међублоковског простора.

Ова сагласност се даје искључиво ради реализације пилот пројекта у оквиру пројекта RePOS, за време трајања пројекта, и може се користити у поступцима везаним за реализацију пројекта RePOS.C поштовањем,

ГРАДОНАЧЕЛНИК

Драгостав Павловић

ИЗВОД ИЗ БАЗЕ ПОДАТАКА КАТАСТРА НЕПОКРЕТНОСТИ

Подаци о непокретности	**8cf10816-2a17-4519-9071-7715136dcf56**
Матични број општине:	71331
Општина:	МЕДИЈАНА
Матични број катастарске општине:	729809
Катастарска општина:	НИШ "ЋЕЛЕ КУЛА"
Датум ажурности:	20.02.2026. 16:11
Служба:	НИШ

1. Подаци о парцели - А лист

Потес / Улица:	БРАНКА КРСМАНОВИЋА
Број парцеле:	175/1
Површина m²:	38047

Подаци о делу парцеле

Број дела:	1
Врста земљишта:	ГРАДСКО ГРАЂЕВИНСКО ЗЕМЉИШТЕ
Култура:	ЗЕМЉИШТЕ УЗ ЗГРАДУ И ДРУГИ ОБЈЕКАТ
Површина m²:	38047

Имаоци права на парцели - Б лист

Назив:	ГРАД НИШ
Лице уписано са матичним бројем:	**ДА**
Врста права:	СВОЈИНА
Облик својине:	ЈАВНА СВОЈИНА
Удео:	1/1

Терети на парцели - Г лист

*** Нема терета ***

Напомене на парцели

*** Нема напомена ***

ANNEX 3

Letter of support Community Foundation Niš

Community foundation Ni
Street: Dusana Spasica18
18 000 Nis, Serbia
RN: 28833806
VAT: 113198592
Bank account : 340-10116528-94

Community Foundation Nis

Niš, 23.02.2026.

To: Milena Dinić Branković, RePOS Principal Investigator

Subject: Letter of support to RePOS project from the Community Foundation Niš

This letter hereby formally confirms that the Community Foundation Niš is strongly interested in giving support to the project **"Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future" (RePOS)**, which has been approved for funding by the Science Fund of the Republic of Serbia within the PRISMA Program. RePOS project aims to re-introduce public open space into residential areas of Serbian cities through a novel integrated planning and design approach. Principal Investigator of the RePOS project is Dr Milena Dinić Branković, and the holder is the Scientific-Research Organization Faculty of Civil Engineering and Architecture Niš.

Community Foundation Niš supports the planned objectives of the RePOS project, and considers the results important for addressing the current challenges in planning and designing of public open spaces. In addition, the Community Foundation Niš is willing to contribute to RePOS project activities as a stakeholder by supporting the realization of the pilot project. RePOS pilot project involves remodelling the public open space in Branka Krsmanovića street (cadastral plot No 175/1 Niš – Ćele Kula. The Community Foundation Niš will contribute in line with its mission and expertise, participate in planned events, and foster the dissemination of project activities.

Sincerely,

Filip Jovanović

Director of the Community Foundation Niš

ANNEX 4

Report on preparing the pilot project context for POS re-development_D4.1

Project: Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future – RePOS

This research was supported by the Science Fund of the Republic of Serbia, #GRANT No 7572

Report on Preparing the Pilot Project Context for POS (Re)development

Deliverable 4.1.

Prepared by:

RePOS Team

February 2026

Contents

1. Pilot site selection procedure 1

2. Site context 1

3. Educational and participatory event 2

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Appendix 13

Report on Preparing the Pilot Project Context for POS (Re)development

1. Pilot site selection procedure

As a part of demonstration activities within the RePOS project, the pilot site for the (re)development of public open space (POS) has been successfully prepared through a structured co-creation process involving various stakeholders. The preparation of the pilot context focused on awareness-raising, knowledge exchange, and comprehensive multi-stakeholder engagement, establishing a solid foundation for the next phases of urban design development and implementation of the urban design project.

The selected demonstration site is a residential POS in Branka Krsmanovića Street, City of Niš (cadastral plot No 175/1, Niš – Ćele Kula). The site was chosen in cooperation with representatives of the City and the City Municipality, and based on residents' interest and motivation to participate in the improvement of their shared environment.

The process was initiated through consultations with the Chief Urban Planner of the City of Niš, ensuring the pilot project aligns with the city's broader urban planning strategies. Following this initial agreement, the research team proposed several potential locations. The final pilot site was then selected and officially confirmed by the Chief Urban Planner in coordination with the Mayor and the City's Monitoring Department. Subsequently, meetings were held with representatives of the City Municipality of Medijana, where the pilot site is located, to verify local feasibility. This was followed by a joint mobilization meeting with municipality officials and Homeowners' association managers. To ensure implementation viability, a strategic partnership was established with the Community Foundation Niš, which formally confirmed its willingness to contribute to project activities and support the realization of the pilot intervention. The selection was further socially validated through an educational workshop with residents, confirming their willingness to participate in the co-creation process, and was ultimately finalized by obtaining formal written consent from the City of Niš as the legal landowner.

2. Site context

The selected pilot site is the part of the large housing estate (LHE) Krive livade, built in 1980s. It includes the eastern part of the cadastral plot No 175/1, cadastral municipality Niš – Ćele Kula (Fig. 1), and represents a common space[1] for buildings in Branka Krsmanovića street (no. 19, 21, 23, 25, 27, 29, 31), and Pariske komune street

[1] https://www.repos-project.rs/pdf/pos-typology.pdf, https://www.repos-project.rs/maps

(no. 19, 21, 23, 25), where approximately 1,300 people live. This location was chosen as typological representative of POS in LHEs that suffer from degraded green surfaces, lack of functional urban equipment, and vulnerability to stormwater retention. The site offers an optimal testing ground for the integration of innovative and sustainable solutions aligned with the RePOS theoretical framework.

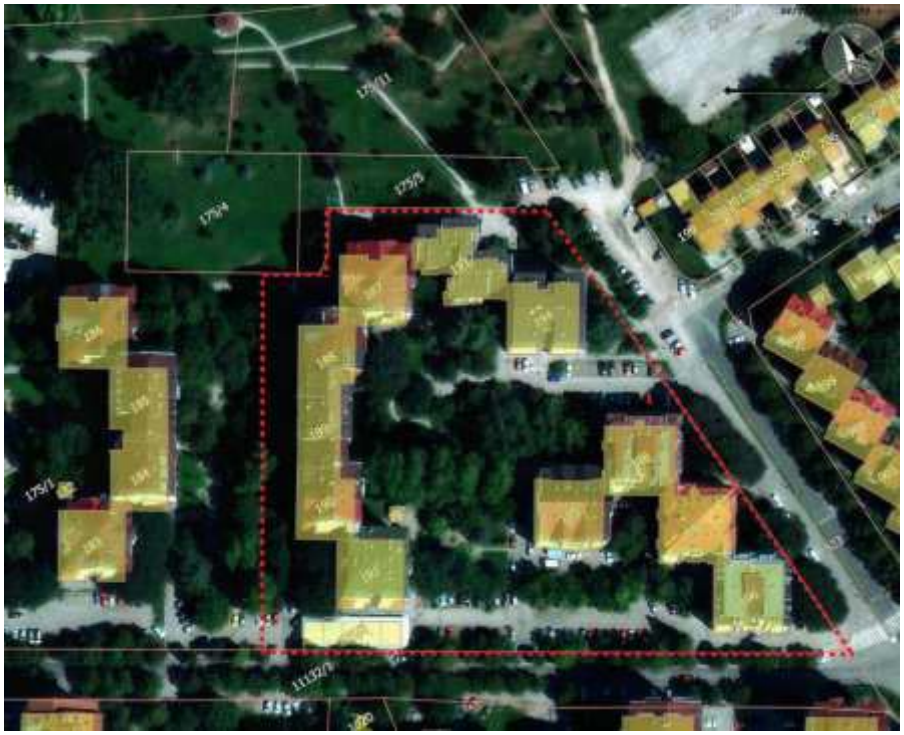


Figure 1 – Pilot project site (marked by red dottet line)
Source: https://a3.geosrbija.rs/

3. Educational and participatory event

A participatory event was organized on February 12, 2026, at the Municipality of Medijana (17:00–18:30). The event was attended by representatives from the City of Niš, the City Municipality of Medijana, the Community Foundation Niš, local residents and the RePOS team. It consisted of two distinct phases: an educational phase and a co-design phase. The educational component aimed to increase residents' awareness of inovative and sustainable solutions in POS design, along with the presentation of smart solutions for urban equipment. The participatory segment enabled residents to actively contribute ideas regarding the positioning and conceptualization of proposed interventions within their common POS.

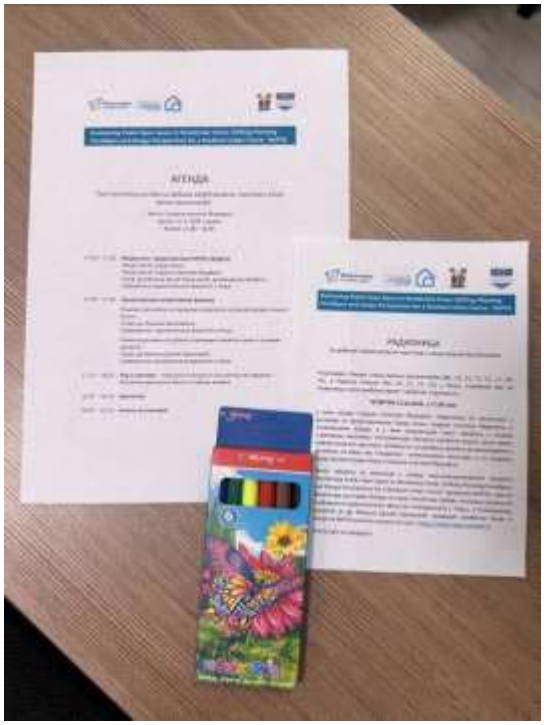
The event was opened by Marko Aleksovski, Deputy President of the City Municipality of Medijana, who emphasized the importance of this initiative. Following him, Miljana Medarov Vujaklija, Head of the Monitoring Unit of the City Administration for Planning and Construction, addressed the attendees as the representative of the City of Niš responsible for the implementation of the pilot project. Prof. dr Ljiljana Vasilevska, a member of the RePOS team, then presented

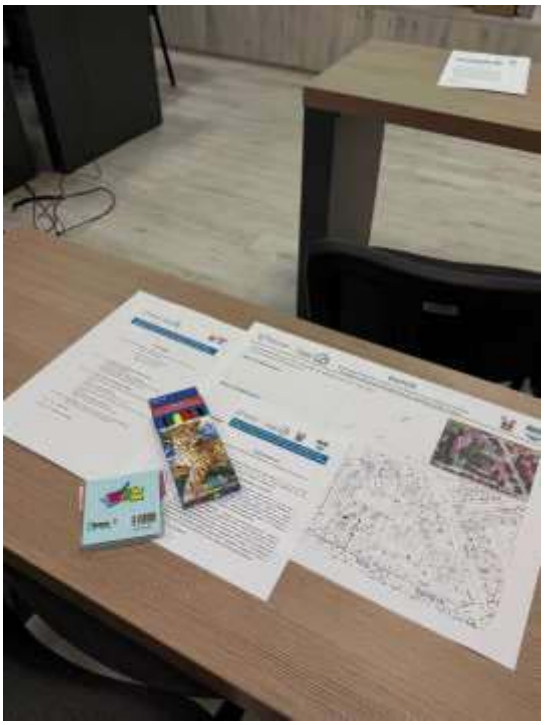
Nature-based Solutions, focusing on bioretention and rain gardens. The goal was to clarify these elements and explain their function in stormwater management and microclimate regulation. Prof. dr Milena Dinić Branković, the project Principal Investigator, introduced concepts of smart solar urban equipment, specifically smart benches and solar lighting, highlighting benefits such as energy efficiency and digital connectivity. Following the educational presentations, Filip Jovanović, Director of the Community Foundation Niš, addressed the participants to discuss the foundation's role and support in realizing the pilot project.

After the educational session, the process moved to active co-creation through group work. Participants collaborated in groups to propose specific locations for the placement of bioretention/rain garden and urban equipment. The event concluded with an open discussion and a structured survey administered to the participants. The survey was designed to gather quantitative feedback on the residents' current use of the space, their perception of key spatial issues, their understanding of the proposed solutions, and their willingness to actively participate in the physical realization, future maintenance of the pilot project, as well as their overall evaluation of the workshop and the participatory process itself.

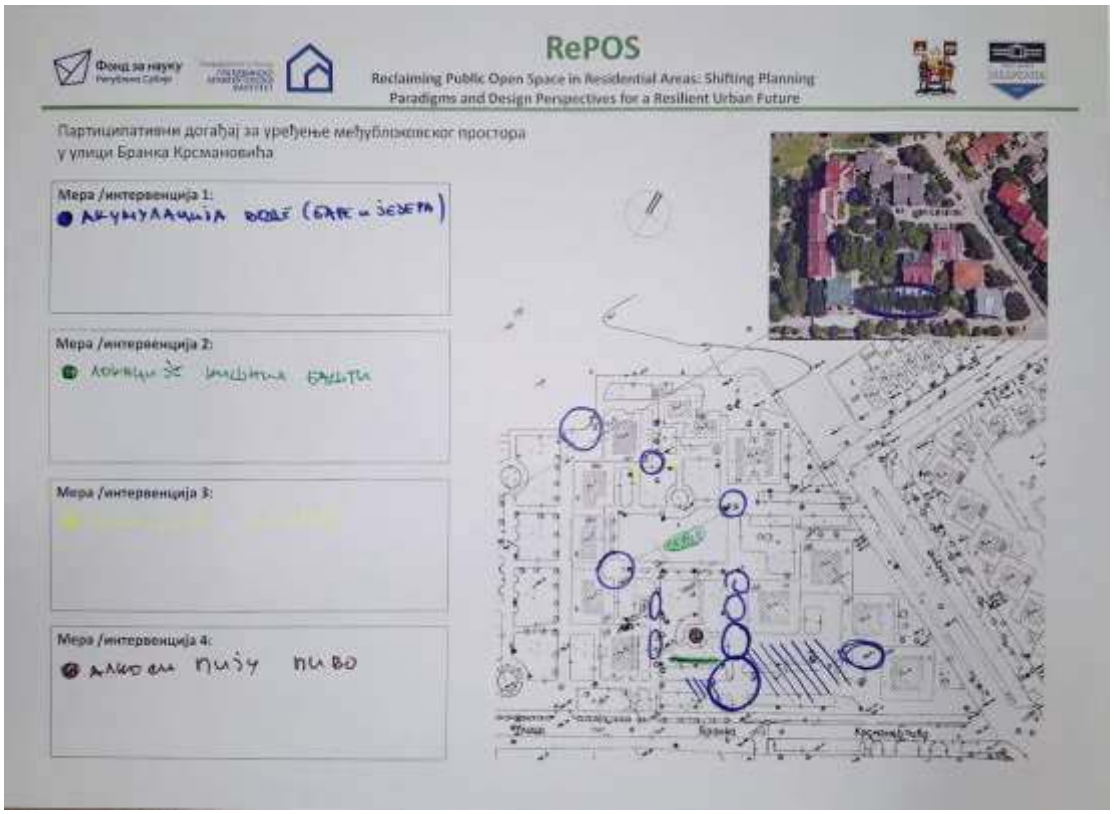
This workshop represented an important step in strengthening collaboration between residents, local authorities, and the research team. The co-creation process resulted in a jointly articulated vision for the transformation of the selected POS, which will be further elaborated.

3.1. Photos from the event





3.2. Workshop results



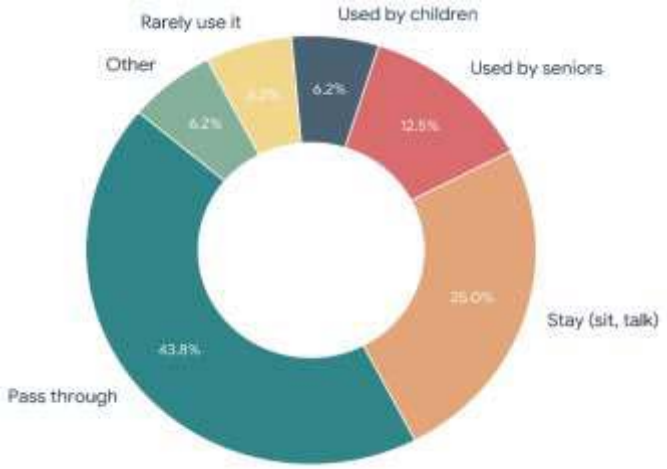
RePOS
Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future
Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића
Мера /интервенција 1:
Мера /интервенција 2:
Мера /интервенција 3:
КИШНА БАШТА
Мера /интервенција 4:

RePOS
Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future
Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића
Мера /интервенција 1:
Мера /интервенција 2:
Мера /интервенција 3:
Мера /интервенција 4:

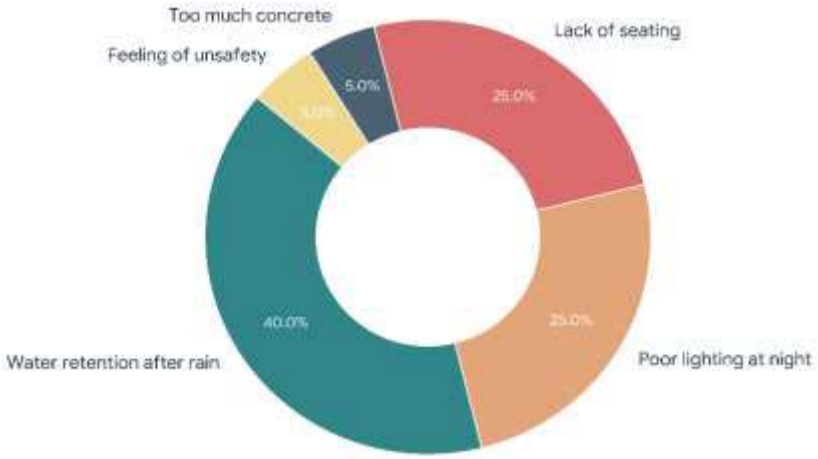
3.3. Survey results

A total of 8 participants completed the survey, and their responses to the questions are presented below.

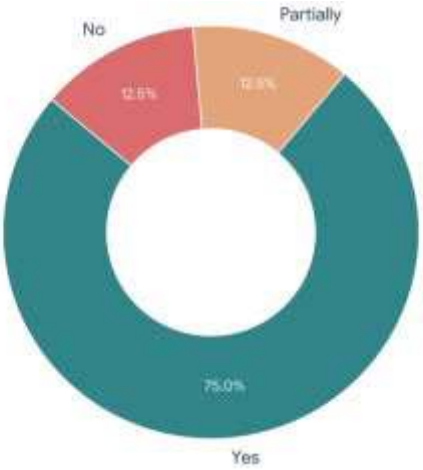
1. How do you most often use the public open space today?



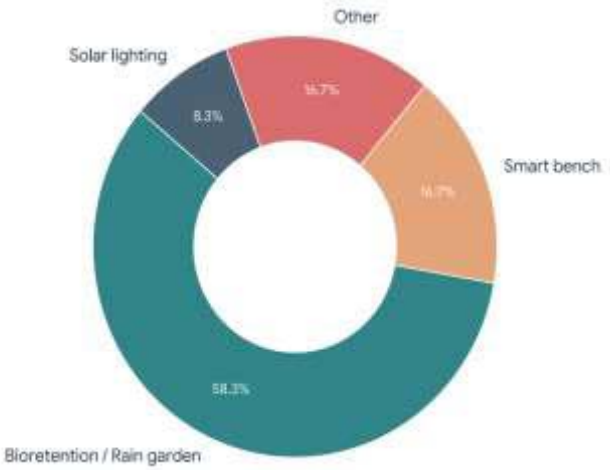
2. What do you consider the biggest problems of the space today?



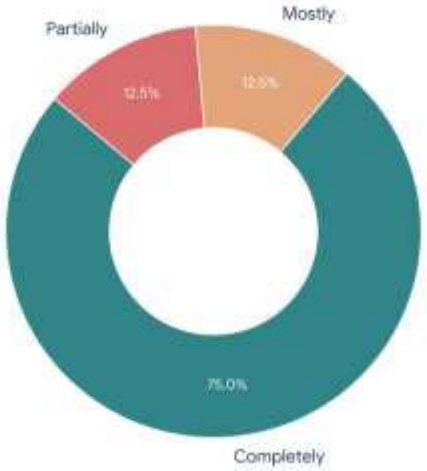
3. Were you familiar with nature-based solutions (e.g., bioretention, rain gardens) before this workshop?



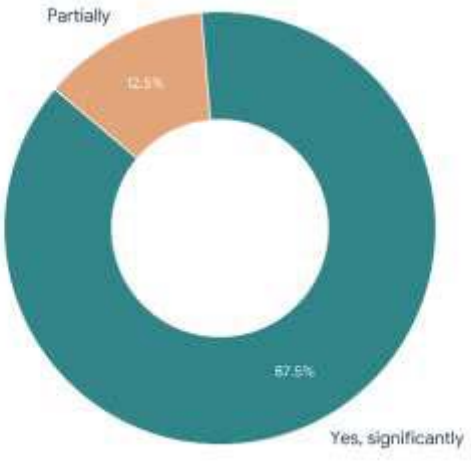
4. Which interventions do you consider the most important priorities for spatial arrangement?



5. After the presentation and workshop, to what extent are the proposed solutions clear and acceptable to you?

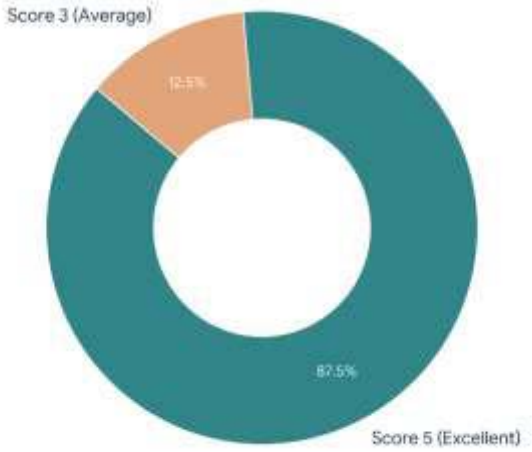


6. Did the workshop help you better understand the possibilities of sustainable arrangement of shared open spaces?

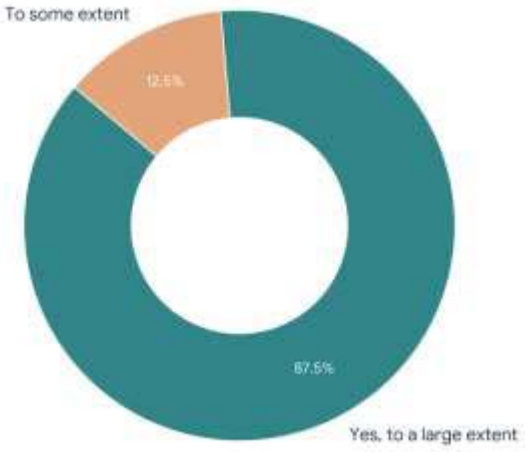


7a. How interesting was the workshop? (1–5)

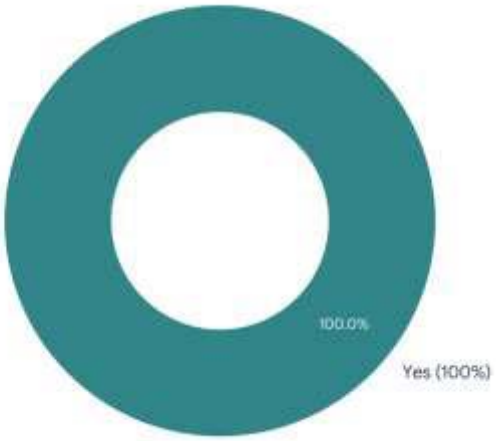
7b. How much opportunity did you have to express your opinion? (1–5)



8. Do you think citizens can influence how public open spaces are arranged through such workshops?



9. Would you be willing to participate in the realization of the pilot project (e.g., planting) and its later maintenance?



10. Do you have any other comments or suggestions?

Respondents pointed out a lack of grass, emphasized the importance of regular maintenance, and suggested that future projects should focus on implementing permeable surfaces for parking spaces.

The survey conducted among residents and representatives of the homeowners' associations regarding the open public space in their residential area reveals a community that is not only highly aware of local environmental challenges but also exceptionally eager to participate in innovative, sustainable solutions.

Currently, the space functions primarily as a transit zone, although a significant portion of residents also use it for resting and socializing. Every single respondent identified "water retention after rain" as a major problem of the space. Secondary, yet significant, concerns include poor nighttime lighting and a lack of seating.

The community demonstrated a surprisingly high baseline awareness of nature-based solutions, with the vast majority already familiar with concepts like rain gardens prior to the workshop.

The educational and participatory aspects of the workshop proved successful. Residents reported that the proposed solutions were clear and acceptable, and that the event significantly deepened their understanding of sustainable urban design. Furthermore, the participants rated the workshop highly in terms of both interest and the opportunity provided to express their opinions.

Residents firmly believe that citizen participation in such formats can significantly influence urban planning and all of them expressed strong willingness to actively participate in both the physical realization (e.g., planting) and the subsequent maintenance of the pilot project.

Appendix 1: Letter of support from the City of Niš

Република Србија
ГРАД НИШ
ГРАДОНАЧЕЛНИК

Број: 1674 /2023-01
Датум: 18.10.2023

Ms. Milena Dinić Branković
RePOS Principal Investigator

LETTER OF SUPPORT

This letter hereby formally confirms that the City of Niš is strongly interested in giving support to the project Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future (RePOS), which has been approved for funding within the PRISMA Program. Financing for the PRISMA Program is provided by the Republic of Serbia (Ministry of Science, Technological Development, and Innovation), through a World Bank loan with implementation support, and the European Union, through a grant contribution. The activities are part of the Serbia Accelerating Innovation and Growth Entrepreneurship Project (SAIGE Project), dedicated to strengthening innovative entrepreneurship and scientific research. RePOS project aims to re-introduce public open space into residential areas of Serbian cities through a novel integrated planning and design approach. Principal Investigator of the RePOS project is Dr Milena Dinić Branković, and the holder is the Scientific-Research Organization Faculty of Civil Engineering and Architecture Niš.

RePOS research will build on existing knowledge to create a replicable planning model of an appealing, inclusive, safe, green, resilient and sustainable public open space that implements novel digital, nature-based, multifunctionality, socio-cultural and management solutions. By using a mixed-methods approach, RePOS will develop systemic guidance directives for urban planning and design with an all-inclusive toolset to support innovative solutions in (re)creation of public open space, as well as specific guidelines for participation and implementation. The devised theoretical framework will be tested at a pilot project scale in the City of Niš with multiple stakeholders. Research outputs will inspire updating of legislation and planning regulations, help local governments with decision-making, assist planners in guiding (re)development process and benefit local communities by enhancing the quality of housing.

The City of Niš supports the planned objectives of the RePOS project, and considers the results important for addressing the current challenges in planning and designing of public open spaces. In addition, the City of Niš is willing to contribute to RePOS project by enabling the remodelling of one public open space that will be selected in cooperation with the city officials, and based on residents' interest and motivation for (re)development. In addition, we will participate in planned events, foster the dissemination of project activities and promote the use of project results in further development.

Dragana Sotirovski
Mayor

18 000 НИШ, УЛ. 7. ЈУЛИ БР. 2, ТЕЛ: 018/504-411

Appendix 2: Formal consent from the land owner for the pilot project implementation

Реупблика Србија
ГРАД НИШ
ГРАДОНАЧЕЛНИК
Број: 327/2026-01
Датум: 20.02.2026

САГЛАСНОСТ власника земљишта за реализацију пилот пројекта
на к.п. бр. 175/1 КО Ниш – Ћеле Кула

У складу са Писмом подршке пројекту RePOS (Одлука број 3674/2023-01 од 16.10.2023. године), Град Ниш, као власник земљишта, даје сагласност да се на катастарској парцели број 175/1 КО Ниш – Ћеле Кула реализује пилот пројекат у оквиру активности на научноистраживачком пројекту „Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future" (акроним RePOS).

Пројекат RePOS реализује се у оквиру Програма ПРИЗМА Фонда за науку Републике Србије (број пројекта: 7572), у периоду 2024–2027. године. Носилац пројекта је Грађевинско-архитектонски факултет Универзитета у Нишу, а руководилац пројекта је др Милена Динић Бранковић, ванредни професор.

Град Ниш даје сагласност за реализацију пилот пројекта на предметној парцели, која је изабрана у договору Градоначелника Ниша, Главне градске урбанисткиње Града Ниша, Одсека за мониторинг Градске управе за планирање и изградњу, Градске општине Медијана и пројектног тима RePOS. Интервенције у оквиру пилот пројекта обухватиће уређење дела међублоковског простора.

Ова сагласност се даје искључиво ради реализације пилот пројекта у оквиру пројекта RePOS, за време трајања пројекта, и може се користити у поступцима везаним за реализацију пројекта RePOS.C поштовањем,

ГРАДОНАЧЕЛНИК
Драгостав Павловић

18 000 НИШ, УЛ. 7. ЈУЛИ БР. 2, ТЕЛ: 018/504-411

Appendix 3: Extract from the real estate cadastre database

Република Србија
Републички геодетски завод
Геодетско-катастарски информациони систем

katastar.rgz.gov.rs/eKatastarPublic | 23.2.2026. 7:25:48

ИЗВОД ИЗ БАЗЕ ПОДАТАКА КАТАСТРА НЕПОКРЕТНОСТИ

Подаци о непокретности	8cf10816-2a17-4519-9071-7715136dcf56
Матични број општине:	71331
Општина:	МЕДИЈАНА
Матични број катастарске општине:	729809
Катастарска општина:	НИШ "ЋЕЛЕ КУЛА"
Датум ажурности:	20.02.2026. 16:11
Служба:	НИШ

1. Подаци о парцели - А лист

Потес / Улица:	БРАНКА КРСМАНОВИЋА
Број парцеле:	175/1
Површина m²:	38047

Подаци о делу парцеле

Број дела:	1
Врста земљишта:	ГРАДСКО ГРАЂЕВИНСКО ЗЕМЉИШТЕ
Култура:	ЗЕМЉИШТЕ УЗ ЗГРАДУ И ДРУГИ ОБЈЕКАТ
Површина m²:	38047

Имаоци права на парцели - Б лист

Назив:	ГРАД НИШ
Лице уписано са матичним бројем:	**ДА**
Врста права:	СВОЈИНА
Облик својине:	ЈАВНА СВОЈИНА
Удео:	1/1

Терети на парцели - Г лист

*** Нема терета ***

Напомене на парцели

*** Нема напомена ***

Appendix 4: Letter of support from Community Foundation Niš

Community foundation Ni
Street: Dusana Spasica18
18 000 Nis, Serbia
RN: 28833806
VAT: 113198592
Bank account : 340-10116528-94

Community Foundation Nis

Niš, 23.02.2026.

To: Milena Dinić Branković, RePOS Principal Investigator

Subject: Letter of support to RePOS project from the Community Foundation Niš

This letter hereby formally confirms that the Community Foundation Niš is strongly interested in giving support to the project **"Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future" (RePOS)**, which has been approved for funding by the Science Fund of the Republic of Serbia within the PRISMA Program. RePOS project aims to re-introduce public open space into residential areas of Serbian cities through a novel integrated planning and design approach. Principal Investigator of the RePOS project is Dr Milena Dinić Branković, and the holder is the Scientific-Research Organization Faculty of Civil Engineering and Architecture Niš.

Community Foundation Niš supports the planned objectives of the RePOS project, and considers the results important for addressing the current challenges in planning and designing of public open spaces. In addition, the Community Foundation Niš is willing to contribute to RePOS project activities as a stakeholder by supporting the realization of the pilot project. RePOS pilot project involves remodelling the public open space in Branka Krsmanovića street (cadastral plot No 175/1 Niš – Ćele Kula. The Community Foundation Niš will contribute in line with its mission and expertise, participate in planned events, and foster the dissemination of project activities.

Sincerely,

Filip Jovanović

Director of the Community Foundation Niš

+38164 4961439 info@fondacijanis.rs fondacijanis.rs

Appendix 5: Agenda

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

АГЕНДА

Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића

Место: Градска општина Медијана
Датум: 12. 2. 2026. године
Време: 17.00 – 18.30

17.00 – 17.05 **Уводна реч, представљање РеПОС пројекта**
Представник Града Ниша
Представник Градске општине Медијана
Проф. др Милена Динић Бранковић, руководилац пројекта,
Грађевинско-архитектонски факултет у Нишу

17.05 – 17.20 **Представљање иновативних решења**

Решења заснована на природи са фокусом на биоретнезије и кишне баште
Проф. др Љиљана Василевска,
Грађевинско- архитектонски факултет у Нишу

Паметна решења за урбано опремање (паметне клупе и соларна расвета)
Проф. др Милена Динић Бранковић,
Грађевинско-архитектонски факултет у Нишу

17.20 – 18.05 **Рад у групама** – предлози позиције и концептуалног решења биоретнезије/кишне баште и урбане опреме

18.05 – 18.20 **Дискусија**

18.20 – 18.30 **Анкета за учеснике**

Фонд за науку Републике Србије

Пројекат: Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића

Место: Градска општина Медијана
Датум: 12. 2. 2026. године
Време: 17.00 – 18.30

Листа присутних

Бр.	Име и презиме	Организација/Станар	Позиција	Е-пошта, телефон (опционо)	Потпис
1.	[redacted]	ГЗ за планирање и изградњу		[redacted]	
2.	[redacted]	Локална фондација Ниш	Директор	[redacted]	
3.	[redacted]	БК 29		[redacted]	
4.	[redacted]	БК 21		[redacted]	
5.	[redacted]	ЈП Ноне Манаџер ДОО	ДИРЕКТОР	[redacted]	
6.	[redacted]	PRO-DOM	PROFESIONALNI UPRAVNIK	[redacted]	
7.	[redacted]	БК 27	Станар	[redacted]	
8.	[redacted]	ПК 23	СТАНАР	[redacted]	
9.	[redacted]	БК 19	СТАНАР	[redacted]	
10.	[redacted]	G.O. Medijana	ZAM. PREDSEDNIKA	[redacted]	

Appendix 6: Sign-in sheet

Фонд за науку Републике Србије

11.	[redacted]	ГО Медијана	члан већа	[redacted]	
12.	[redacted]	ГО Медијана	ПРЕДСЕДНИК	[redacted]	
13.					
14.					
15.					
16.					
17.					
18.					
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20.					
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22.					
23.					
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25.					
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27.					

ANNEX 5

WORKSHOP RESULTS: Conceptual Urban Design Proposal with Innovative solutions_D4.2

Project: Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future – RePOS

This research was supported by the Science Fund of the Republic of Serbia, #GRANT No 7572

Conceptual Urban Design Proposal with Innovative Solutions for Residential POS in Niš

Deliverable 4.2.

Prepared by:

RePOS Team

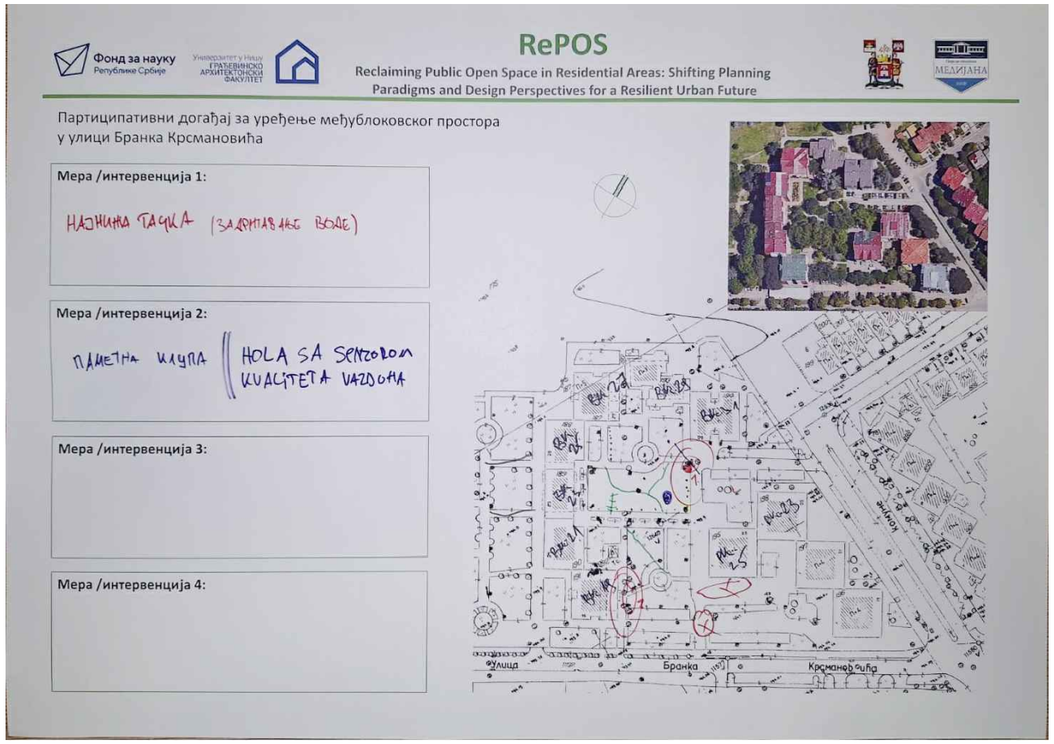
March 2026

RePOS

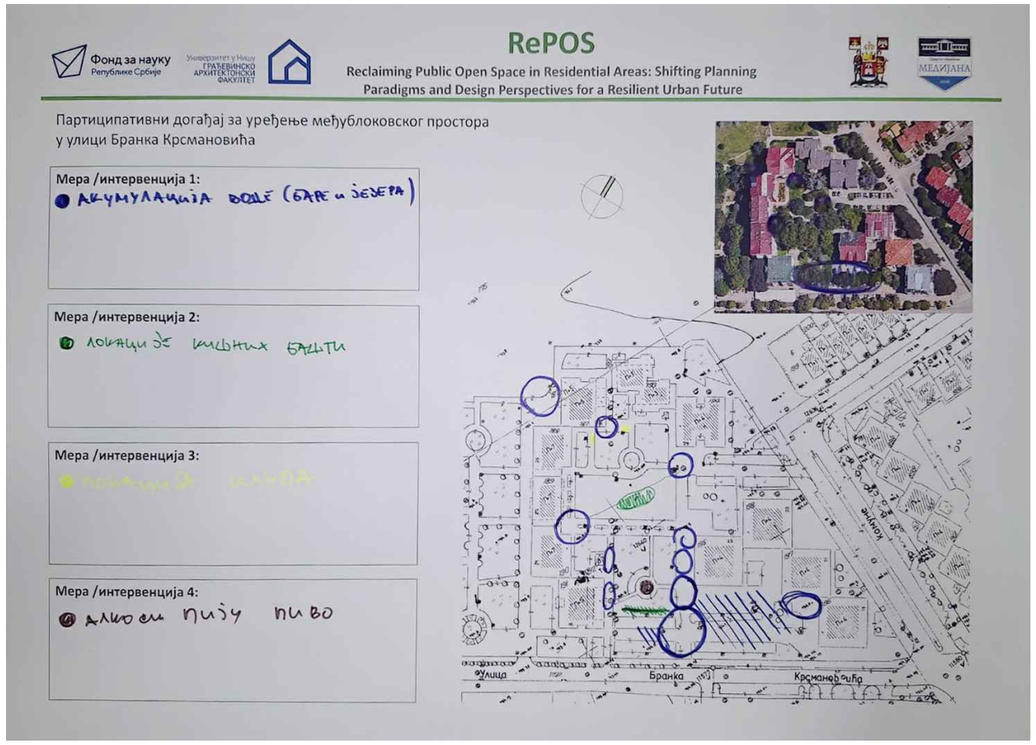
Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future

Results of residents' participation – identified problems and proposals

TEAM 1

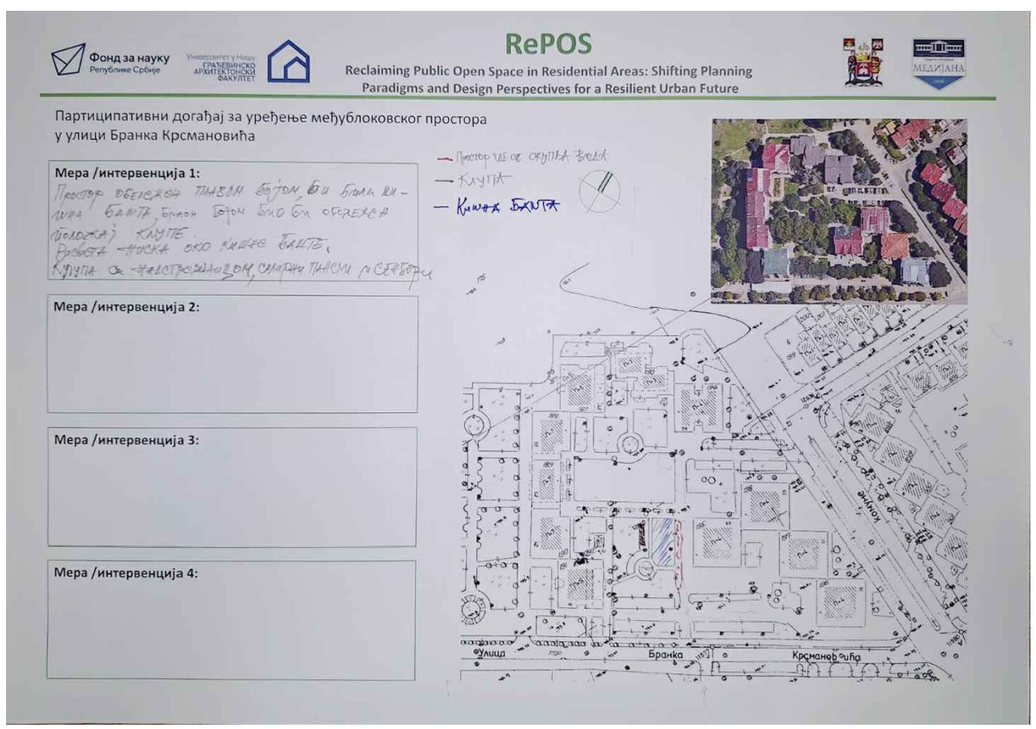


TEAM 2



TEAM 3

TEAM 4

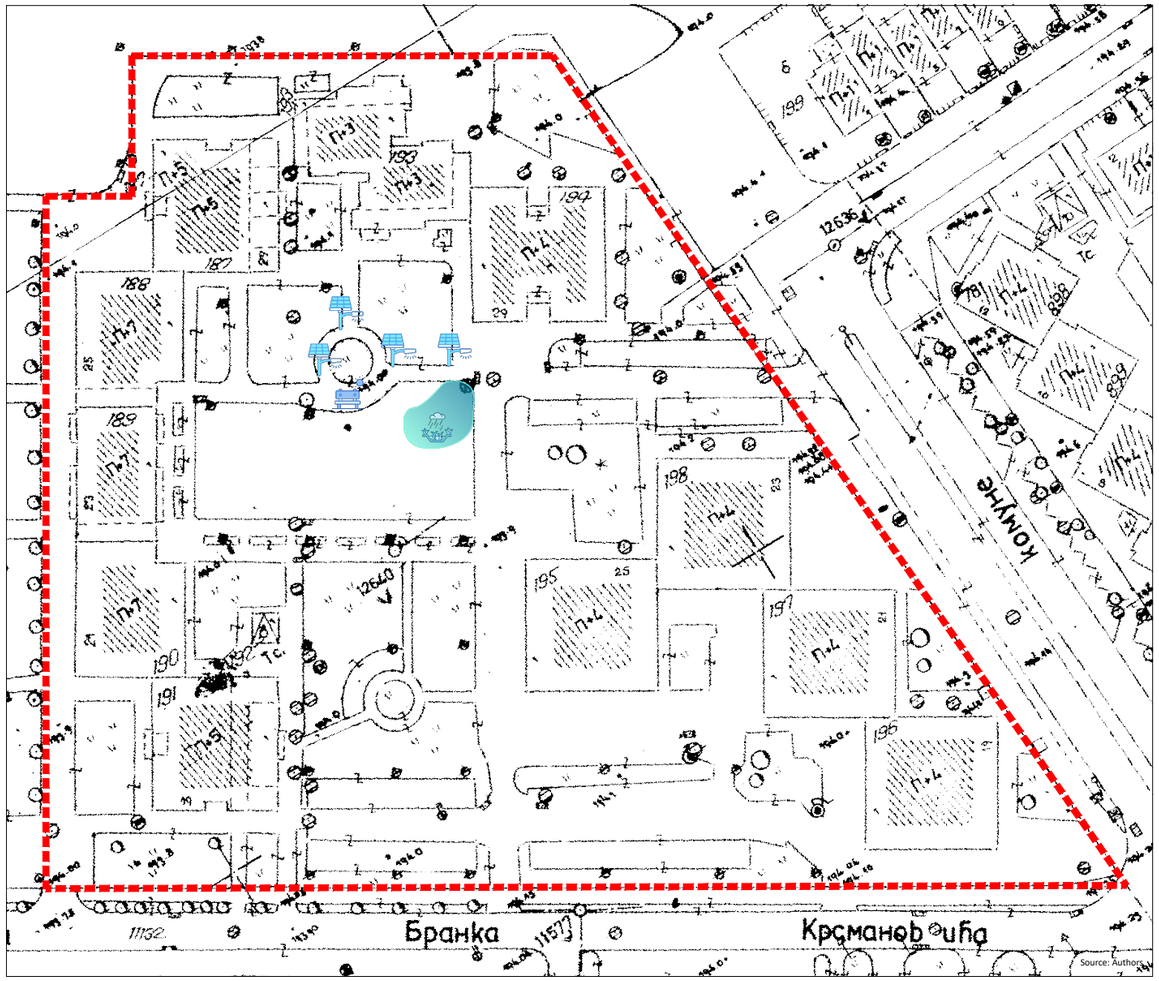


RePOS

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future

Conceptual design – position of the proposed interventions

PUBLIC OPEN SPACE IN THE PART OF THE SETTLEMENT KRIVE LIVADE WHERE THE PILOT PROJECT IS BEING IMPLEMENTED – SCALE 1:1000



EXISTING CONDITION - BEFORE INTERVENTIONS

Source: Authors

Source: Authors

PLANNED CONDITION – AFTER INTERVENTIONS

Source: https://extension.umn.edu/landscape-design/rain-gardens

Source: https://hola.rs/proizvodi/solarne-eko-pametne-klupe/hola-l-solarna-klupa/

Source: https://rasveta-wlight.rs/product/solarna-lampa-nerdjajuci-celik-1xled-globo-globo-33436/

coverage of the neighborhood where the pilot project is being implemented

rain garden

solar bench

solar lamp

Source of symbols: https://www.freepik.com/

The photographs are for illustrative purposes. The appearance of the rain garden and the installed equipment may differ from the examples shown. The specific bench model and lamp model will be selected through the public procurement process.

ANNEX 6

Design Project: Co-created Vision for POS _D4.4

Project: Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future – RePOS

This research was supported by the Science Fund of the Republic of Serbia, #GRANT No 7572

Co-created Vision for Public Open Space in a Multi-family Residential Area in Niš

Deliverable 4.4.

Prepared by:

RePOS Team

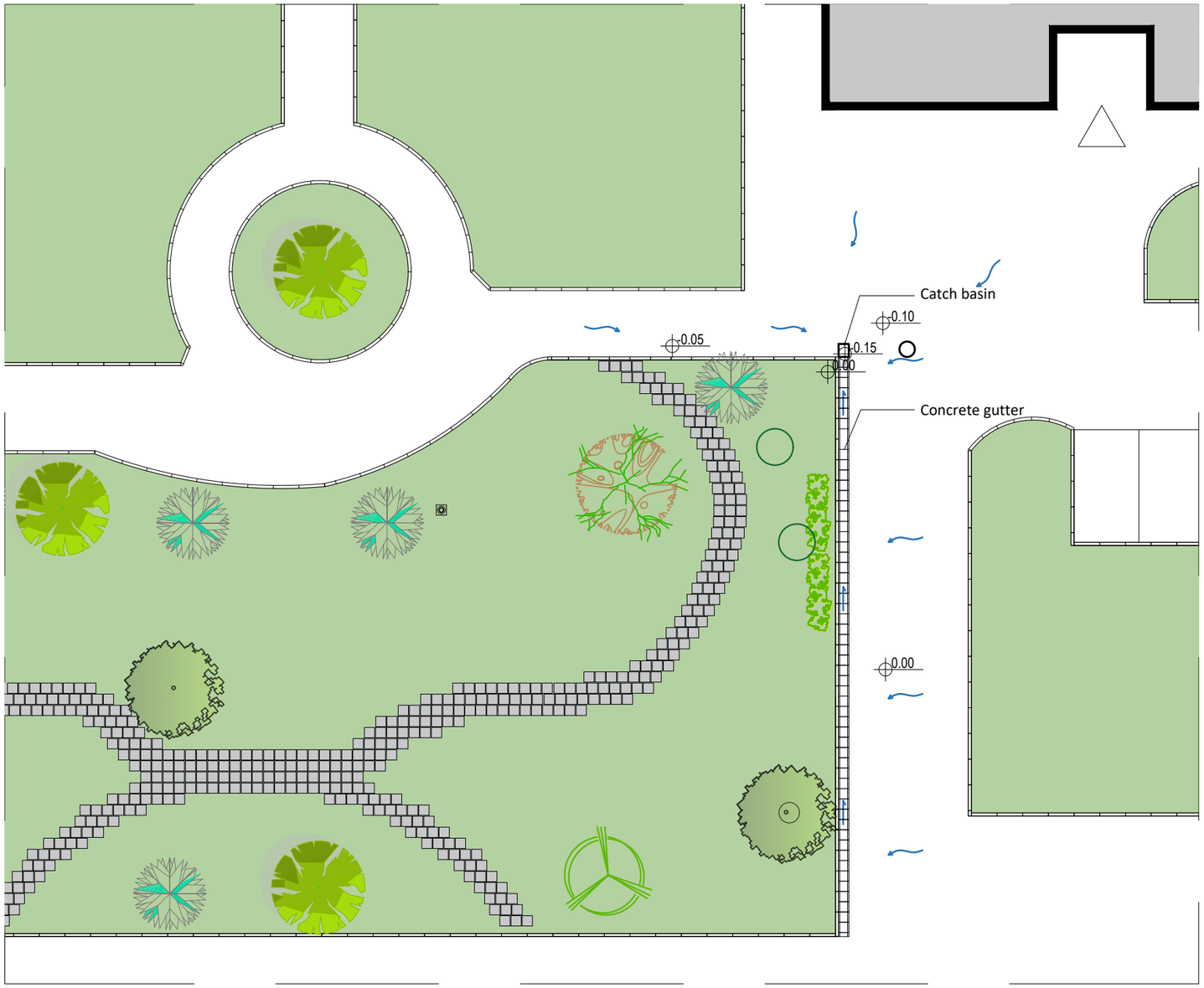
April 2026

RePOS

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future

Public Open Space Redesign Project

EXISTING CONDITION Scale 1:200



LEGEND

Path - concrete pavers laid in grass

Existing lighting pole

EXISTING GREENERY

Picea abies - Norway Spruce

Chamaecyparis sp - False Cypress

Salix sp. - Willow

Tillia cordata - Small-leaved Lime

Acer dasycarpum - Silver Maple

Viburnum - Evergreen Viburnum

Spiraea sp. - Bridal Wreath

Science Fund of the Republic of Serbia

Универзитет у Нишу ГРАЂЕВИНСКО АРХИТЕКТОНСКИ ФАКУЛТЕТ

УНИВЕРЗИТЕТ У БЕОГРАДУ АРХИТЕКТОНСКИ ФАКУЛТЕТ

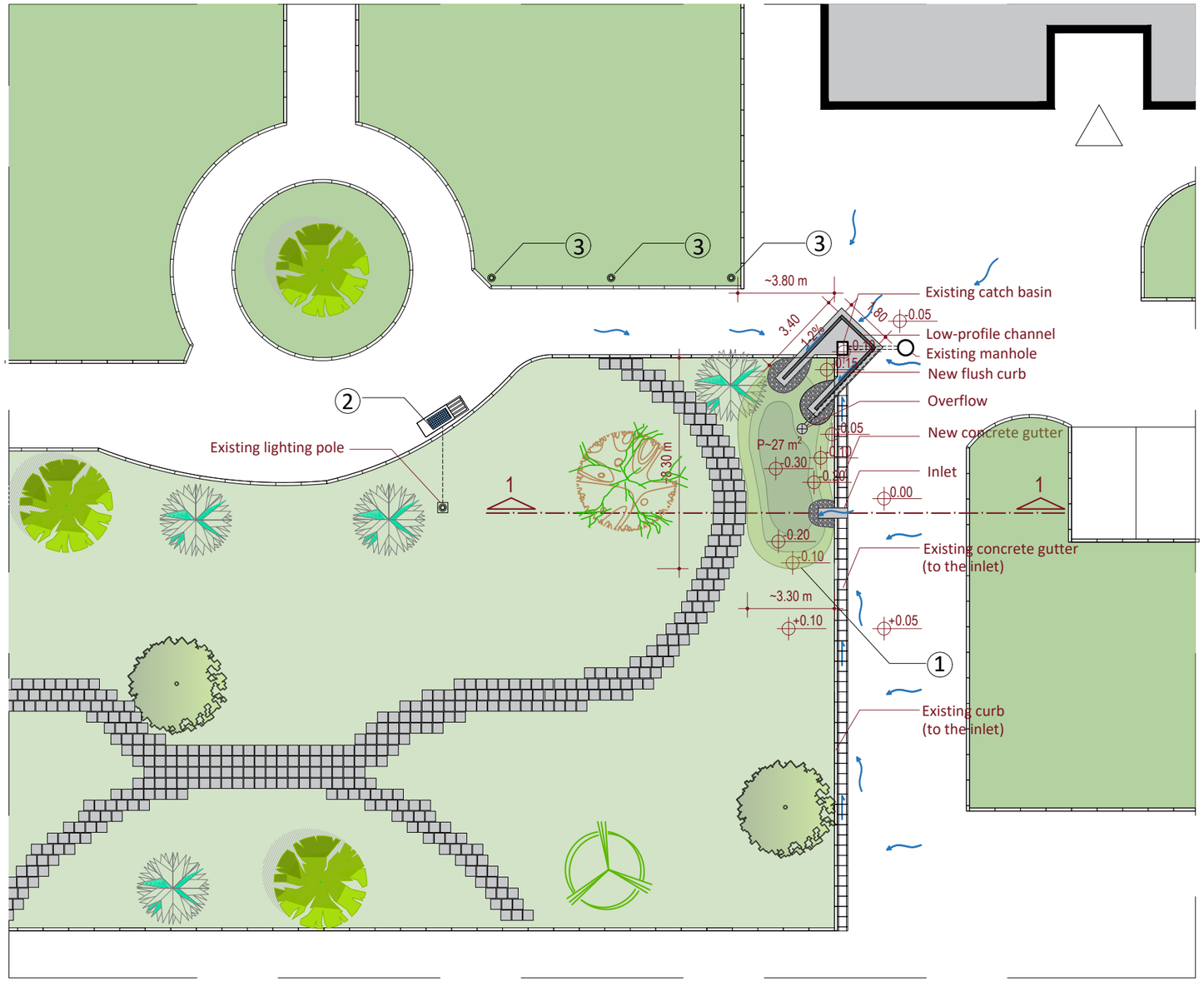
RePOS

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future

Градска општина МЕДИЈАНА НИШ

Public Open Space Redesign Project

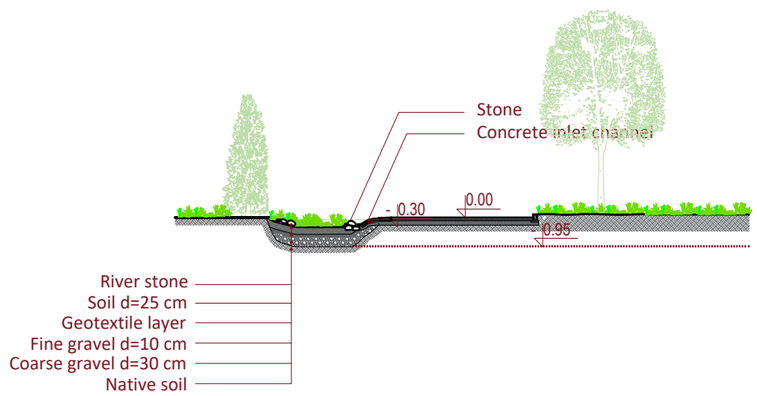
CONCEPTUAL URBAN DESIGN SOLUTION Scale 1:200



LEGEND

1. RAIN GARDEN
2. SOLAR SMART BENCH
3. SOLAR LAMP

SECTION 1-1 Scale 1:200



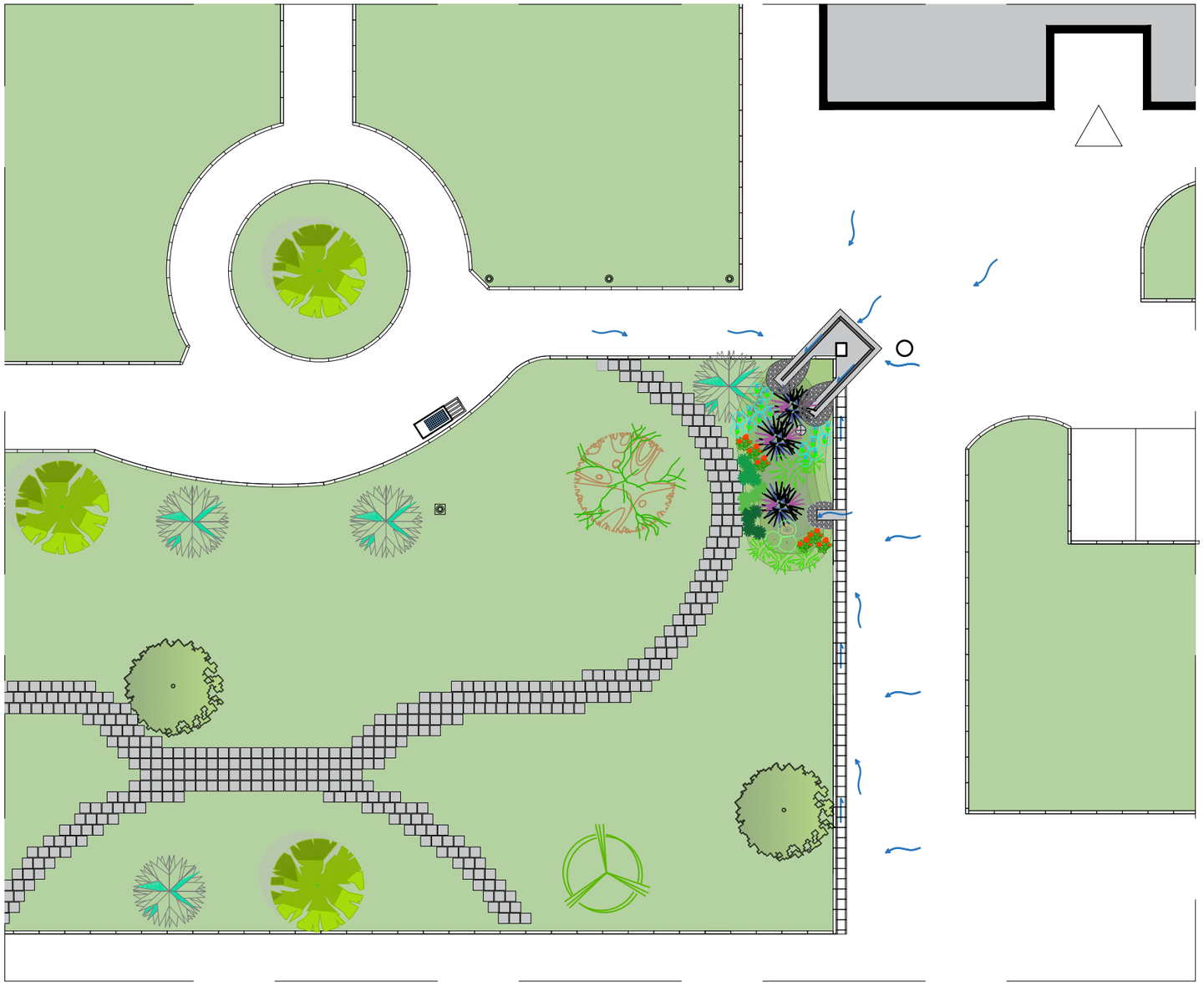
Consultant: Dr. Dragan Milićević, dipl.građ.inž.

RePOS

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future

Public Open Space Redesign Project

LANDSCAPING PLAN Scale 1:200



LEGEND

EXISTING GREENERY

- Picea abies - Norway Spruce
- Chamaecyparis sp - False Cypress
- Salix sp. - Willow
- Tillia cordata - Small-leaved Lime
- Acer dasycarpum - Silver Maple

RAIN GARDEN GREENERY

- Carex riparia - Greater Pond Sedge 2 pcs/m²
- Butomus umbellatus - Flowering Rush 6 pcs/m²
- Houttuynia cordata - Chameleon Plant 4 pcs/m²
- Lavandula angustifolia - English Lavender 1 pc/m²
- Stachys lanata - Lamb's Ear 4 pcs/m²
- Iris versicolor - Blue Flag Iris 4 pcs/m²

Consultant: Milijana Petković Kostić, dipl.inž.pejz.arh.

ANNEX 7

Bill of Quantities and Cost Estimate

Bill of Quantities and Cost Estimate RePOS

Item No.	Description	Unit	Quantity	Rate [RSD]	Amount [RSD]
100	**Preparatory Works**				
101	Cleaning and preparation of the site for the construction of the rain garden. Marking of boundaries according to the design, removal of existing vegetation, topsoil and waste.	m^2	27,00	400	10.800
102	Removal of the existing concrete gutter and disposal of debris.	m	7,00	1500	10.500
103	Removal of the existing curb and disposal of debris.	m	10,00	1000	10.000
104	Breaking up the concrete around the catch basin at the designated location for constructing the footing for the solar bench, including disposal of debris.	m^2	5,46	7000	38.185
	Total Item 100:				**69.485**
200	**Earthworks**				
201	Mechanical (90%) and manual (10%) excavation of soil for the formation of the rain garden. Excavation shall be carried out according to the designed slopes and elevations.	m^3	27,55	2400	66.120
202	Manual excavation of soil for the installation of the concrete gutter. Excavation shall be carried out according to the designed slopes and elevations.	m^3	0,56	6000	3.360
203	Manual excavation of soil for the installation of PVC pipes. Excavation shall be carried out according to the designed slopes and elevations.	m^3	0,75	6000	4.500
204	Loading and transport of excavated material to a designated disposal site up to 10 km away, while retaining part of the existing soil suitable for the rain garden.	m^3	28,86	1100	31.746
205	Levelling the bottom of the excavation and forming the designed gradients.	m^2	35,00	600	21.000
206	Supply, transport and installation of geotextile of appropriate grammage (200 g/m²). Installation with overlaps of min. 20–30 cm.	m^2	32,00	300	9.600
207	Supply, transport, and installation of a coarse gravel layer, fraction 32–64 mm. Filling includes material brought to the site. Layer thickness: 30 cm. Leveling and partial compaction.	m^3	8,70	9500	82.650
208	Supply, transport, and installation of a fine gravel layer, fraction 8–16 mm. Filling includes material brought to the site. Layer thickness: 10 cm. Leveling and partial compaction.	m^3	2,90	10000	29.000
209	Supply, transport, and installation of crushed stone 0-31.5 mm as a base for the construction of the path and concrete channel for laying the low-profile channel. Filling includes material brought to the site. Layer thickness: 15 cm. Leveling and partial compaction.	m^3	0,93	8000	7.440

210	Supply, delivery and placement of soil suitable for the rain garden (a mixture of humus or sand and substrate), together with the retained existing soil of good quality. The quantity shall be adjusted on site. Layer thickness: 25 cm. Levelling shall be carried out according to the design.	m^3	7,25	5500	39.875
211	Supply, transport and installation of overflow drain Ø200/125 mm.	pcs.	1,00	12000	12.000
212	Supply and transport of PVC pipe Ø125 mm from the drain to the sewer system.	m	4,00	800	3.200
213	Installation of PVC pipe and connection to the drain and sewer system.	m	4,00	5000	20.000
214	Supply and installation of decorative river stone.	m^3	5,00	2500	12.500
215	Supply of native plant species suitable for rain gardens, according to the design – greater pond sedge.	pcs.	3,00	400	1.200
216	Supply of native plant species suitable for rain gardens, according to the design – flowering rush.	pcs.	6,00	350	2.100
217	Supply of native plant species suitable for rain gardens, according to the design – chameleon plant.	pcs.	3,00	600	1.800
218	Supply of native plant species suitable for rain gardens, according to the design – lavender.	pcs.	5,00	600	3.000
219	Supply of native plant species suitable for rain gardens, according to the design – lamb's ear.	pcs.	12,00	350	4.200
220	Supply of native plant species suitable for rain gardens, according to the design – blue flag iris.	pcs.	16,00	800	12.800
221	Transport of native plant species suitable for rain gardens, according to the design.	pcs.	1,00	5750	5.750
222	Preparation of planting spots, planting and watering of native plant species suitable for rain gardens, according to the design.	pcs.	45,00	350	15.750
	Total Item 200:				**389.591**
300	**Concrete Works**				
301	Construction of an inlet channel for conveying stormwater into the rain garden and a channel at the location of the existing catch basin. The channels shall be made of reinforced concrete, class C20/25, according to the design. The rate includes the required formwork, as well as the preparation and placing of concrete.	m^3	4,14	24000	99.264
302	Construction of a lean concrete base, class C12/15, for laying the gutter channel, including supply, transport and installation, according to the design.	m^3	0,28	14000	3.920
303	Supply, transport and laying of the concrete gutter.	m	7,00	3000	21.000
304	Supply, transport and laying of curbs.	m	9,00	2200	19.800
305	Supply, transport and laying of a low-profile channel, 10 cm.	m	9,00	7000	63.000
306	Concreting of the area between the channel and the manhole with reinforced concrete, class C20/25, according to the design. The unit price includes the required formwork, as well as the preparation and placing of concrete.	m^2	0,30	24000	7.200

	Total Item 300:				**214.184**
400	**Solar Smart Bench and Lighting Fixture**				
401	Supply and transport of a solar smart bench with integrated: photovoltaic panel, battery, USB chargers / wireless charging, LED lighting and eco-sensor.	pcs.	1,00	865329	865.329
402	Installation of the solar smart bench. The item includes construction of the foundation, fixing and connection to the electrical grid according to the manufacturer's instructions.	pcs.	1,00	72000	72.000
403	Supply and transport of a solar LED lighting fixture with pole.	pcs.	3,00	11666	34.998
404	Installation of the solar LED lighting fixture with pole. Includes construction of the foundation, anchoring and commissioning.	pcs.	3,00	8000	24.000
	Total Item 400:				**996.327**
	Total:				**1.669.587**

ANNEX 8

Raingarden ENVIMET: Comparison of the Outdoor Microclimate in Two POS scenarios_D4.3

Project: Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future – RePOS

This research was supported by the Science Fund of the Republic of Serbia, #GRANT No 7572

Comparison of the outdoor microclimate in two POS scenarios

Deliverable 4.3.

Prepared by:

RePOS Team

May 2026

Comparison of the outdoor microclimate in two POS scenarios

For simulating the outdoor microclimate for “before” and “after” scenarios at the pilot project site within the public open space (POS) in the housing estate in Branka Krsmanovića Street in Niš[1] (Fig. 1), ENVI-met software version 5.9.0 was used.

Figure 1- a) Location of the pilot project site (https://gis.ni.rs/smartPortal/gunisPublic) b) photo from the site (authors)

The pilot site is located within the large housing estate of Krive Livade (Fig. 2a), constructed in the 1980s. This area is a typical urban micro-location that faces several issues, including deteriorating green spaces, insufficient functional urban infrastructure, and vulnerability to stormwater retention. Conceptual Urban Design Proposal with Innovative Solutions for Residential POS in Niš[2] (Fig. 2b) was the result of a participatory event organized by the RePOS team at the Municipality of Medijana. Participants actively engaged in the co-creation process through group work and developed a vision for transforming the selected POS, which was used to create a design proposal.

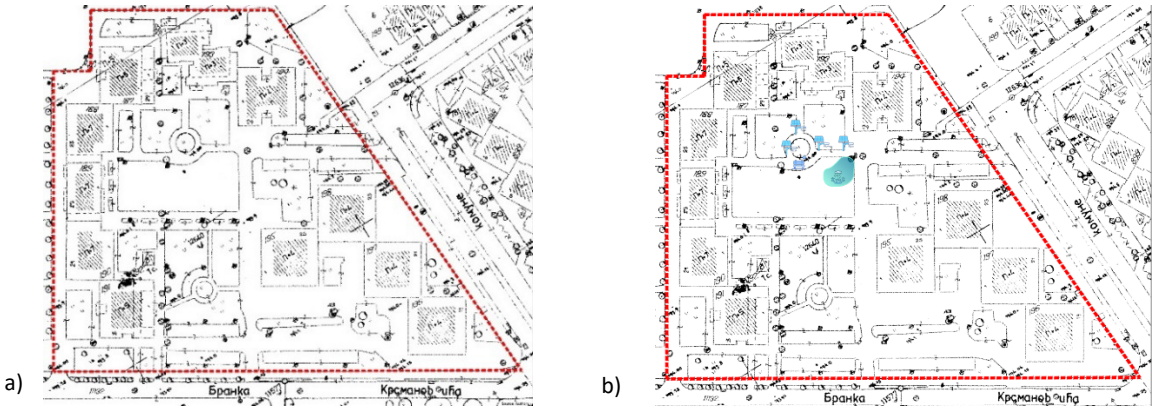


Figure 2- a) Pilot project site; b) Conceptual design - position of proposed interventions (https://www.repos-project.rs/pdf/konceptualni-predlog-ure%C4%91enja-sa-inovativnim-re%C5%A1enjima-za-stambeni-jop-u-ni%C5%A1u.pdf)

[1] Deliverable 4.1.: https://www.repos-project.rs/pdf/report-on-preparing-the-pilot-project-context-for-pos-re-development.pdf
[2] Deliverable 4.2.: https://www.repos-project.rs/pdf/conceptual-urban-design-proposal-with-innovative-solutions-for-residential-pos-in-ni%C5%A1.pdf

For this research, two scenarios were compared: the original environment from the public open space within the large housing estate in Branka Krsmanovića as „before“ intervention and the adapted environment within the same space at the demonstration site as the „after“ intervention scenario. For the modeling of the first scenario, data from the original site were gathered and processed by the RePOS team members and applied in software (Fig. 3a), and for the second scenario, data from the proposed public open space redesign project regarding the planned intervention were used (Fig. 3b).

a)

b)

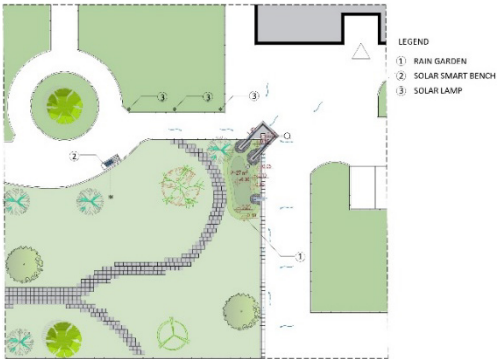
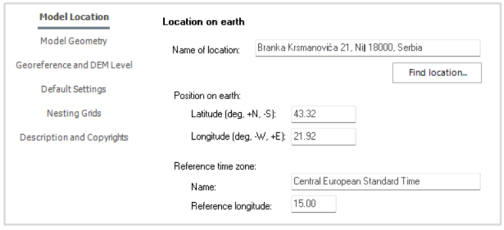


Figure 3 - a) Existing condition; b) Conceptual urban design solution (https://www.repos-project.rs/pdf/co-created-vision-for-pos-in-a-multifamily-residential-area-in-ni%C5%A1.pdf)

For modelling the scenarios, the application Spaces was used within the ENVI-met software headquarters. Thanks to the application's model location selection feature in this application, the precise latitude and longitude of the pilot project site in Niš are set (Fig. 4a). The model dimensions for both scenarios were 200 x 160 x 60 m, which match the actual size of this area. The grid cell for dx and dy was defined with a size of 1 m, and dz with a size of 2 m, with an enabled option for splitting the lowest gridbox into 5 cubcells to improve model accuracy, especially in the z direction near the ground (Fig. 4b). Above the highest building on the site, in the model, is predicted enough space to improve the simulation precision and to obtain more realistic microclimate results.

a)



b)

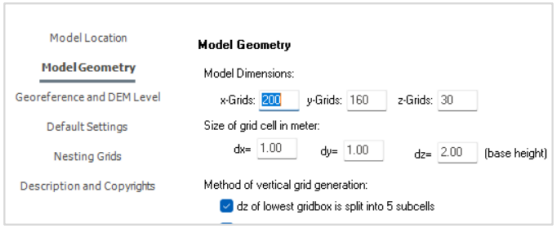
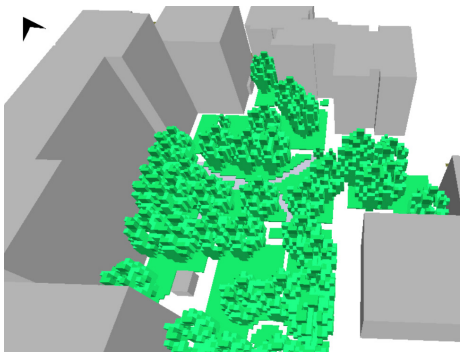


Figure 4 - a) Model Location settings b) Model Geometry settings (Authors)

After setting the main details regarding location and geometry, the pilot project site was modeled based on the data obtained from the terrain and technical drawing of the existing state. Buildings that surround the POS represent the site's borders and were also modeled at real scale. The vegetation, surface, and building materials data were gathered during field observations by the RePOS team members. Gathered materials were adjusted to those available within the application database (Table 1).

Table 1 - Materials and vegetation applied in the model for the first scenario (Authors)



Model in ENVI-met's *Spaces*

Building's materials	Wall material	Default wall— moderate insulation
	Roof material	Default wall— moderate insulation
Open space materials	Main pedestrian paths	Concrete pavement grey
	Pedestrian path within greenery	PP concrete used
	POS soil below vegetation	Default unsealed soil (sandy loam)
Vegetation	Grass	Grass 25 cm average dense
	3D Pants	Confiers, Deciduous trees

The variables between these two scenarios included the construction of the rain garden within the green area in POS, with the surface approximately 27 m^2. This included different soil profiles that have greater characteristics in retaining water (loamy soil), and the addition of new greenery suitable for the rain garden (Figure 5a). Because of the construction of the rain garden, some of the low vegetation had to be removed, which is shown in Figure 5b, and all tall vegetation is retained. This vegetation is along the pedestrian path, it is low – growning greenery, and it is not reducing the shade that this area has.

a)

b)

Figure 5 – a) Proposed landscaping plan of the pilot project; b) Greenery to be removed (https://www.repos-project.rs/pdf/co-created-vision-for-pos-in-a-multifamily-residential-area-in-ni%C5%A1.pdf)

This research faced certain technical limitations associated with the applied numerical model of the ENVI-met software version used. Due to the *dz* cell height constraints, terrain variations of up to 10 cm at the site could not be modeled. In the project design, it is proposed that the rain garden is a depressed area with cascading excavation up to – 30cm below the ground level. Due to the technical limitations of the application, in terms of the grid cell size, it was not possible to precisely model it. The emphasis was instead on the soil profile and vegetation to align more closely with the proposed design. Not all the vegetation species proposed within the conceptual urban design solution were available in the ENVI-met's *Spaces* application – especially those in the rain garden, since the only available vegetation that is not trees are bushes and grass. This database shortcoming was resolved by modifying the characteristics of available vegetation species in the ENVI-met

Database Manager application to match those proposed in the design project. These modifications were in terms of vegetation leaf area (LAD) profile, root depth, albedo, and stomata humidity factor, and it was to align with the characteristics of the proposed plants. Due to the lack of a dedicated rain garden soil profile in ENVI-met, the rain garden was approximated using a soil type with higher water retention, combined with irrigation settings to maintain increased soil moisture conditions.

The initial meteorological conditions required for the simulation settings were obtained from the last publicly available Meteorological Yearbook, which is for the year 2024[3]. Since the default in the application was set for 01 July 2025, and the last available Meteorological Yearbook was for 2024, the date chosen for the simulations was 01 July 2024. Simulations were conducted in the summer season, over a 17 h timeframe (start 05 AM and end 10 PM on 01 July). In the Meteorological Yearbook, temperature was measured at 07 AM, 2 PM, and 9 PM and ranged between 23,9 - 34,1 °C. Relative humidity varied between 42 at 2 PM and 71% at 9 PM. The prevailing wind was north-east at an inflow of 45° with an average speed of 1.4 m/s. Cloud cover of low, medium, and high clouds was 0. The same meteorological data were used for setting scenarios of both simulations.

After completing both simulations, the results were compared using ENVI-met's *Leonardo* application. To ensure better precision and compare more real microclimate changes in space, the view plane was positioned at k = 4, or 1.80 meters. The results from the pre-intervention scenario were used as a reference data set. The simulations' results were compared for changes in Air Temperature (AT), Wind Speed (WS), Relative Humidity (RH), and Mean Radiant Temperature (MRT). Besides the *Leonardo* application, within the ENVI-met software, the *BIO-met* application was also used for simulating thermal comfort and determining the Physiological Equivalent Temperature (PET). For this simulation, the same height of the view plane was used - k = 4, or 1.80 meters, and as a reference person, a 35-year-old male with summer clothing. Results obtained in this application were also compared in *Leonardo*. To clearly represent results graphically, a scale of 20 colours was used, and for each comparison, it was adapted to the obtained values.

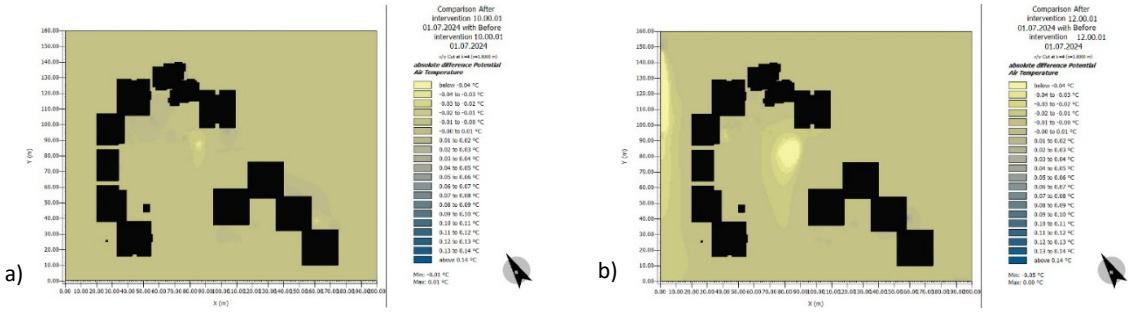
When graphically presenting results in *Leonardo*, floating interpolation was tested but not used for quantitative comparison, as it introduced spatial smoothing effects leading to overestimation of local differences compared to fixed-grid analysis. This was mostly expressed when floating interpolation produced exaggerated MRT deviations that were not consistent with the physical scale and characteristics of the intervention, and therefore, fixed-grid comparison was adopted for quantitative analysis for all comparisons.

First, results from the due simulations were compared in terms of the absolute **Air Temperature (AT) change** in the before and after scenarios. Scenarios are compared in different time series: 8 AM, 10 AM, 12 PM, 2 PM, 4 PM, 6 PM, and 8 PM. The first temperature change was observed when comparing results at 10 AM, and it was in the range - 0.01 – 0.01 °C. Maximum change was observed when comparing results at 2 PM,

[3] Meteorological Yearbook for 2024, available online: https://www.hidmet.gov.rs/data/meteo_godisnjaci/Republika%20Srbija%20-%20Meteorolo%C5%A1ki%20godisnjak%201%20-%20klimatoloki%20podaci%20-%202024.pdf

and it was in the range - 0.05 – 0.00 °C. After the scenarios result at 4 PM, the temperature difference begins to drop, and after 6 PM, there is no change in temperature between these two scenarios.

It can be concluded that there is an air temperature change between these scenarios, and that the implementation of the rain garden can have a positive impact on its reduction. The value of the air temperature is very small -0.05 – 0.01 °C, which can be related to the small scale of the project implemented or its spatial characteristics (depth, size etc.), but it may indicate that increasing the intervention area could also increase the value of the change and positively impact the POS microclimate. In Figures 6a-d, results from Leonardo comparisons were presented for diferent time series.

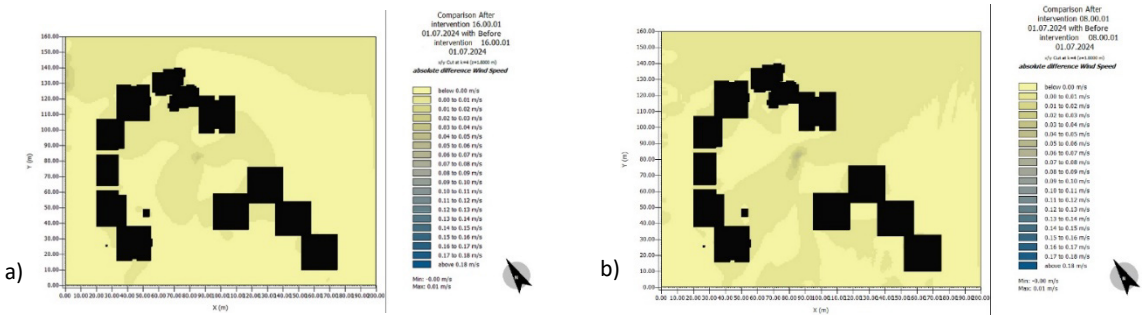


a) Comparison of absolute AT difference at 10 AM *b) Comparison of absolute AT difference at 12 PM*

c) Comparison of absolute AT difference at 2 PM *d) Comparison of absolute AT difference at 4 PM*

Figure 6 - Comparison of the absolute difference in Air Temperature (AT) for the before and after intervention scenarios

Next, results from the due simulations were compared in terms of the **absolute wind speed change (WS)**. Wind speed absolute difference was compared in different time data sets: 8 AM, 10 AM, 12 PM, 2 PM, 4 PM, 6 PM, and 8 PM. During the entire time, this change is in the range -0.01 to 0.00 m/s, which can be seen in figures 7a and 7 b.

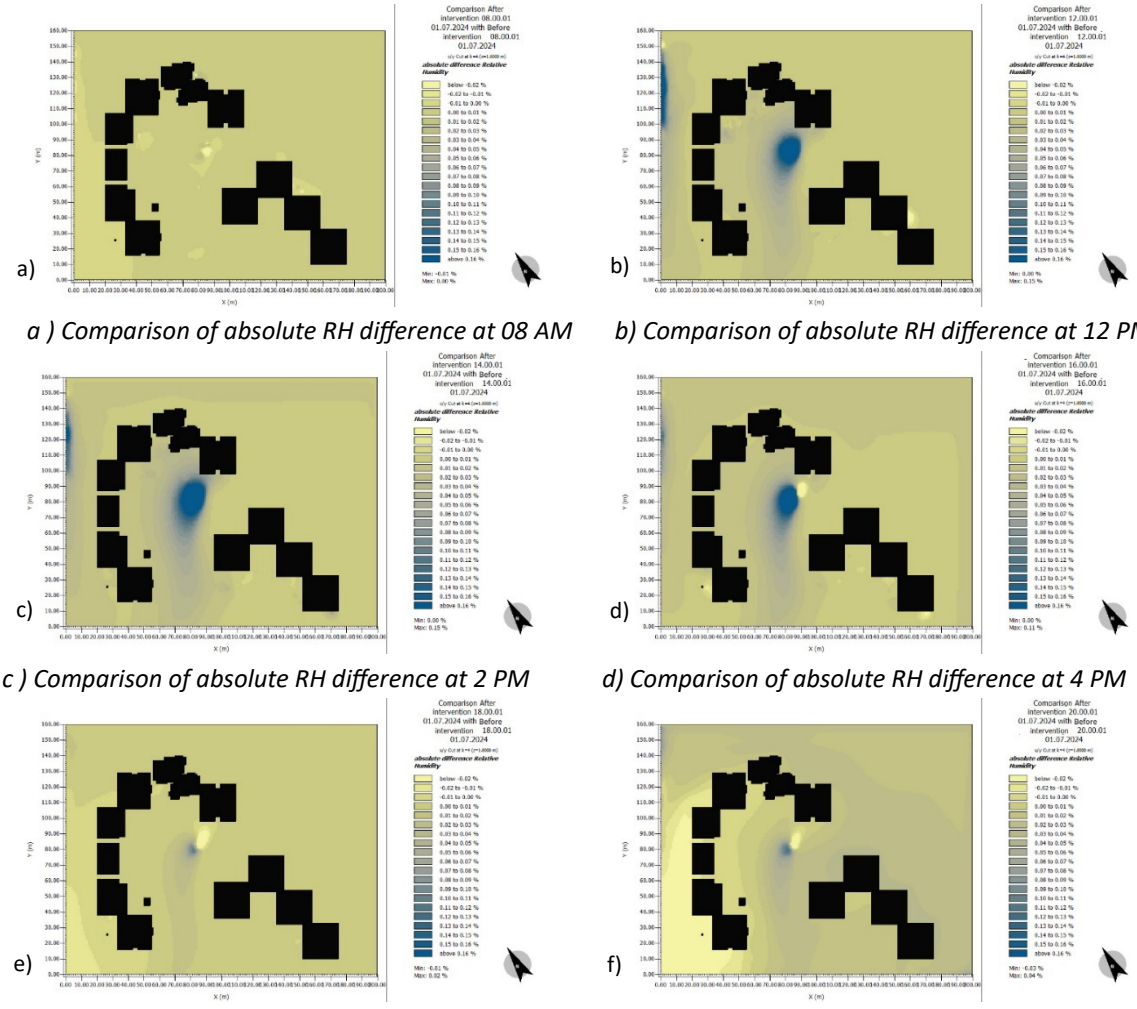


a) Comparison of absolute WS difference at 08 AM *b) Comparison of absolute WS difference at 4 PM*

Figure 7 - Comparison of the absolute difference in Wind Speed (WS) for the before and after intervention scenarios

Wind speed differences between scenarios were negligible (Δ ≈ 0.01 m/s), indicating that the implemented rain garden does not significantly affect the local airflow pattern at the pedestrian level. The intervention was carried out at ground level within the green area, there were no „vertical“interventions, and the new greenery that was introduced is low vegetation. As a result, it does not influence vertical air flow, leading to only a minor change in wind speed, which has no significant impact on the microclimate.

The results from these two scenarios were then compared based on the **changes in absolute Relative Humidity (RH)**. The relative humidity absolute difference was compared in different time data sets: 8 AM, 10 AM, 12 PM, 2 PM, 4 PM, 6 PM, and 8 PM. During the entire time, this change is in the range -0.03 to 0.15 %, which can be seen in figures 8a-f. The highest value of humidity change between the two scenarios was observed at 12 and 2 PM, and it was 0.15 %. In the morning, 08 AM, and afternoon, 6 PM this changes were minor.



a) Comparison of absolute RH difference at 08 AM

b) Comparison of absolute RH difference at 12 PM

c) Comparison of absolute RH difference at 2 PM

d) Comparison of absolute RH difference at 4 PM

e) Comparison of absolute RH difference at 6 PM

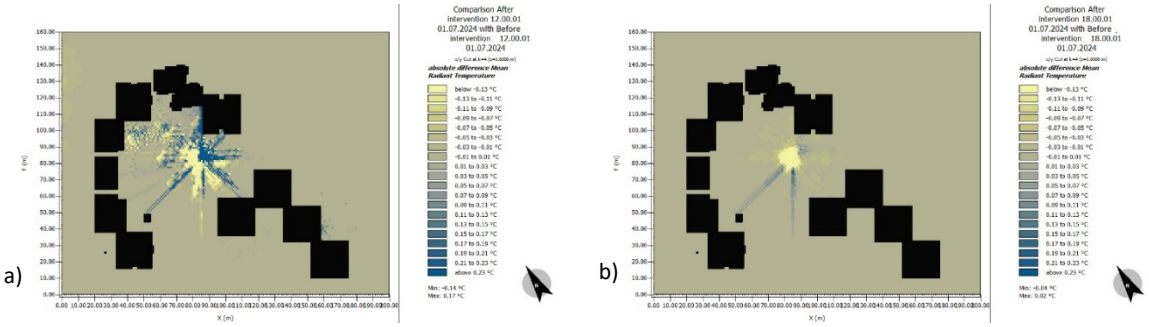
f) Comparison of absolute RH difference at 8 PM

Figure 8 - Comparison of the absolute difference in Relative Humidity (RH) for the before and after intervention scenarios

Relative humidity showed negligible changes between scenarios (ΔRH ≤ 0.15%), indicating that the implemented rain garden had a limited direct effect on near-surface atmospheric moisture conditions at the pedestrian level at a height of 1.80 m. The simulation is unable

to calculate different scenarios related to rainfall amounts and the potential effectiveness of a rain garden in retaining water during the simulation period. However, it does suggest that certain changes in relative humidity exist, especially in the hottest part of the day, 12 and 2 PM, which can have a positive impact on the microclimate during summer months even with this small – scale intervention.

Results of the **absolute Mean Radiant Temperature (MRT) change** were analysed next. Data sets are used for the 8 AM, 10 AM, 12 PM, 2 PM, 4 PM, 6 PM, and 8 PM time series. Localized and modest changes in the mean radiant temperature, ranging from -0.14 to 0.23 °C can be observed. The cooling effect of the rain garden reaches its peak of -0.14 °C at 12 PM, and it falls to -0.04 °C at 6 PM (Figures 9a and 9b).

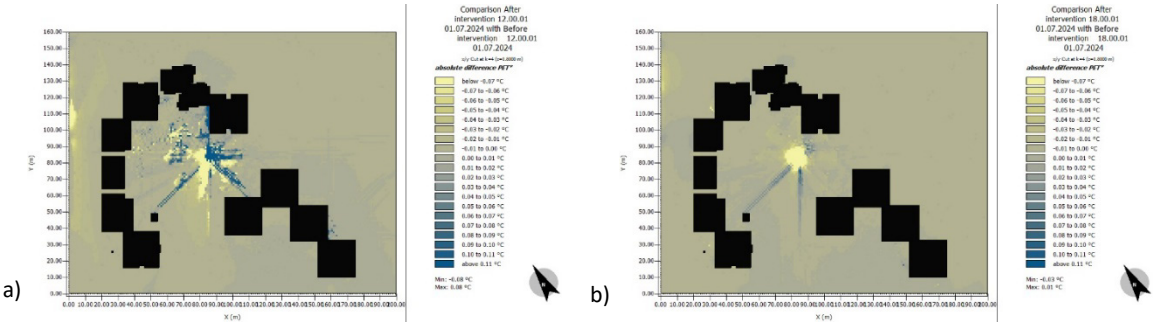


a) Comparison of absolute MRT difference at 12 PM *b) Comparison of absolute MRT difference at 6 PM*

Figure 9 - Comparison of the absolute difference in Mean Radiant Temperature (MRT) for the before and after intervention scenarios

Caused by the grid resolution 1x1 m horizontaly and 2 m vertically, the area of the rain garden occupies a small number of cells compared to the entire surface of POS. The cooling effect of -0.14 °C occurs during daylight due to increased evapotranspiration from the rain garden soil and vegetation within it. The slightly warming effect of +0.23 °C near the rain garden paved surfaces can be caused by the characteristics of the rain garden vegetation species, which have a different albedo than the previous ground, which affects reflection. Therefore, the results should be interpreted as indicative changes rather than absolute predictions of the rain garden impact. Even though the intervention is small-scale, changes in MRT can be observed as localized microclimate stabilization through altered surface moisture and evapotranspirative processes, rather than a major cooling effect on the entire POS. This implies that a rain garden with a greater surface can significantly impact the microclimate and can have a cooling effect on a wider area during daylight in summer months.

Finally, **absolute changes in Physiological Equivalent Temperature (PET)** were analyzed as a significant factor for overall thermal comfort. To calculate PET, the *BIO-met* application within ENVI-met headquarters was used to generate data for comparison in the *Leonardo* system, following the same time series used in previous comparisons. Similar to the observations made when comparing absolute changes in mean radiant temperature, modest and localized variations in PET values were noted, which ranged from –0.08 to 0.11 °C. Specifically, a cooling effect, indicated by a PET change of –0.08 °C, was observed at 12 PM and 2 PM, while a slight increase of 0.11 °C occurred at 4 PM. Later, at 6 PM, the lowest increase in PET value was recorded, which was just 0.01 °C. The comparison of the results from both simulations for these peak values is illustrated in Figures 10a and 10b.



a) Comparison of absolute PET difference at 12 PM *b) Comparison of absolute PET difference at 6 PM*

Figure 10 - Comparison of the absolute difference in Physiological Equivalent Temperature (PET) for the before and after intervention scenarios

PET values result from analyzing air temperature, wind speed, relative humidity, and mean radiant temperature, combined with human body characteristics and clothing. Obtained results of PET changes during the simulation period, may also be caused by the rain gardens retaining water. Higher relative humidity can slightly raise the perceived temperature (PET) because it hinders the human body's ability to cool itself through sweat evaporation. Additionally, there is no change in wind speed, indicating that there is no inflow of cool air, which modestly affects the changes in PET values during this simulation. Similar to the analysis of the changing MRT values, we can observe a localized effect in the case of PET with minor positive changes, which corresponds to the scale of the project. However, this shows that by changing the scale of the intervention, a greater impact can be achieved in terms of PET.

The main purpose of the implemented rain garden, which is a nature – based solution, can be observed as a sustainable drainage system that manages stormwater without negatively modifying the local microclimate. From that standpoint, analyzing the results of the before and after scenarios simulations in ENVI-met, it is clear that this intervention has a minor but positive impact on the surroundings. Even though there are technical limitations within the software that were highlighted - the lack of predefined rain garden materials in the ENVI-met database, the inability to model depressions less than 1 m deep, the use of a 1x1 m grid, software application of standard atmospheric and ground characteristics over a 24-hour cycle, the generated results showed positive effects. The rain garden primarily influences the radiative and thermal balance of the urban surface, leading to minor changes in Mean Radiant Temperature MRT and Physiological Equivalent Temperature (PET), while its effect on atmospheric moisture and wind field is negligible due to the small spatial scale and existing vegetation structure.

ANNEX 9

REPOS WEBSITE with FORUM

Start | 0 PRATECI DOKUMENTI | Reclaiming Public Op... | Microsoft Word 2010 | Microsoft Excel - Predlo... | Javni poziv.pdf - Adob... | SR | 13:37

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future

About the Project

Start | 2 Beleške i dokume... | Untitled - Paint | Forum | RePOS -... | Microsoft Word 2... | Microsoft Excel - Pr... | Javni poziv.pdf - A... | SR | 13:29

Speed Dial | Forum | RePOS

https://forum.repos-project.rs/topics/22

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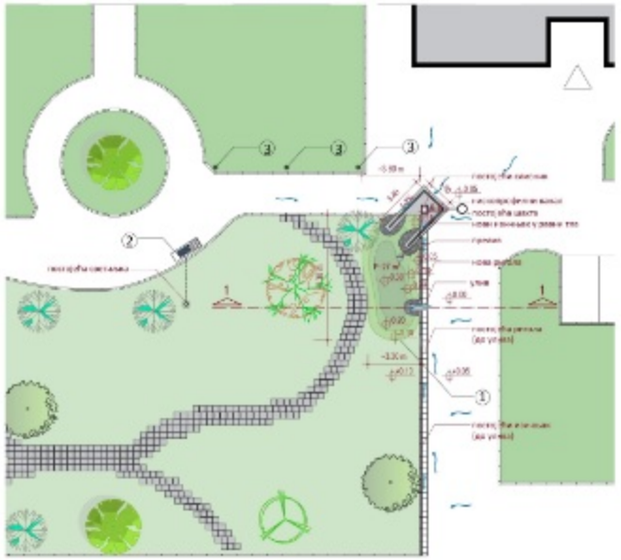
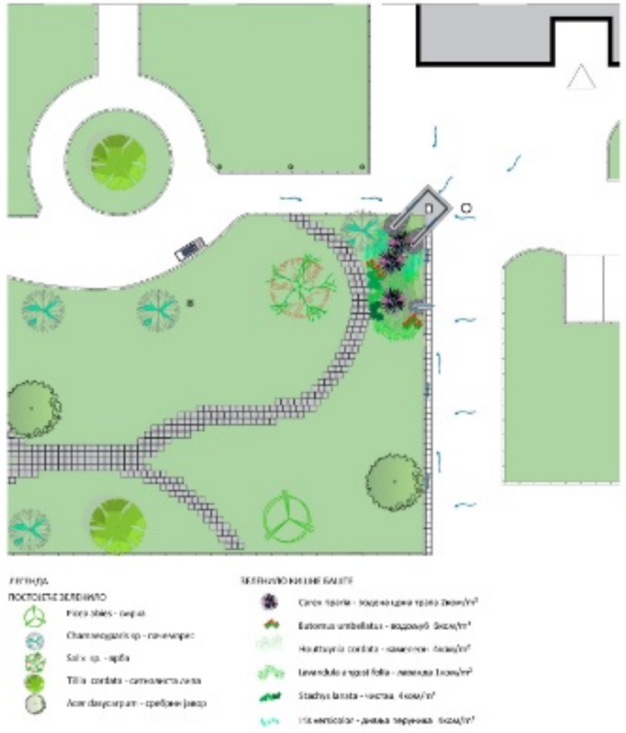
ИДЕЈНО УРБАНИСТИЧКО РЕШЕЊЕ Р 1:200



ПЛАН ОЗЕЛЕЊАВАЊА Р 1:200



Preoblikovanje javnog otvorenog prostora u naselju Krive Livade u Nišu

23.5.2026.
Milena

Start | 2 Beleške i dokume... | FORUM 1.jpg - Paint | Forum | RePOS -... | Microsoft Word 2... | Microsoft Excel - Pr... | Javni poziv.pdf - A... | SR | 13:30

Speed Dial | Forum | RePOS

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Preoblikovanje javnog otvorenog prostora u naselju Krive Livade u Nišu

23.5.2026.
Milena

Gorica Ljubenković 23.5.2026. 08:01:21

Kišna bašta je veoma lepo uklopljena u prostor.

Ivan Paunović 3.6.2026. 12:35:57

Izvanredna ideja i rešenje za poboljšanje urbanog komfora.

Srdjan Mladenovic 3.6.2026. 21:17:11

Super ideja, prelepo resenje.

Prijavite se da biste ostavili komentar.

Login

Email

Password

ANNEX 10

PARTICIPATION PROCESS Time Line: Meetings And Activities

	PARTICIPATION	PROCESS:	Meetings with stakeholders and RePOS activities		
	Date	**Meeting**	**Purpose and activities**	**Comment**	**Document**
1.	16.12.2025	Meeting with Chief urban planner of the City of Niš	Purpose: Support for the RePOS project and agreement on the pilot site selection. The City of Niš confirmed its support for the RePOS project in 2023. The City of Niš expressed its interest and proposed potential locations based on submitted requests for the improvement of inter-block greenery.		Letter of Support – City of Niš – RePOS Project
2.	RePOS activities		Based on the proposal from the City of Niš, an analysis of the space and land ownership was conducted, resulting in a shortlist of 6 potential locations. Two of these aligned with the residents' requests, while four incorporated RePOS proposals to include one from each City Municipality, as previously agreed with the Chief Urban Planner of the City of Niš	The selection was made based on the expressed interest and clearly defined land ownership relations at the site	Consent of the land owner and extract from the real estate cadastre
3.	Internal communication	Communication with the Chief Urban Planner	The RePOS team submitted proposals to the City of Niš, and they selected a location in the City Municipality of Pantelej (LOCATION 1).		
4.	16.01. 2026 23.01.2026	Meetings with representatives of the City Municipality of Pantelej	Purpose: Support for the RePOS project and agreement on the pilot site selection. The City Municipality of Pantelej is not interested in implementing the project, and LOCATION 1 was abandoned	The reason for abandoning the site is the insufficient cooperation between the City Municipality of Pantelej and local communities, which would jeopardize the implementation of the RePOS pilot project.	

5.	Internal communication	Communication with the Chief Urban Planner	In internal communication with the City of Niš (through representatives from the City's Monitoring Department), it was decided that the pilot site selection will be located in the City Municipality of Medijana.		
6.	29.01.2026	Meeting with the President of the City Municipality of Medijana and a representative of the City of Niš	Purpose: Support for the RePOS project and agreement on the selection of LOCATION 2. The City Municipality of Medijana expressed interest in the project implementation and facilitated the organization of a meeting with Housing association managers. Since the cadastral plot is large, it was first discussed with the representatives of the City Municipality of Medijana and the representative of the City of Niš who was present which part of the public open space to include. The realization of an URBACT project is planned in one part of the site, so the other part of the site was selected in order for its residents to also benefit and experience an improvement of their shared environment.		The City of Niš also granted its formal approval (February 20, 2026).
7.	02.02.2026	Meeting with Housing association managers	Support for the RePOS project and agreement on organizing a workshop with local residents, aimed at education and selecting the micro-location for the pilot project. Housing association managers expressed interest and support.		
8,	12.02.2026	Meeting with Community Foundation Niš	Support for the RePOS project, discussing funding opportunities, and agreement on organizing a workshop.		Letter of support-Community Foundation Niš

9,	12.02.2026 at the City Municipality of Medijana (17:00–18:30h)	Educational and participatory workshop attended by representatives from the City of Niš, the City Municipality of Medijana, the Community Foundation Niš, local residents and the RePOS team	It consisted of two distinct phases: an educational phase and a co-design phase. The educational component aimed to increase residents' awareness of innovative and sustainable solutions in POS design, along with the presentation of smart solutions for urban equipment. The participatory segment enabled residents to actively contribute ideas regarding the positioning and conceptualization of proposed interventions within their common POS.		Presentation of the participatory process, organization, content, and workshop results. https://www.repos-project.rs/citizens-participation
9,	RePOS activities	Presentation of the remodeling proposal on the website, with the option to comment on the forum	Presentation of the results on the website, with the option to comment on the forum.		https://forum.repos-project.rs/

ANNEX 11

WORKSHOP documentation

Start | Untitled - Paint | Citizen's Participation... | ESMP PRIMERI_FOND | 0 DRAFT REPOS ESMP_ ... | Edukativna radionica Re... | SR | 21:12

Citizen's Participation

- Agenda radionice
- Anketa Zainteresovane strane
- Lista prisutnih Radionica 12.02.2026
- Podloga za rad
- Poziv na radionicu
- Prezentacija 1 Rešenja zasnovana na prirodi Kišne bašte i bioretenzije
- Prezentacija 2 Pametna rešanja za urbano opremanje Solarna klupa i rasveta

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

ПОЗИВ

на партиципативни догађај за уређење међублоковског простора
у улици Бранка Крсмановића

Поштовани станари улица Бранка Крсмановића (бр. 19, 21, 23, 25, 27, 29, 31), и Париске Комуне (бр. 19, 21, 23, 25) у Нишу, позивамо вас на Радионицу у вези уређења вашег стамбеног окружења у

ЧЕТВРТАК 12.02.2026. у 17,00 сати

у сали зграде Градске општине Медијана. Радионица се организује у договору са представницима Града Ниша, Градске општине Медијана, и управницима зграда, а у вези реализације пилот пројекта у вашем стамбеном окружењу. Интервенција обухвата уређење једног дела вашег међублоковског простора. Активности на уређењу желимо да реализујемо у договору са вама као станарима - корисницима простора, и уз подршку представника Града Ниша и Градске општине Медијана.

Пилот пројекат се реализује у оквиру научноистраживачког пројекта "Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future" (акроним RePOS), који се финансира од стране Фонда за науку Републике Србије. Носилац пројекта је Грађевинско-архитектонски факултет Универзитета у Нишу, а Руководилац пројекта је др Милена Динић Бранковић, ванредни професор. Више о пројекту RePOS можете сазнати на сајту: https://www.repos-project.rs

Хвала вам на сарадњи и надам се да се видимо у четвртак!

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

АГЕНДА

Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића

Место: Градска општина Медијана
Датум: 12. 2. 2026. године
Време: 17.00 – 18.30

17.00 – 17.05 **Уводна реч, представљање РеПОС пројекта**
Представник Града Ниша
Представник Градске општине Медијана
Проф. др Милена Динић Бранковић, руководилац пројекта,
Грађевинско-архитектонски факултет у Нишу

17.05 – 17.20 **Представљање иновативних решења**

Решења заснована на природи са фокусом на биоретнезије и кишне баште
Проф. др Љиљана Василевска,
Грађевинско- архитектонски факултет у Нишу

Паметна решења за урбано опремање (паметне клупе и соларна расвета)
Проф. др Милена Динић Бранковић,
Грађевинско-архитектонски факултет у Нишу

17.20 – 18.05 **Рад у групама** – предлози позиције и концептуалног решења биоретнезије/кишне баште и урбане опреме

18.05 – 18.20 **Дискусија**

18.20 – 18.30 **Анкета за учеснике**

Фонд за науку Републике Србије

Пројекат: Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића

Место: Градска општина Медијана
Датум: 12. 2. 2026. године
Време: 17.00 – 18.30

Листа присутних

Бр.	Име и презиме	Организација/Станар	Позиција	Е-пошта, телефон (опционо)	Потпис
1.	[redacted]	ГЗ за планирање и изградњу		[redacted]	
2.	[redacted]	Локална фонација Ниш	Директор	[redacted]	
3.	[redacted]	БК 29		[redacted]	
4.	[redacted]	БК 21		[redacted]	
5.	[redacted]	Ну Home Manager DOO	Директор	[redacted]	
6.	[redacted]	PRO-DOM	Profesionalni upravnik	[redacted]	
7.	[redacted]	Bk 27	Stanar	[redacted]	
8.	[redacted]	ПК 23	СТАНАР	[redacted]	
9.	[redacted]	БК 19	СТАНАР	[redacted]	
10.	[redacted]	Б.О. Медијана	Зам. председника	[redacted]	

Appendix 6: Sign-in sheet

11.	[redacted]	ГО Медијана	члан већа	[redacted]	
12.	[redacted]	ГО Медијана	председник	[redacted]	
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☒ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: NI_PP_1

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- [x] Пролазим кроз њега
- [ ] Задржавам се (седење, разговор)
- [ ] Користе га деца
- [ ] Користе га старији
- [ ] Ретко га користим
- [x] Друго: Шетам пса

---

2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- [x] Задржавање воде после кише
- [ ] Превише бетона / мало зеленила
- [ ] Превруће лети / недостатак хлада
- [x] Лоше осветљење ноћу
- [x] Недостатак места за седење
- [ ] Осећај небезбедности
- [ ] Друго: _____

---

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- [x] Да
- [ ] Делимично
- [ ] Не

---

4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- [x] Биоретнезија/кишна башта
- [ ] Паметна клупа
- [ ] Соларна расвета
- [ ] Друго_____

---

5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- [x] У потпуности
- [ ] Углавном
- [ ] Делимично
- [ ] Нису ми јасна / не прихватам

---

6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- [x] Да, значајно
- [ ] Делимично
- [ ] Веома мало
- [ ] Не

7. Како оцењујете радионицу?

(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 5

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 5

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- [x] Да, у великој мери
- [ ] У одређеној мери
- [ ] Не, одлуке се углавном доносе без утицаја грађана

---

9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- [x] Да
- [x] Можда
- [ ] Не

---

10. Да ли имате још неки коментар или предлог?

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☒ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: NI PP 2

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- ☐ Пролазим кроз њега
- ☒ Задржавам се (седење, разговор)
- ☐ Користе га деца
- ☐ Користе га старији
- ☐ Ретко га користим
- ☐ Друго: _____

2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- ☒ Задржавање воде после кише
- ☒ Превише бетона / мало зеленила
- ☐ Превруће лети / недостатак хлада
- ☒ Лоше осветљење ноћу
- ☐ Недостатак места за седење
- ☐ Осећај небезбедности
- ☐ Друго: _____

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- ☒ Да
- ☐ Делимично
- ☐ Не

4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- ☒ Биоретнезија/кишна башта
- ☐ Паметна клупа
- ☐ Соларна расвета
- ☐ Друго_____

5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- ☒ У потпуности
- ☐ Углавном
- ☐ Делимично
- ☐ Нису ми јасна / не прихватам

6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- ☒ Да, значајно
- ☐ Делимично
- ☐ Веома мало
- ☐ Не

7. Како оцењујете радионицу?

(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 5

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 5

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- ☒ Да, у великој мери
- ☐ У одређеној мери
- ☐ Не, одлуке се углавном доносе без утицаја грађана

9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- ☒ Да
- ☐ Можда
- ☐ Не

10. Да ли имате још неки коментар или предлог?

#€

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☒ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: Ni_PP_3

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- [x] Пролазим кроз њега
- [x] Задржавам се (седење, разговор)
- [ ] Користе га деца
- [ ] Користе га старији
- [ ] Ретко га користим
- [ ] Друго: _____

---

2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- [x] Задржавање воде после кише
- [ ] Превише бетона / мало зеленила
- [ ] Превруће лети / недостатак хлада
- [ ] Лоше осветљење ноћу
- [x] Недостатак места за седење
- [ ] Осећај небезбедности
- [ ] Друго: _____

---

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- [x] Да
- [ ] Делимично
- [ ] Не

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4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- [x] Биоретнезија/кишна башта
- [ ] Паметна клупа
- [ ] Соларна расвета
- [ ] Друго_____

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5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- [x] У потпуности
- [ ] Углавном
- [ ] Делимично
- [ ] Нису ми јасна / не прихватам

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6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- [x] Да, значајно
- [ ] Делимично
- [ ] Веома мало
- [ ] Не

7. Како оцењујете радионицу?

(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 5

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 5

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- [x] Да, у великој мери
- [ ] У одређеној мери
- [ ] Не, одлуке се углавном доносе без утицаја грађана

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9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- [x] Да
- [ ] Можда
- [ ] Не

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10. Да ли имате још неки коментар или предлог?

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☒ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: NI_PP_4

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- [x] Пролазим кроз њега
- [ ] Задржавам се (седење, разговор)
- [ ] Користе га деца
- [ ] Користе га старији
- [ ] Ретко га користим
- [ ] Друго: _____

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2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- [x] Задржавање воде после кише
- [ ] Превише бетона / мало зеленила
- [ ] Превруће лети / недостатак хлада
- [ ] Лоше осветљење ноћу
- [x] Недостатак места за седење
- [ ] Осећај небезбедности
- [ ] Друго: _____

---

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- [ ] Да
- [ ] Делимично
- [x] Не

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4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- [x] Биоретнезија/кишна башта
- [x] Паметна клупа
- [ ] Соларна расвета
- [ ] Друго_____

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5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- [x] У потпуности
- [ ] Углавном
- [ ] Делимично
- [ ] Нису ми јасна / не прихватам

---

6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- [x] Да, значајно
- [ ] Делимично
- [ ] Веома мало
- [ ] Не

7. Како оцењујете радионицу?
(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 (5)

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 (5)

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- [x] Да, у великој мери
- [ ] У одређеној мери
- [ ] Не, одлуке се углавном доносе без утицаја грађана

---

9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- [x] Да
- [ ] Можда
- [ ] Не

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10. Да ли имате још неки коментар или предлог?

НЕДОВОЉНО ТРАВЕ, ОСТАТАК ПРОСТОРА ОДРЖАВАТИ

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☑ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: NI-PP-7

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- [x] Пролазим кроз њега
- [ ] Задржавам се (седење, разговор)
- [ ] Користе га деца
- [ ] Користе га старији
- [x] Ретко га користим
- [ ] Друго: _____

---

2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- [x] Задржавање воде после кише
- [ ] Превише бетона / мало зеленила
- [ ] Превруће лети / недостатак хлада
- [x] Лоше осветљење ноћу
- [x] Недостатак места за седење
- [x] Осећај небезбедности
- [ ] Друго: _____

---

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- [x] Да
- [ ] Делимично
- [ ] Не

---

4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- [x] Биоретнезија/кишна башта
- [ ] Паметна клупа
- [x] Соларна расвета
- [ ] Друго_____

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5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- ☑ У потпуности
- ☐ Углавном
- ☐ Делимично
- ☐ Нису ми јасна / не прихватам

---

6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- ☑ Да, значајно
- ☐ Делимично
- ☐ Веома мало
- ☐ Не

7. Како оцењујете радионицу?
(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 5

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 5

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- ☑ Да, у великој мери
- ☐ У одређеној мери
- ☐ Не, одлуке се углавном доносе без утицаја грађана

---

9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- ☑ Да
- ☐ Можда
- ☐ Не

---

10. Да ли имате још неки коментар или предлог?

Да се у неком следећем пројекту обрати пажња на имплементацију водопропусније подлоге за паркинг просторе.

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☑ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: HL_PP_6

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- ☑ Пролазим кроз њега
- ☐ Задржавам се (седење, разговор)
- ☐ Користе га деца
- ☐ Користе га старији
- ☐ Ретко га користим
- ☐ Друго: _____

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2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- ☑ Задржавање воде после кише
- ☐ Превише бетона / мало зеленила
- ☐ Превруће лети / недостатак хлада
- ☑ Лоше осветљење ноћу
- ☐ Недостатак места за седење
- ☐ Осећај небезбедности
- ☐ Друго: _____

---

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- ☑ Да
- ☐ Делимично
- ☐ Не

---

4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- ☑ Биоретнезија/кишна башта
- ☑ Паметна клупа
- ☐ Соларна расвета
- ☐ Друго_____

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5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- ☑ У потпуности
- ☐ Углавном
- ☐ Делимично
- ☐ Нису ми јасна / не прихватам

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6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- ☑ Да, значајно
- ☐ Делимично
- ☐ Веома мало
- ☐ Не

7. Како оцењујете радионицу?
(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 5

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 5

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- ☑ Да, у великој мери
- ☐ У одређеној мери
- ☐ Не, одлуке се углавном доносе без утицаја грађана

---

9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- ☑ Да
- ☐ Можда
- ☐ Не

---

10. Да ли имате још неки коментар или предлог?

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☑ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: Ni – PP_7

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

Фонд за науку Републике Србије

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- [x] Пролазим кроз њега
- [x] Задржавам се (седење, разговор)
- [x] Користе га деца
- [x] Користе га старији
- [ ] Ретко га користим
- [ ] Друго: _____

2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- [x] Задржавање воде после кише
- [ ] Превише бетона / мало зеленила
- [ ] Превруће лети / недостатак хлада
- [x] Лоше осветљење ноћу
- [x] Недостатак места за седење
- [ ] Осећај небезбедности
- [ ] Друго: _____

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- [x] Да
- [ ] Делимично
- [ ] Не

4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- [x] Биоретнезија/кишна башта
- [ ] Паметна клупа
- [ ] Соларна расвета
- [ ] Друго У НАШЕМ СЛУЧАЈУ, ОБНОВА ОДВОДНЕ ИНФРАСТРУКТУРЕ (КОЛСКИ ПРИЛАЗИ И ТРОТОАРИ)

5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- ☐ У потпуности
- ☑ Углавном
- ☐ Делимично
- ☐ Нису ми јасна / не прихватам

---

6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- ☑ Да, значајно
- ☐ Делимично
- ☐ Веома мало
- ☐ Не

7. Како оцењујете радионицу?
(1 – веома лоше, 5 – одлично)

а) Колико Вам је радионица била занимљива?

1 2 3 4 5

б) Колико сте имали простора да изнесете своје мишљење?

1 2 3 4 5

8. Да ли сматрате да грађани кроз овакве радионице могу да утичу на то како ће се уређивати јавни отворени простори?

- ☐ Да, у великој мери
- ☑ У одређеној мери
- ☐ Не, одлуке се углавном доносе без утицаја грађана

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9. Да ли бисте били спремни да учествујете у реализацији пилот-пројекта (нпр. садња зеленила, радови на реализацији кишне баште) **и у каснијем одржавању простора?**

- ☑ Да
- ☐ Можда
- ☐ Не

---

10. Да ли имате још неки коментар или предлог?

Формулар сагласности за учествовање у анкети

Хвала Вам на добровољном пристанку да учествујете у овом истраживању као испитаник. Циљ истраживања је да се испитају мишљења грађана-станара о уређењу јавног отвореног простора.

Ваше учешће је потпуно добровољно. У сваком тренутку можете одбити да одговорите на поједина питања или прекинути анкету без икаквих последица.

Сви прикупљени подаци користиће се **анонимно и искључиво у научно-истраживачке сврхе**, у оквиру пројекта RePOS – Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future. Идентитет учесника неће бити откривен, а резултати ће бити представљени само кроз збирне анализе.

Ваша сагласност је неопходна као потврда да сте упознати са циљевима истраживања и начинима коришћења резултата анкете.

Анкету спроводе истраживачи са Грађевинско-архитектонског факултета Универзитета у Нишу. Истраживање је намењено искључиво у научно-истраживачке сврхе.

Изјава учесника

☑ Сагласан/а сам да учествујем у анкети и реализацији пилот-пројекта у оквиру научно-истраживачког пројекта RePOS

Шифра испитаника: ĐK 21/38 NLPP_8

АНКЕТНИ УПИТНИК

1. Како данас најчешће користите јавни отворени простор у непосредном стамбеном окружењу?

(може више одговора)

- ☒ Пролазим кроз њега
- ☒ Задржавам се (седење, разговор)
- ☐ Користе га деца
- ☒ Користе га старији
- ☐ Ретко га користим
- ☐ Друго: _____

---

2. Шта сматрате највећим проблемима тог простора?

(може више одговора)

- ☒ Задржавање воде после кише
- ☐ Превише бетона / мало зеленила
- ☐ Превруће лети / недостатак хлада
- ☒ Лоше осветљење ноћу
- ☒ Недостатак места за седење
- ☐ Осећај небезбедности
- ☐ Друго: _____

---

3. Да ли сте пре ове радионице били упознати са решењима заснованим на природи (нпр. биоретензије, кишне баште)?

- ☐ Да
- ☒ Делимично
- ☐ Не

---

4. Које интервенције сматрате најважнијим приоритетима за уређење простора?

- ☐ Биоретнезија/кишна башта
- ☐ Паметна клупа
- ☐ Соларна расвета
- ☒ Друго_____

---

5. Након презентације и радионице, у којој мери су Вам јасна и прихватљива предложена решења за уређење простора?

- ☐ У потпуности
- ☐ Углавном
- ☑ Делимично
- ☐ Нису ми јасна / не прихватам

---

6. Да ли Вам је радионица помогла да боље разумете могућности одрживог уређења заједничког отвореног простора?

- ☐ Да, значајно
- ☑ Делимично
- ☐ Веома мало
- ☐ Не

7. Како оцењујете радионицу?
(1 – веома лоше, 5 – одлично)

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б) Колико сте имали простора да изнесете своје мишљење?

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- ☑ У одређеној мери
- ☐ Не, одлуке се углавном доносе без утицаја грађана

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- ☑ Да
- ☐ Можда
- ☐ Не

---

10. Да ли имате још неки коментар или предлог?

Šifra ispitanika	Potpis ispitanika
NI_PP_1	
NI_PP _2	
NI_PP _3	
NI_PP _4	
NI_PP _5	
NI_PP _6	
NI_PP _7	
NI_PP _8	
NI_PP _9	
NI_PP _10	
NI_PP _11	
NI_PP _12	
NI_PP _13	
NI_PP _14	
NI_PP _15	

Šifra ispitanika	Potpis ispitanika
NI_PP_16	
NI_PP _17	
NI_PP _18	
NI_PP _19	
NI_PP _20	
NI_PP _21	
NI_PP _22	
NI_PP _23	
NI_PP _24	
NI_PP _25	
NI_PP _26	
NI_PP _27	
NI_PP _28	
NI_PP _29	
NI_PP _30	

Start | Site Factsheet | ReP... | ESMP PRIMERI_FOND | 0 DRAFT REPOS ESMP_... | Edukativna radionica R... | Document2 - Microsoft ... | SR | 21:14

- Consent of the land owner and extract from the real estate cadastre
- RePOS Project Letter of support CF Nis
- RePOS project Letter of support City of Niš
- Site Photos

Science Fund of the Republic of Serbia

This research is supported by the Science Fund of the Republic of Serbia, #GRANT No 7572, Reclaiming Public Open in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

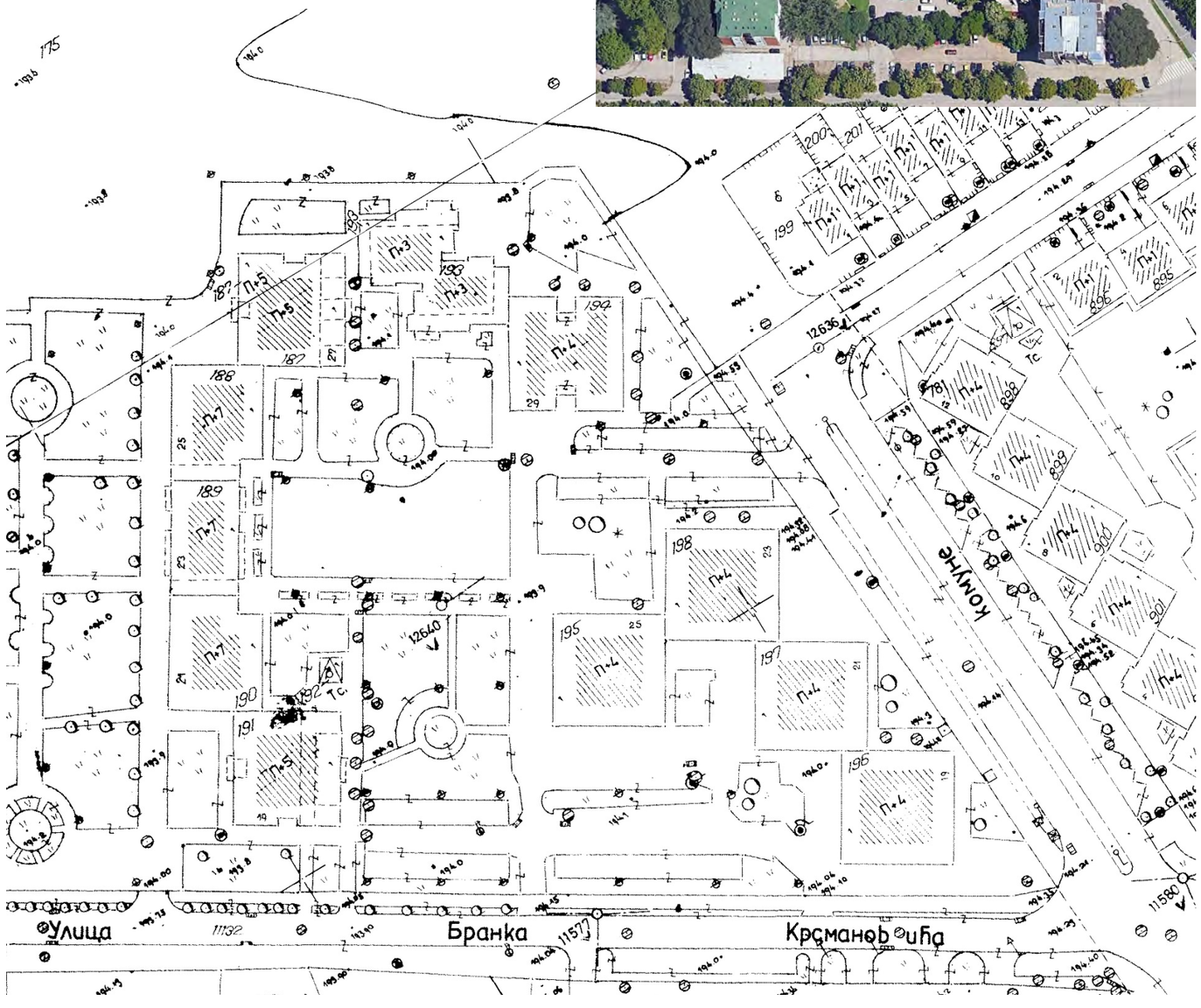
Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића

Мера /интервенција 1:

Мера /интервенција 2:

Мера /интервенција 3:

Мера /интервенција 4:



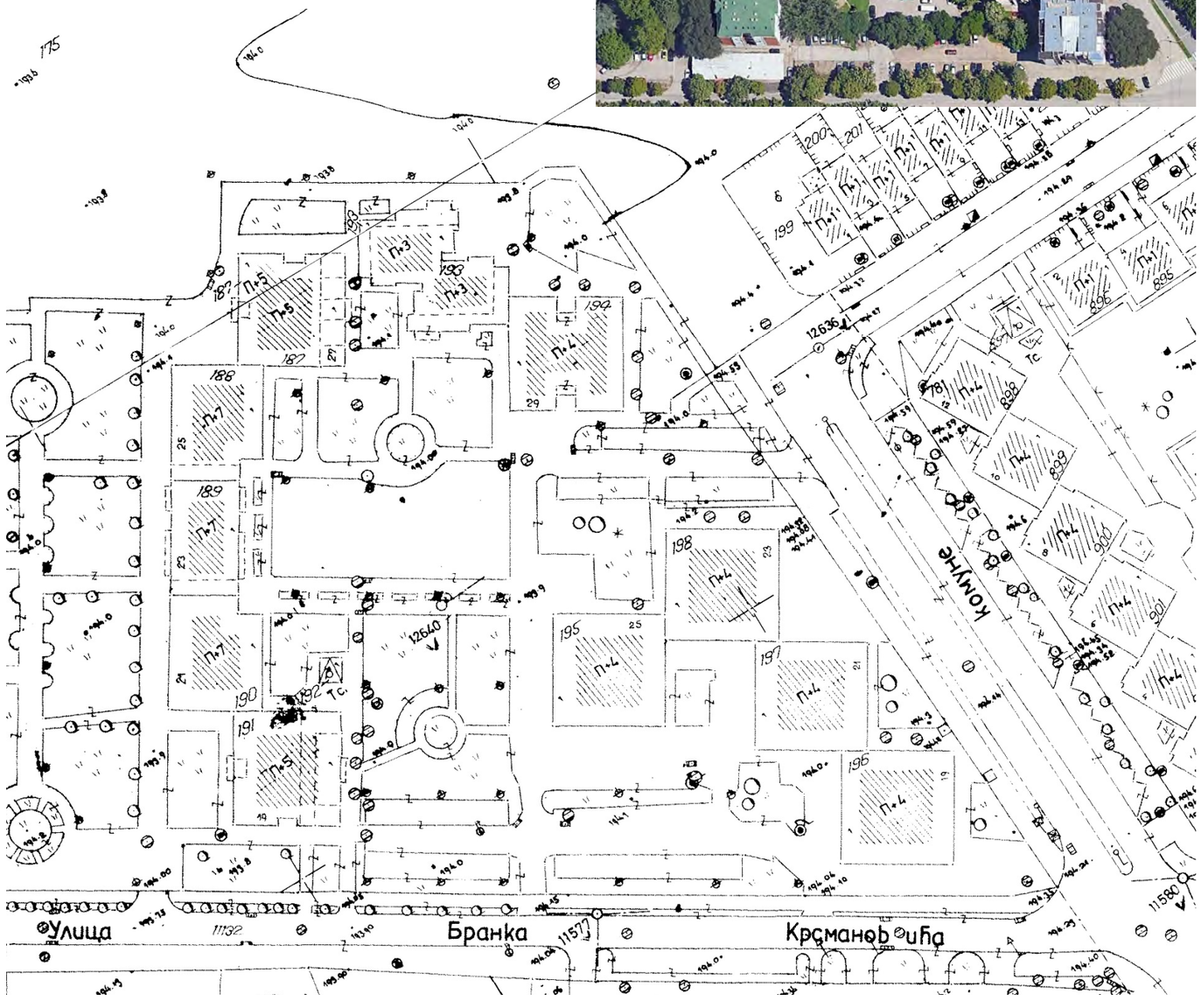
Партиципативни догађај за уређење међублоковског простора у улици Бранка Крсмановића

Мера /интервенција 1:

Мера /интервенција 2:

Мера /интервенција 3:

Мера /интервенција 4:



Фонд за науку
Републике Србије

Rešenja zasnovana na prirodi (Nature-based Solutions, NbS) sa fokusom na kišne bašte i bioretenzije

dr Ljiljana Vasilevska, red.prof.

,

Šef Katedre za urbanizam i prostorno planiranje
Građevinsko-arhitetonski fakultet Univerzieta u Nišu
ljiljana.vasilevska@gaf.ni.ac.rs

Rešenja zasnovana na prirodi

- **Priroda kao saveznik u našem gradu/naselju/bloku**:

  Koristimo zelenilo i **rešenja zasnovana na prirodi** (poput kišnih bašti i bioretenzija) da bismo rashladili prostor, bolje upravljali padavinama i stvorili zdravije životno okruženje

Kišna bašta: Prirodni „sunđer“ našeg bloka

- **Šta je kišna bašta?**

  Plitko ozelenjeno udubljenje (depresija) u terenu koje izgleda kao obična cvetna bašta, ali ima posebnu namenu

- **Čemu ona služi?**

  Sakuplja i ’’upija’’ kišnicu koja se sliva sa krovova i nepropusnih površina (betonskih ili asfaltnih staza, prolaza ili parkinga), sprečavaj da se voda zadržava na njima i plavi područje

- **Kako nam pomaže?**

  Zemlja i korenje biljaka rade kao prirodni filter. Oni zadržavaju nečistoće, dok višak vode polako upija u zemlju, čime se direktno sprečavaju male lokalne poplave u dvorištu

- **Da li će tu stalno biti vode?**

  Ne. Za razliku od bara ili močvara, ona je većinu vremena suva. Voda se u njoj zadržava samo kratko nakon kiše (obično 12 do 48 sati), taman koliko je biljkama potrebno

https://frontierlandscaping.com/is-a-rain-garden-right-for-you/

PRE
file:///C:/Users/Ljiljana/Desktop/bay+view+before+and+after.webp

POSLE

Nedoumice i pitanja:

1. „Kišna bašta će biti leglo komaraca“

- **Istina:** Komarcima je potrebno **7 do 12 dana** stajaće vode da bi položili jaja i da bi se izlegle larve
- **Objašnjenje:** Pravilno projektovana kišna bašta upije svu vodu za najviše **48 sati**. To znači da voda nestane mnogo pre nego što komarci uopšte dobiju priliku da se razmnože. Zapravo, komarci će pre naseliti staru gumu, zapušen oluk ili saksiju u kojoj stoji voda nego sunčanu kišnu baštu

2. „To će postati močvara ili bara usred dvorišta“

- **Istina:** Kišna bašta **nije bara ni jezero**
- **Objašnjenje:** Ona je dizajnirana da bude suva 90% vremena. Udubljenje je plitko (obično samo 15–20 cm), a drenažni sloj zemlje je takav da voda brzo prolazi kroz njega. Ona izgleda kao obična bašta, a ne kao stajaća voda

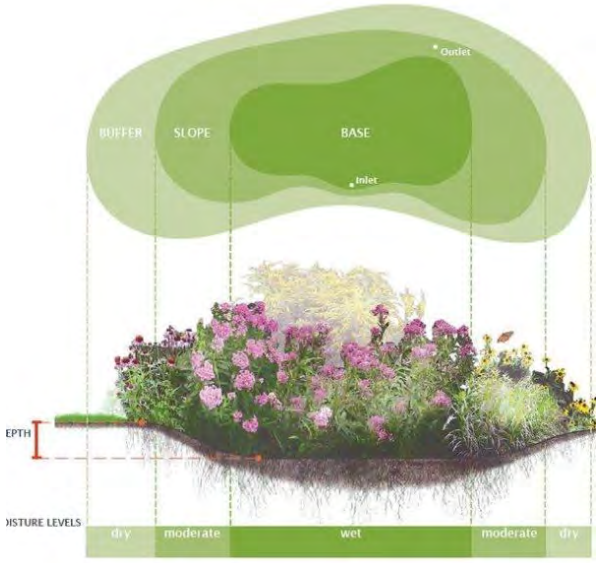
https://xerces.org/blog/rain-gardens-are-winwin

3. „Bašta će privući vlagu u temelje zgrade“

- **Istina:** Pravilna lokacija eliminiše ovaj rizik
- **Objašnjenje:** Kišne bašte se uvek planiraju na udaljenosti od najmanje **3 do 4 metra** od zgrade i na mestu gde je nagib terena usmeren suprotno od temelja. Na taj način, bašta zapravo štiti zgradu jer kontrolisano odvodi vodu koja bi inače mogla da završi uz same zidove

4. „Održavanje je skupo i komplikovano“

- **Istina:** Održavanje je slično kao kod bilo kog drugog uređenog zelenila
- **Objašnjenje:** Najviše posla ima na početku dok se biljke ne prime. Kasnije je dovoljno 2-3 puta godišnje očistiti lišće i smeće koje voda nanese na ulaz u baštu i proveriti da li su biljke zdrave. One vremenom postaju samoodržive



Bioretenzija: Nevidljiva tehnologija prirode

- **Šta je bioretenzija?**

  To je **„naprednija rođaka" kišne bašte** **-** prirodni slojeviti sistem od posebnih mešavina peska, zemlje i šljunka koji su skriveni ispod zelenila. Iako liči na kišnu baštu, ona je projektovana da pruži dodatne usluge, pogotovo na lokcijama sa velikim učešćem nepropusnih površina

- **Čemu ona služi?**

  Njena uloga je da prihvati vodu sa velikih neporoznih površina, poput parkinga ili prometnih prolaza i ulica. Ona ne služi samo za upijanje, već je njen glavni zadatak da tu vodu temeljno pročisti pre nego što ona nastavi svoj put

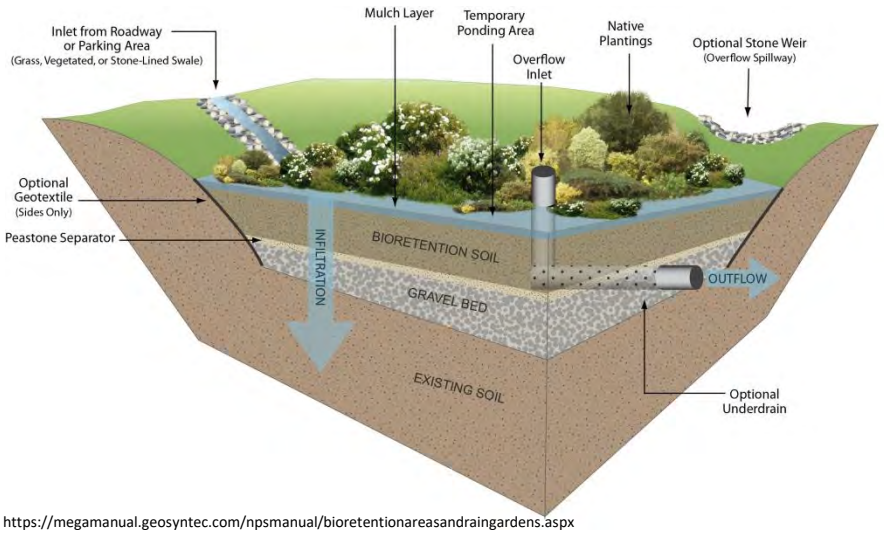
https://sfbetterstreets.org/find-project-types/greening-and-stormwater-management/stormwater-overview/bioretention-rain-gardens/index.html

- **Kako nam pomaže?**

  Pored toga što upija vodu (**infiltracija**), bioretenzija vrši i aktivnu **filtraciju**. Kroz pažljivo birane slojeve peska i supstrata, ona deluje kao prirodni sunđer koji iz vode „izvlači“ ulja, teške metale i druge nečistoće sa asfalta i betona, vraćajući prirodi čistu vodu

- **Koja je glavna razlika u odnosu na kišnu baštu?**

  Glavna razlika je u „unutrašnjem sastavu“. Dok se kišna bašta oslanja na postojeće zemljište, bioretenzija koristi specifične slojeve materijala koji su tu namenski postavljeni da bi maksimalno ubrzali i poboljšali prečišćavanje vode u urbanim uslovima - **dok je kišna bašta fokusirana na upijanje kišnice, bioretenzija je "mini fabrika" za prečišćavanje vode**



https://megamanual.geosyntec.com/npsmanual/bioretentionareasandraingardens.aspx

Unutrašnje dvorište Robert-Baberske-Straße/Eduard-Winterstein-Straße, Drewitz, Potsdam (2005)
Pilot projekat regeneracije javnog otvorenog prostora u okviru saveznog i državnog ''Programa urbanog razvoja velikih područja'' - Städtebauliche Weiterentwicklung großer Neubaugebiete (otpočeo 1997.)

Unutrašnje dvorište, stambeno područje Friedrich-Engels-Platz, Beč

4 ključna pitanja za danas

1. „Gde se stvaraju 'jezera' u našem dvorištu?“

Cilj: Pronalaženje idealne lokacije za **kišnu baštu ili bioretenziju**

Pojašnjenje: Tražimo mesta gde se voda najduže zadržava na asfaltu ili travnjaku nakon jače kiše. To su mesta gde bi kišna bašta bila najkorisnija jer bi "popila" tu vodu i sprečila blato i bare

2. „Gde nam je leti nepodnošljivo toplo, a gde nedostaje hlad?“

Cilj: Određivanje lokacije za **solarnu klupu i prateće zelenilo**

Pojašnjenje: Solarna klupa je idealna na mestu gde ljudi već vole da se okupljaju, ali joj je potrebno i sunce (za panele) i blizina hlada (da bi vam bilo prijatno da sedite). Gde ima najviše betoniranih površina koje leti najviše zrači toplotu?

3. „Kojim stazama se najčešće krećemo i gde nam treba prostor za odmor?“

Cilj: Funkcionalnost i bezbednost

Pojašnjenje: Da li je bolje da klupa i svetiljka budu blizu ulaza, dečijeg igrališta ili na nekoj mirnijoj ruti? Gde bi vam svetiljka najviše značila da se osećate sigurno kada se vraćate kući po mraku?

4. „Šta bi nas najviše motivisalo da čuvate ovaj novi kutak?“

Cilj: Održivost projekta

Pojašnjenje: Da li želite da bašta bude puna cveća koje cveta u različito vreme? Da li želite da klupa ima pogled na neki specifičan deo bloka? Kada vi sami "dizajnirate" namenu (npr. "kutak za komšijsku kafu"), taj prostor čete osećati kao svoj i više ćete ga paziti.

Pametna rešenja za urbano opremanje

Pilot projekat u okviru projekta **Reintegrisanje javnog otvorenog prostora u područja višeporodičnog stanovanja u gradovima Srbije – RePOS**, programa PRIZMA Fonda za nauku RS

Dr Milena Dinić Branković, vanr. prof.

Univerzitet u Nišu – Građevinsko-arhitektonski fakultet

Rukovodilac projekta RePOS

Digitalna rešenja

Фонд за науку
Републике Србије

- Spektar **alata, tehnologija i metoda**, koje se mogu primenjivati na licu mesta, ili daljinski putem digitalnih mreža

- Klasifikacija **prema ulozi u planerskom procesu**:
  - **za analizu prostora – prikupljanje i obrada podataka**

    GIS alati, platforme za projektovanje i mapiranje, virtuelna i proširena stvarnost (VR i AR), alati za ekološki monitoring
  - **za uključivanje zajednice**

    omogućavaju participaciju građana putem društvenih mreža, participativnog mapiranja i digitalnih platformi za javne konsultacije
  - **u prostoru – fizički ugrađene u urbano okruženje**

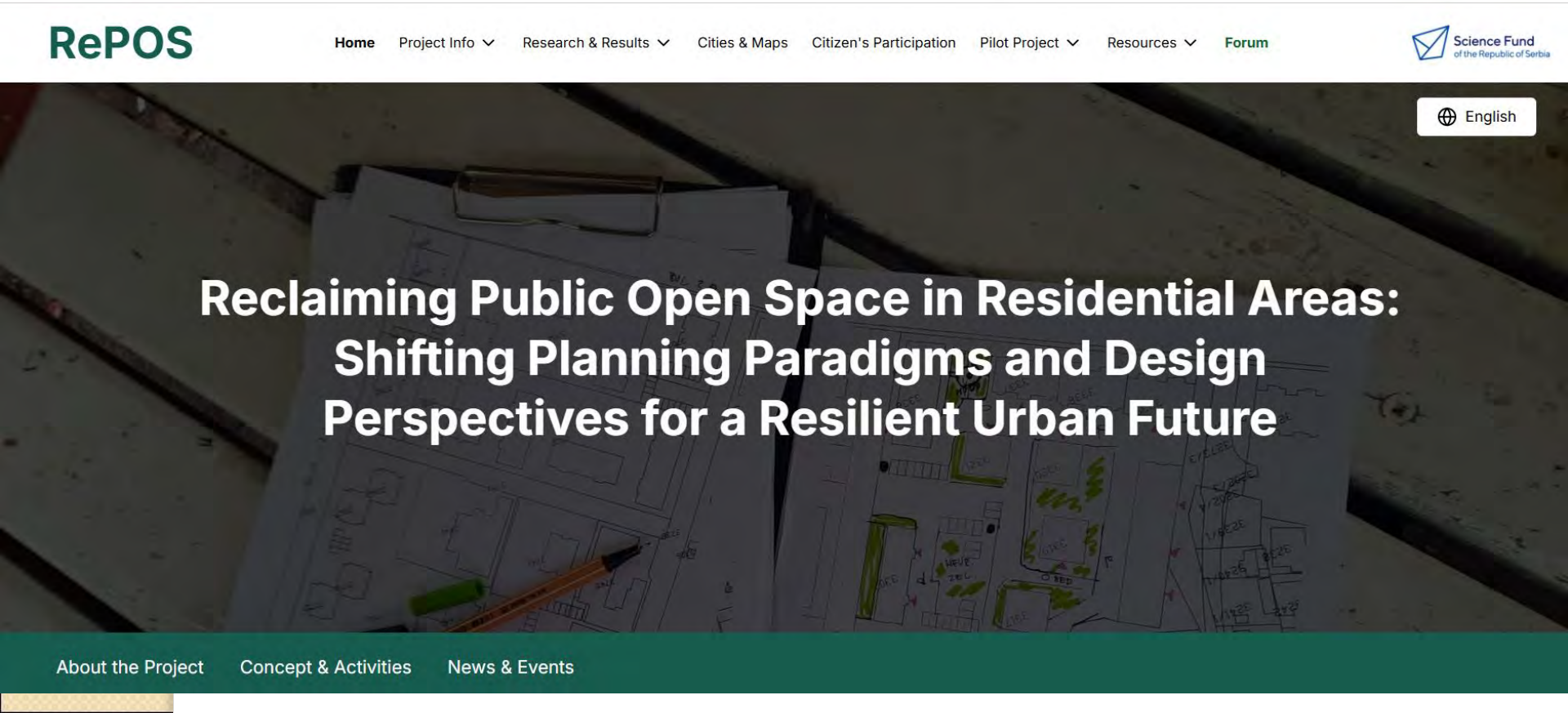
    omogućavaju korisnicima pristup informacijama u realnom vremenu ili unapređenje prostornog doživljaja (npr. senzori)

RePOS digitalna rešenja
za uključivanje zajednice

Фонд за науку
Републике Србије

RePOS digitalna platforma https://www.repos-project.rs/

Omogućava uključivanje zainteresovanih strana u svim fazama - informisanje, konsultacije, saradnja, zajedničko donošenje odluka i osnaživanje zajednice



RePOS digitalna rešenja

u prostoru

Фонд за науку
Републике Србије

Pristup informacijama i unapređenje prostornog doživljaja: Pametna klupa

Funkcioniše na principu obnovljivih izvora energije (energije vetra, solarne energije). Smanjuje se potrošnja konvencionalne energije i doprinosi smanjenju emisije štetnih gasova. Uz solarno napajanje postaje samoodrživa - solarni panel pretvara sunčevu energiju u električnu energiju. U zavisnosti od solarnog panela, može posedovati i USB priključke i punjače za telefon, laptop i električni skuter. Može sadržati Wi-Fi hotspot, LED osvetljenje, senzore kvaliteta vazduha ili informativni displej.

RePOS digitalna rešenja

u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Hola Systems

Preko senzor modula informacije se prenose se na uređaj na klupi, i dalje se emituju preko displeja. Klupa može prikazivati sledeća merenja:
– Zagađenost vazduha,
– Vlažnost vazduha,
– Nivo buke,
– Gustinu magle,
– Pešačke gužve (ukoliko je klupa blizu prostora za šetnju),
– Automobilske gužve (ukoliko je klupa blizu parkinga ili ulice),
– Nivo padavina,
– Druga merenja koja su potrebna na konkretnoj lokaciji.

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Hola Systems

https://hola.rs/proizvodi/solarne-eko-pametne-klupe/hola-interaktivna-solarna-klupa/

RePOS digitalna rešenja

u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Hola Systems

Ergonomski dizajn omogućava korisniku da sedi kao za stolom. Na naslon klupe se mogu postaviti laptop, ili kafa, voda, kako bi se upotpunila atmosfera.
https://hola.rs/en/blog/smart-solar-bench-a-modern-solution-for-urban-spaces/

RePOS digitalna rešenja

u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Strawberry Energy

https://strawberrye.com/smart-bench-1/

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Strawberry Energy

Beograd, Trg Republike. 100% samostalni energetski sistem. Površine za brendiranje i umetnički rad. Besplatan WiFi hotspot. Besplatno punjenje baterije. Udoban prostor za sedenje. https://www.eliteareas.gr/tag/smartbench/

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Strawberry Energy

Senzori: CO_2, temperatura, vlažnost, vazdušni pritisak, nivo buke.

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: QBen

https://qben.hr/pametne-klupe-postavljene-u-dubrovniku/

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: City Gecko

Klupe su osmišljene da budu modularne. Moguće je kombinovati više različitih ili istih modula kako bi se dobili različiti oblici. https://citygecko.solar/klupe.html

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: City Gecko

Klupe sa naslonom ili bez naslona.
https://citygecko.solar/klupe.html

Module Wheel služi korisnicima da odlože ili napune bicikle i električne trotinete.
https://citygecko.solar/klupe.html

RePOS digitalna rešenja

u prostoru

Фонд за науку
Републике Србије

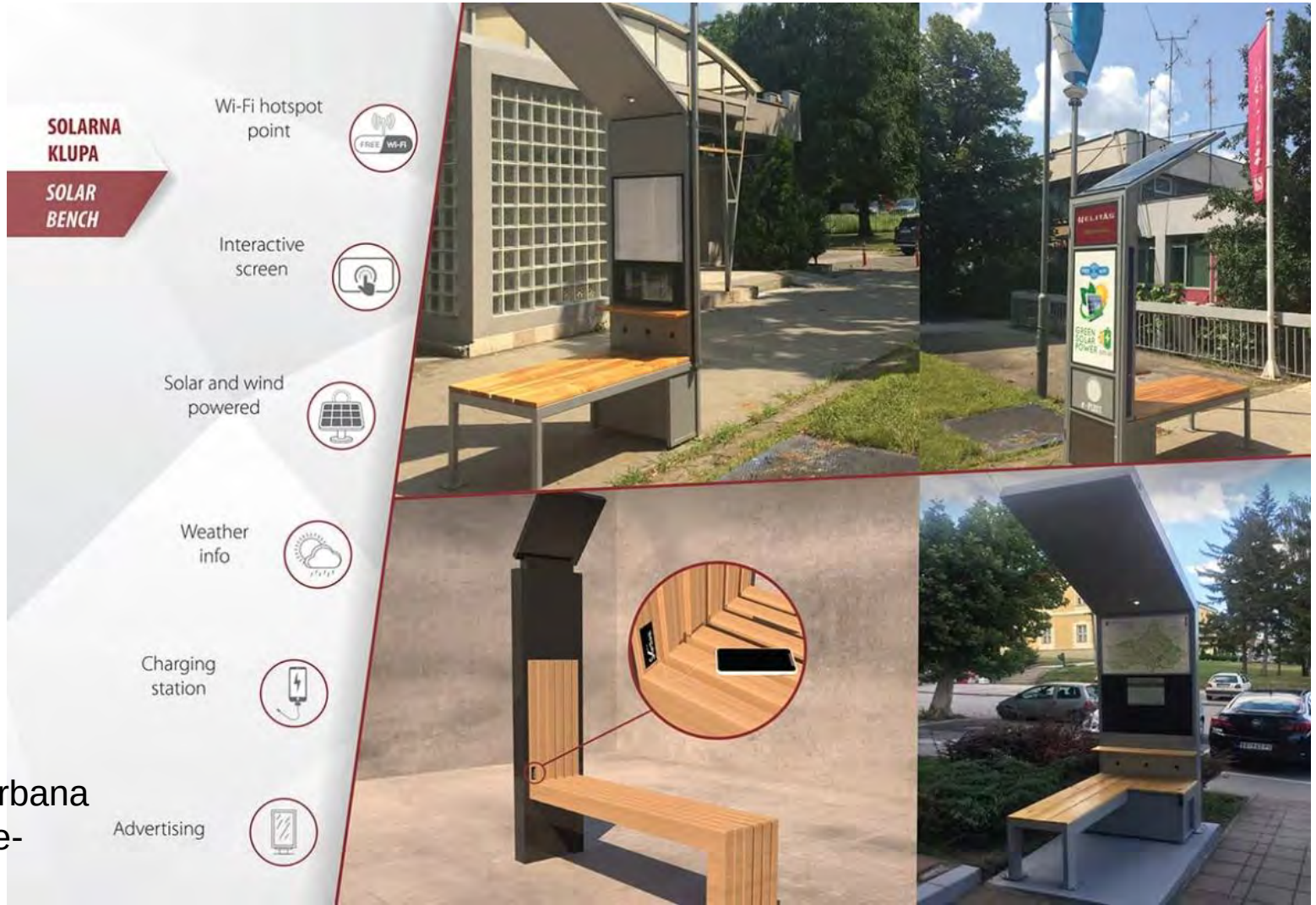
Solarna pametna klupa: Include

Nacionalni park Plitvička jezera. Pametne klupe i stolovi na solarni pogon. https://np-plitvicka-jezera.hr/poboljsanje-iskustva-posjetitelja-s-pametnim-klupama-na-solarni-pogon-u-nacionalnom-parku-plitvicka-jezera/

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Elitas



https://elitas-belgrade.com/urbana-oprema/solarne-pametne-klupe/

RePOS digitalna rešenja
u prostoru

Фонд за науку
Републике Србије

Solarna pametna klupa: Elitas

Gornji Milanovac i Požega. Za potrebe Turističke organizacije postavljene su pametne klupe sa monitorima koji omogućavaju informisanje turista o istorijskim, kulturnim i zabavnim sadržajima. https://elitas-belgrade.com/urbana-oprema/solarne-pametne-klupe/

RePOS urbano opremanje

Фонд за науку
Републике Србије

Solarna rasveta – podna svetiljka

https://rasveta-wlight.rs/product-category/spoljna-rasveta/solarna-rasveta/page/2/

RePOS urbano opremanje

Фонд за науку
Републике Србије

Solarna rasveta – podna svetiljka

https://rasveta-wlight.rs/product-category/spoljna-rasveta/solarna-rasveta/page/2/

RePOS urbano opremanje

Фонд за науку
Републике Србије

Solarna rasveta – zidna svetiljka

https://rasveta-wlight.rs/product-category/spoljna-rasveta/solarna-rasveta/page/2/
https://www.ledlight.rs/proizvod/solarna-led-zidna-lampa-swl-26-6-25w-4000k-ip54/
https://www.ledlight.rs/proizvod/solarna-led-zidna-lampa-esl-76-6-25w-4000k-ip54/

Projekat RePOS

Фонд за науку
Републике Србије

https://www.repos-project.rs/

Društvene mreže

Instagram

_repos__

https://www.instagram.com/_repos__/

Facebook

Repos Project

Projekat RePOS

Фонд за науку
Републике Србије

Hvala na pažnji

Dr Milena Dinić Branković, vanredni profesor
Katedra za urbanizam i prostorno planiranje
Univerzitet u Nišu – Građevinsko-arhitektonski fakultet
Aleksandra Medvedeva 14, 18000 Niš, Srbija
milena.dinic@gaf.ni.ac.rs

ANNEX 12

Grievance Form

Grievance Form

Grievance Reference Number (to be filled in by [name]):			
Contact Details	Name:		
	Address:		
	Tel:		
	e-mail:		
How would you prefer to be contacted? Please tick box	By post	By phone	By e-mail
Name and the identification information (from identity card).			
Details of your grievance. Please describe the problems, who it happened to, when, where and how many times, as relevant			
What is your suggested resolution for the grievance?			
How to submit this form to /[name of concessionaire]	By Post to:		
	By hand: please drop this form at		
	By e-mail: Please email your grievance, suggested resolution and preferred contact details to:		
Signature		Date	
RESPONSE:			
Date:			
Undertaken activities			

Name of PI:	
Forwarded to the Science Fund	
Date:	
The Letter No.	
Grievance Closed:	
Date:	Name and signature of the PI:

SERBIA ACCELERATING INNOVATION AND GROWTH ENTREPRENEURSHIP (SAIGE) PROJECT

Program PRISMA

PUBLIC CONSULTATION DETAILS AND MINUTES OF MEETING FOR THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

PROJECT

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future (RePOS)

Associated project:

Pilot Project for Redesign of Public Open Space
in a Multi-family Residential Neighbourhood in Niš
(RePOS Pilot Project)

Public consultation meeting
Date: August 20, 2026.
Time: 17,00-18,30
Venue: City Municipality of Medijana, Niš, Republic of Serbia

Prepared by the RePOS Project Team
Faculty of Civil Engineering and Architecture, University of Niš
Faculty of Architecture, University of Belgrade

INTRODUCTION

This document records the public disclosure and consultation process for the Draft Environmental and Social Management Plan (ESMP) prepared for the RePOS Pilot Project. The Draft ESMP was prepared within the PRISMA/SAIGE framework and the RePOS Pilot Project was classified as a moderate-risk associated project. The purpose of the ESMP is to identify potential environmental and social impacts, define mitigation and monitoring measures, and establish responsibilities through the project life cycle.

The public consultation process comprised three phases: (a) public notification through online disclosure of the invitation, direct invitations to relevant stakeholders, and physical notification in and around the Krive Livade residential neighbourhood, as well as at the Faculty of Civil Engineering and Architecture in Niš; (b) a written-comment period; and (c) an in-person public consultation meeting attended by stakeholders. The meeting also provided participants with an opportunity to raise questions and comments directly with the presenters prior to the finalisation of the ESMP.

The consultation record below follows the eight information items required for the separate Public Consultation Details and Minutes of Meeting document accompanying the ESMP.

1. Manner in which notification of the consultation was announced

The Public Consultation was announced through several complementary communication channels in order to ensure broad public accessibility and direct outreach to residents and users of the Pilot Project area. The announcement was published 21 days before the Public Consultation.

The consultation announcement was disseminated through the RePOS Project website (https://www.repos-project.rs/), the Faculty of Civil Engineering and Architecture, University of Niš website (https://gaf.ni.ac.rs/), the RePOS Facebook and Instagram pages, as well as through printed notices placed at multiple locations in the Krive Livade neighbourhood (Branka Krsmanovića and Pariske komune Streets) and in St. Sava Park, in the vicinity of the Pilot Project area.

The announcement invited the general public, public authorities, organisations, residents, representatives of homeowners' associations and other interested stakeholders to review the Draft ESMP and participate in the consultation process.

The Draft ESMP was made available on the RePOS Project website and the website of the Faculty of Civil Engineering and Architecture, University of Niš, starting from 1 August 2026 for a period of 15 days. The publicly disclosed material comprised:

- Draft Environmental and Social Management Plan (ESMP) for the RePOS Pilot Project;
- ANNEX 5 - Workshop Results: Conceptual Urban Design Proposal with Innovative Solutions (Deliverable 4.2);
- ANNEX 6 - Design Project: Co-created Vision for Public Open Space in a Multi-family Residential Area in Niš (Deliverable 4.4);
- Public Consultation Announcement containing information on the consultation procedure, dates, venue and submission of comments; and
- Grievance Form for submitting comments, complaints and suggestions related to the Draft ESMP and the RePOS Pilot Project.

Interested parties were invited to submit comments, proposals and suggestions by e-mail, using the published grievance/comment form, no later than 19 August 2026 at 16:00. No written comments,

objections, questions or suggestions were received through the designated e-mail address during the announced written consultation period.

The announcement also provided the date, time, venue and registration instructions for the in-person consultation meeting.

The selected photographs below illustrate publication through project/faculty websites and social media, and physical posting at multiple residential-building entrances and public locations in and around Krive Livade and St. Sava Park.

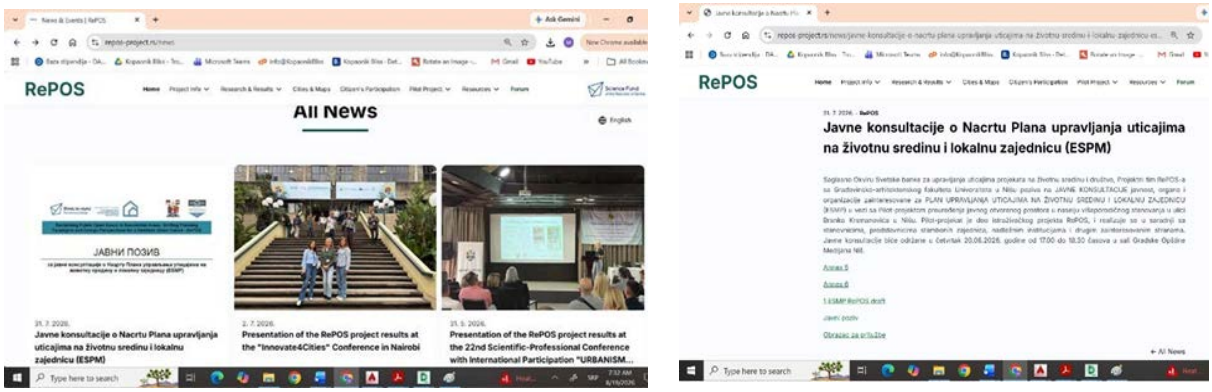


Figure1. Announcement of the Public Consultation on the ESMP Draft Document on the RePOS Project website

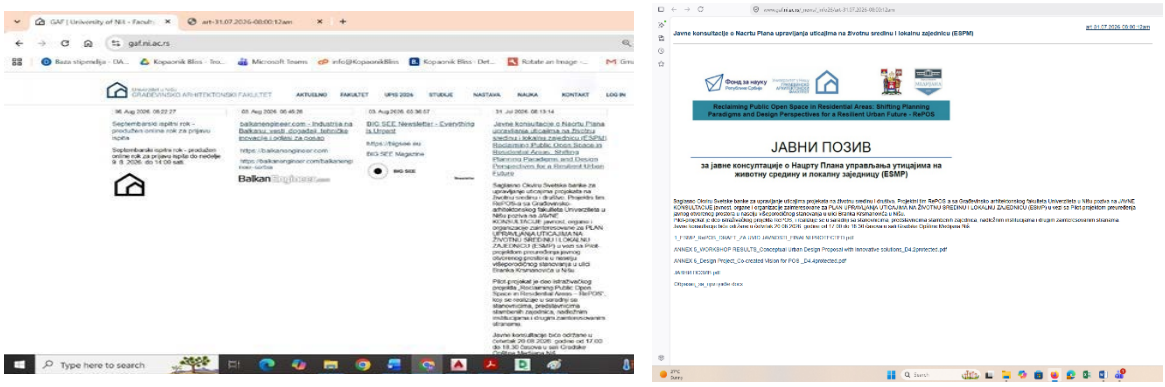


Figure 2. Announcement of the Public Consultation on the ESMP Draft Document on the Faculty of Civil Engineering and Architecture website

2am Агенда - партиципативни дог art-31.07.2026-08:00:12am

ews/_info26/ЈАВНИ ПОЗИВ.pdf

70%

Фонд за науку

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

ЈАВНИ ПОЗИВ

за јавне консултације о Нацрту Плана управљања утицајима на животну средину и локалну заједницу (ESMP)

Сагласно Оквиру Светске банке за управљање утицајима пројеката на животну средину и друштво, Пројектни тим RePOS-а са Грађевинско-архитектонског факултета Универзитета у Нишу позива на **ЈАВНЕ КОНСУПТАЦИЈЕ** јавност, органе и организације заинтересоване за **ПЛАН УПРАВЉАЊА УТИЦАЈИМА НА ЖИВОТНУ СРЕДИНУ И ЛОКАЛНУ ЗАЈЕДНИЦУ (ESMP)** у вези са **Пилот-пројектом преуређења јавног отвореног простора у насељу вишепородичног становања у улици Бранка Крсмановића у Нишу.**

Пилот-пројекат је део истраживачког пројекта „Reclaiming Public Open Space in Residential Areas – RePOS", који се реализује у сарадњи са становницима, представницима стамбених заједница, надлежним институцијама и другим заинтересованим странама.

Јавне консултације биће одржане у четвртак 20.08.2026. године од 17.00 до 18.30 часова у сали Градске Општине Медијана Ниш.

Увид у предметни документ могуће је извршити на интернет страницама пројекта RePOS: https://www.repos-project.rs/ и Грађевинско-архитектонског факултета Универзитета у Нишу: https://gaf.ni.ac.rs, почев од 1.08.2026. у трајању од 15 дана.

Сви заинтересовани могу доставити примедбе, предлоге и сугестије попуњавањем Обрасца за примедбе, који је доступан на интернет страницама пројекта RePOS и Грађевинско-архитектонског факултета Универзитета у Нишу. Попуњен образац потребно је доставити електронским путем на адресу: repos.prizma@gmail.com, са назнаком у предмету поруке: „за Јавне консултације за Нацрт Плана управљања утицајима на животну средину и локалну заједницу (ESMP)", најкасније до 19.08.2026. године до 16.00 часова.

Све благовремено примљене примедбе и предлози биће размотрени. Питања, одговори, закључци и евентуалне измене Нацрта Плана управљања животном средином и друштвеним питањима (ESMP) биће евидентирани у Извештају о спроведеним јавним консултацијама.

Пријаву за учешће на непосредним јавним консултацијама потребно је послати до 20.08.2026. године до 10.00 часова путем електронске поште на адресу: repos.prizma@gmail.com.

RePOS тим
Грађевинско-архитектонски факултет
Универзитета у Нишу

Figure 3. Announcement of the Public Consultation on the ESMP Draft Document on the Faculty of Civil Engineering and Architecture website with all documents for Public consultation

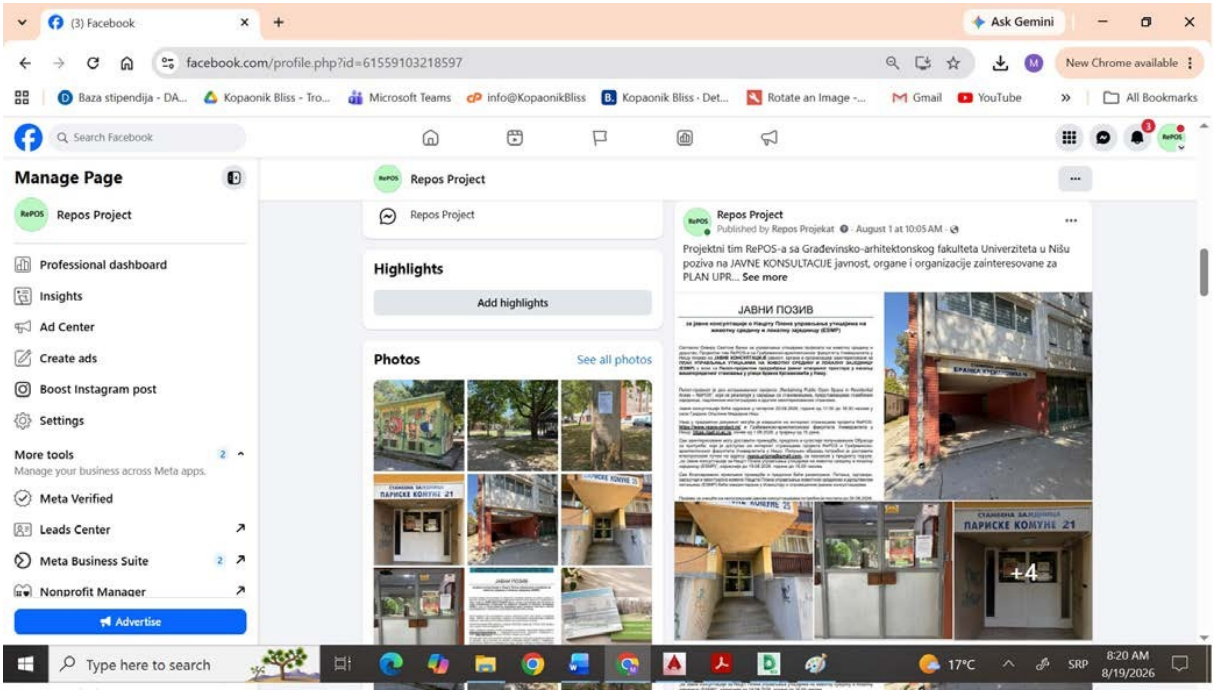


Figure 4. Announcement of the Public Consultation on the ESMP Draft Document on the RePOS Facebook page

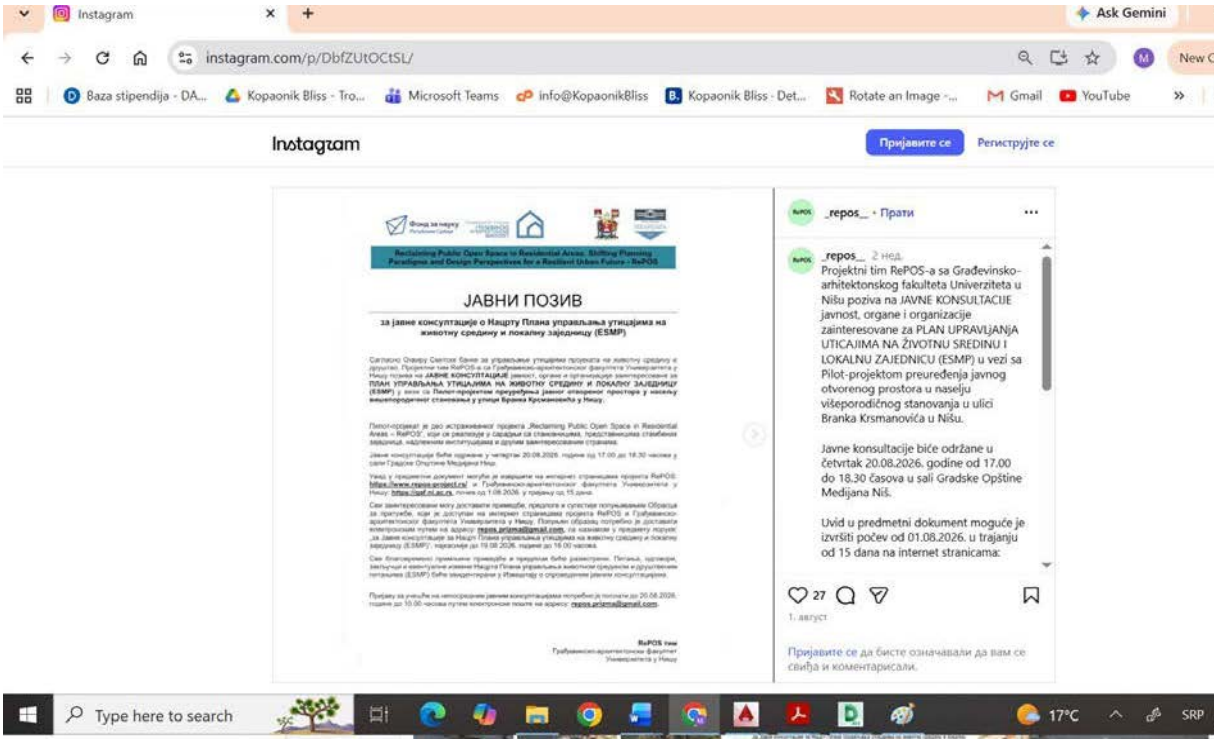


Figure 5. Announcement of the Public Consultation on the ESMP Draft Document on the RePOS Instagram Page

Figure 6. Public notice at a residential-building entrances in the Krive Livade neighbourhood

Figure 7. Public notice at a residential-building entrances in the Krive Livade neighbourhood

Figure 8. Public notice in the immediate vicinity of the pilot project site and in the nearby St. Sava Park

2. Date of the consultation

The consultation was held on August 20, 2026, starting at 5:00 PM local time.

3. Location of the consultation

Consultation was held at the Meeting Hall, City Municipality of Medijana, Niš, Republic of Serbia.

4. Stakeholders specifically invited

In addition to the general public announcement, direct e-mail invitations were sent to stakeholders considered particularly relevant to preparation, implementation and future operation and maintenance of the RePOS Pilot Project. The invited group included representatives of the City of Niš, relevant City administrations, the City Municipality of Medijana, Public Utility Company ,,Medijana'' Niš, Community Foundation Niš, homeowners' associations/building managers from the Pilot Project area, the RePOS Project Team and a potential implementation-sector representative.

A total of 12 stakeholders/institutional representatives were specifically invited. The complete list, including contact details and dates/manner of invitation is given in the Figure 9.

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

LIST OF SPECIALLY INVITED STAKEHOLDERS

Event: Public Consultation on the Draft Environmental and Social Management Plan (ESMP)
Date: 20 August 2026
Venue: Hall of the City Municipality of Medijana, Niš

Data Processing Notice

The data are collected exclusively for the purpose of documenting the public consultation on the ESMP for the RePOS pilot project and for communication related to the comments submitted. Contact details will not be disclosed in the publicly available version of the report and will be processed in accordance with personal data protection regulations.

No.	Name and Surname	Institution	Telephone	Email	Date Sent	Method of Invitation	Confirmation of Receipt / Attendance
1	[redacted]	City of Niš	[redacted]	[redacted]	31 July 2026	Email	/
2	[redacted]	City Administration for Planning and Construction	[redacted]	[redacted]	31 July 2026.	Email	/
3	[redacted]	City Administration for Property and Environmental Protection	[redacted]	[redacted]	19 August 2026	Email	/
4	[redacted]	City Municipality of Medijana	[redacted]	[redacted]	31 July 2026	Email	/
5	[redacted]	Public Utility Company "Medijana" Niš	[redacted]	[redacted]	19 August 2026	Email	/
6	[redacted]	Public Utility Company "Medijana" Niš	[redacted]	[redacted]	19 August 2026	Email	/
7	[redacted]	Public Utility Company "Medijana" Niš	[redacted]	[redacted]	19 August 2026	Email	/
8	[redacted]	Community Foundation Niš	[redacted]	[redacted]	31 July 2026	Email	/
9	[redacted]	Homeowners' association managers	[redacted]	[redacted]	31 July 2026	Email	/
10	[redacted]	Homeowners' association managers	[redacted]	[redacted]	31 July 2026	Email	/
11	[redacted]	Homeowners' association managers	[redacted]	[redacted]	31 July 2026	Email	/
12	[redacted]	RePOS Project Team	[redacted]	[redacted]	31 July 2026	Email	/

Figure 9. List of Specifically Invited Stakeholders

5. List of attendees

A total of 14 participants signed the attendance list at the public consultation meeting. Participants included representatives of relevant City administration and the City Municipality of Medijana and, local residents and building/community representatives, Community Foundation Niš, the Faculty of Civil Engineering and Architecture, University of Niš, and the RePOS Project Team.

The entire list of the attendees is provided in Figure 10. Contact details were collected solely for documenting the consultation and communication related to submitted comments. In accordance with the notice on the attendance form, contact details should not be reproduced in any publicly disclosed version of this report unless required by the competent authority. The original attendance form was completed in Serbian. In the publicly disclosed version, personal data and signatures have been redacted, while institutional affiliation and consent to event photography remain visible.

Фонд за науку Републике Србије

Универзитет у Нишу Архитектонско грађевински факултет

Медијана

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

ЛИСТА ПРИСУТНИХ

Догађај: Јавне консултације за Нацрт Плана управљања утицајима на животну средину и локалну заједницу (ESMP)
Датум: 20.08. 2026. Године
Место: Сала Градске Општине Медијана, Ниш

Обавештење о обради података
Подаци се прикупљају искључиво ради документовања јавних консултација за ESMP за RePOS пилот-пројекат и комуникације у вези са достављеним коментарима. Контакт подаци неће бити објављени у јавно доступној верзији извештаја и користиће се у складу са прописима о заштити података о личности.

Бр.	Име и презиме	Институција / својство	Имејл или телефон (опционо)	Сагласан/на са фотографисањем догађаја*	Потпис	Напомена
1.	[redacted]	ГО Медијана	[redacted]	ДА	[redacted]	
2.	[redacted]	Управник стамбене заједнице	[redacted]	ДА	[redacted]	
3.	[redacted]	СТАНАР	[redacted]	ДА	[redacted]	
4.	[redacted]	ЈП Завод за урбанизам Ниш	[redacted]	ДА	[redacted]	
5.	[redacted]	ГУ за планирање	[redacted]	ДА	[redacted]	
6.	[redacted]	Локална фондација Ниш	[redacted]	ДА	[redacted]	
7.	[redacted]	СТАНАР	[redacted]	ДА	[redacted]	

Бр.	Име и презиме	Институција / својство	Имејл или телефон (опционо)	Сагласан/на са фотографисањем догађаја*	Потпис	Напомена
8.	[redacted]	ГУ за планирање и изградњу	[redacted]	ДА	[redacted]	
9.	[redacted]	ГАФ Ниш	[redacted]	ДА	[redacted]	
10.	[redacted]	ГАФ Ниш	[redacted]	ДА	[redacted]	
11.	[redacted]	ГАФ Ниш	[redacted]	ДА	[redacted]	
12.	[redacted]	ГАФ Ниш	[redacted]	ДА	[redacted]	
13.	[redacted]	ГАФ Ниш	[redacted]	ДА	[redacted]	
14.	[redacted]	СТАНАР	[redacted]	ДА	[redacted]	

* Фотографије се користе за документовање догађаја и као прилози уз извештај. Учесник може означити „ДА“ или „НЕ“.

Figure 11. Signed attendance list for the in-person public consultation meeting held on 20 August 2026 (original form in Serbian; names, contact details and signatures redacted in the publicly disclosed version).

6. Meeting Agenda

The agenda of the Public Consultation was presented together with the ESMP Draft Document in order to provide participants with relevant information on the Pilot Project, the identified environmental and social aspects, and the propo11.

Table 1. Meeting Agenda

TIME	ACTIVITY
5:00 - 5:05 PM	Opening remarks and presentation of the agenda
5:05 - 5:20 PM	Presentation of the RePOS Pilot Project, pilot location and participatory process - Prof. Dr Milena Dinić Branković, Principal Investigator
5:20 - 5:50 PM	Presentation of the Draft Environmental and Social Management Plan (ESMP) - Prof. Dr Ivana Bogdanović Protić, ESMP co-author; RePOS WP3 work package coordinator
5:50 - 6:20 PM	Questions, comments and responses - Moderator: Dr Milica Ljubenović
6:20 - 6:30 PM	Conclusions - Prof. Dr Ivana Bogdanović Protić and Prof. Dr Milena Dinić Branković

Фонд за науку Републике Србије

Универзитет у Нишу ГРАЂЕВИНСКО АРХИТЕКТОНСКИ ФАКУЛТЕТ

МЕДИЈАНА

Reclaiming Public Open Space in Residential Areas: Shifting Planning Paradigms and Design Perspectives for a Resilient Urban Future - RePOS

АГЕНДА

Јавне консултације за Нацрт Плана управљања утицајима на животну средину и локалну заједницу (ESMP) у вези са Пилот-пројектом преуређења јавног отвореног простора у насељу вишепородичног становања у улици Бранка Крсмановића у Нишу

Сала Градска општина Медијана
Датум: 20. август 2026. године
Време: 17.00 – 18.30 ч

Трајање	Активност
17.00 - 17.05 ч	**Уводна реч и представљање дневног реда**
17.05 - 17. 20 ч	**Представљање RePOS пилот-пројекта, пилот-локације и партиципативног процеса** Проф. др Милена Динић Бранковић, руководилац пројекта Грађевинско-архитектонски факултет Универзитета у Нишу
17.20 - 17.50 ч	**Представљање Нацрта Плана управљања животном средином и друштвеним питањима (ESMP)** Проф. др Ивана Богдановић Протић, коауторка ESMP-а Грађевинско-архитектонски факултет Универзитета у Нишу
17.50 - 18.20 ч	**Питања, коментари и одговори** Модераторка: др Милица Љубеновић, доцент Грађевинско-архитектонски факултет Универзитета у Нишу
18.20 - 18.30 ч	**Закључци** Проф. др Ивана Богдановић Протић Проф. др Милена Динић Бранковић, руководилац пројекта Грађевинско-архитектонски факултет Универзитета у Нишу

Figure 11. ESMP Draft Document public consultation Agenda

The public consultation started at 5.00 PM. Dr Milica Ljubenović opened the meeting, welcomed the participants, presented the agenda and briefly explained the purpose of the public consultation and the consultation procedure.

Prof. Dr Milena Dinić Branković, Principal Investigator of the RePOS Project, presented the RePOS Project and the associated Pilot Project by means of a PowerPoint presentation. The presentation covered the process from identification and selection of the Pilot Project area through previous stakeholder participation and co-creation activities to the final design proposal. The planned small-scale interventions include one solar smart bench, three solar lamps and a rain garden of approximately 27 m².

At approximately 5:20 PM, Dr Ivana Bogdanović Protić, Associate Professor and co-author of the ESMP document, presented the Draft Environmental and Social Management Plan (ESMP) for the RePOS Pilot Project by means of a PowerPoint presentation. She first explained the purpose and structure of the ESMP, as well as its role in identifying, assessing and managing potential environmental and social impacts during the different phases of Pilot Project implementation. The presentation also outlined the baseline conditions at the site, the planned interventions, and the potential impacts that could arise during construction and subsequent use of the public open space.

The identified environmental and social risks were presented in detail, including temporary construction-related impacts such as noise, dust, waste generation and management, occupational health and safety, public safety, and protection of the existing greenery. Particular attention was given to the functioning of the rain garden as a Nature-based Solution, including its role in collecting, retaining, filtering and gradually draining stormwater, as well as its relationship with the existing stormwater drainage system. The planned installation of the solar smart bench and solar lighting was also presented, with reference to safe use, maintenance and long-term functionality.

For each identified risk, the corresponding avoidance, mitigation, control and monitoring measures were explained, together with the responsibilities of the relevant actors for their implementation. The Monitoring Plan was also presented, clarifying what would be monitored during project implementation and operation, how and when monitoring would be carried out, and which parties would be responsible. It was emphasised that the ESMP links the technical design of the Pilot Project with environmental protection, safety requirements, local community involvement, maintenance and the future management of the public open space.

The discussion on the content of the ESMP draft focused on the possible negative impacts on the environment and the social environment as well as on the positive impacts in terms of the expected overall development objectives of the project. The public hearing was attended by a total of 14 participants. The discussion took the form of a participatory discussion and all interested participants were given the opportunity to ask questions, provide comments and suggestions, and discuss the proposed measures and other relevant aspects of the ESMP Draft Document. They confirmed that meaningful communication and involvement of all interested parties was achieved during the planning phases of the project.

7. Summary Meeting Minutes (Comments, Questions and Responses by Presenters)

During the discussion, nine substantive contributions were recorded, comprising seven questions and two comments/suggestions presented below in the order in which they were raised. These focused mainly on the practical implementation of ESMP requirements, the functioning of the rain garden, the relationship between Nature-based Solutions and conventional stormwater drainage infrastructure,

ownership and management of residential public open spaces, future maintenance, and long-standing local ponding and drainage problems.

- **The question raised was:** Will the contractor follow the ESMP, and is it realistic to expect that all recommendations will be implemented under actual site conditions?

Response by presenters: The presenters explained that implementation of the works must follow the ESMP mitigation and monitoring requirements, while technical execution will necessarily respond to actual site conditions. Cooperation with local residents and their active participation was also identified as important for successful implementation and future upkeep.

Outcome / follow-up: No new environmental or social risk was identified. Compliance with the ESMP and appropriate supervision during implementation remain required.

- **The question raised was:** Has the possibility of mosquito breeding associated with the rain garden been considered?

Response by presenters: The presenters explained that the proposed rain garden is designed so that stormwater is filtered and drained through its layers rather than retained as long-term stagnant water. Therefore, conditions typically associated with mosquito breeding are not expected.

Outcome / follow-up: No ESMP amendment required.

- **The question raised was:** Ownership of open spaces between residential buildings in Niš is often complex. If this type of intervention can be implemented only at a limited number of locations, what is its wider applicability?

Response by presenters: The presenters explained that ownership and management issues have been examined within the RePOS Project through typologies, guidelines and implementation approaches. Possible solutions include co-management arrangements and categorisation of spaces according to ownership structure and responsibilities. This issue extends beyond the scope of the present ESMP and is addressed through other RePOS outputs.

Outcome / follow-up: No ESMP amendment required. The issue remains relevant to broader RePOS implementation guidance.

- **The question raised was:** If an existing stormwater drain is already present at the location, why is a rain garden needed?

Response by presenters: The presenters explained that during short-duration intense rainfall, runoff may exceed the immediate capacity of the existing drain and contribute to local ponding and flash flooding. The rain garden receives part of the runoff, slows and filters it, and supports gradual infiltration and drainage, thereby complementing the existing drainage system.

Outcome / follow-up: The final ESMP should clearly state that the rain garden complements, rather than replaces, conventional drainage.

- **The question raised was:** The City of Niš already has stormwater drains and drainage infrastructure. Why should these not be sufficient, and does the City have adequate communal infrastructure for such events?

Response by presenters: The presenters clarified that the rain garden represents a small-scale supplementary intervention. It does not substitute for municipal drainage infrastructure, but locally receives, slows and filters runoff while providing additional environmental benefits.

Outcome / follow-up: No change to mitigation measures is required; clarification of the complementary role of the rain garden is recommended.

- **The question raised was:** Does construction of a rain garden imply that the existing municipal drainage infrastructure is inadequate?

Response by presenters: The presenters clarified that it does not. The rain garden is a complementary micro-scale Nature-based Solution intended to function together with conventional stormwater infrastructure. Similar approaches are increasingly used internationally to improve urban resilience to intense rainfall events.

Outcome / follow-up: No ESMP amendment required.

- **The question raised was:** Is the intention to construct rain gardens instead of investing in conventional stormwater infrastructure?

Response by presenters: The presenters explained that rain gardens are not intended to replace conventional drainage infrastructure. They represent one of several complementary approaches that can reduce peak runoff, filter stormwater, and provide additional ecological and landscape benefits.

Outcome / follow-up: No ESMP amendment required.

- **The comment/suggestion was:** A participant suggested that a broader network of small-scale rain gardens could be beneficial, provided that residents or households are sufficiently motivated to participate.

Response by presenters: The presenters agreed that decentralised small-scale interventions could provide cumulative benefits. However, wider replication would require adequate financial resources, organisational support, and active participation and commitment of residents.

Outcome / follow-up: The suggestion is relevant for the potential future replication and upscaling of similar Nature-based Solutions within residential areas. No amendment to the ESMP is required.

- **The comment was:** A resident from the Pilot Project area expressed support for the proposed intervention and reported that the location has experienced drainage problems and large puddles after rainfall for decades. The participant also noted that the existing stormwater drain may become blocked by leaves.

Response by presenters: The RePOS team thanked the resident and noted that this local experience is consistent with the stormwater-management problem identified in the baseline assessment and further supports the rationale for testing the rain-garden intervention at the selected micro-location.

Outcome / follow-up: The comment provides additional local confirmation of the baseline conditions. No new environmental or social risk was identified, and no amendment to the ESMP is required.

Overall outcome of the discussion

No participant objected to implementation of the RePOS Pilot Project. No new significant environmental or social risk or impact was identified during the consultation that had not already been considered in the Draft ESMP. The discussion was consistent with the main issues addressed in the Draft ESMP, particularly stormwater management, maintenance, institutional responsibilities and the need for cooperation among residents, local authorities and other stakeholders.

The discussion also provided additional local confirmation of long-standing stormwater ponding at the Pilot Project site and highlighted the need to communicate clearly that the proposed rain garden is a complementary Nature-based Solution, not a replacement for municipal stormwater drainage infrastructure.

No additional written comments or questions were received after the meeting through the designated consultation e-mail address.

Following the discussion and summary of the key conclusions, the public consultation was officially closed at 6.30 PM.

8. Decisions reached and actions agreed upon, including schedules, deadlines and responsibilities

Based on the public disclosure process and the in-person public consultation, the following conclusions and actions were agreed:

- The public consultation process for the Draft ESMP was completed and the questions and comments raised at the meeting were recorded and considered.
- No written comments were received during the announced written-comment period.
- No new significant environmental or social risks or impacts were identified that would require substantive changes to the Mitigation Plan or Monitoring Plan.
- The Final ESMP should clarify, where appropriate, that the rain garden is a complementary micro-scale Nature-based Solution that supports, but does not replace, the municipal stormwater drainage system.
- The implementation, mitigation, monitoring, safety, maintenance and decommissioning requirements already defined in the ESMP remain applicable.
- Following installation, commissioning and technical acceptance of the Pilot Project urban equipment, the solar smart bench and the three solar lighting fixtures will be formally transferred into the ownership of Public Utility Company “Medijana” Niš. The agreed handover does not replace or reduce any environmental, safety, maintenance, monitoring or end-of-life obligations specified in the Final ESMP.
- The Final ESMP should therefore clarify the post-handover institutional responsibility for operation and maintenance of the solar smart bench and solar lighting so that it reflects the agreed ownership transfer to Public Utility Company “Medijana” Niš.
- The rain garden will remain subject to the maintenance and monitoring arrangements established in the Final ESMP; the equipment-ownership decision above concerns the solar smart bench and solar lighting.

- Communication and cooperation with the City Municipality of Medijana, the City of Niš, Public Utility Company "Medijana" Niš, residents and other relevant stakeholders will continue during implementation and operation of the Pilot Project.

Agreed actions, responsibilities and schedule are given in the Table 2.

Table 2. Agreed actions, responsibilities and schedule

ACTION	**RESPONSIBLE PARTY**	**SCHEDULE / DEADLINE**
Finalise the Public Consultation Report and include the consultation outcome in the final ESMP documentation.	RePOS Project Team / ESMP authors	Immediately after completion of the consultation process and before final ESMP submission.
Add/confirm clarification that the rain garden complements existing stormwater drainage infrastructure.	RePOS Project Team / ESMP authors	Before finalisation of the ESMP.
Clarify post-handover operation and maintenance responsibility for the solar smart bench and solar lighting in line with the agreed transfer to the Public Utility Company "Medijana" Niš.	RePOS Project Team / ESMP authors, in coordination with PUC Mediana Niš	Before finalisation of the ESMP and before handover.
Formally transfer ownership of the solar smart bench and three solar lighting fixtures to the City of Niš.	RePOS/GAFUN and the City of Niš, with relevant City/municipal actors as applicable	After installation, commissioning and technical acceptance; before closure of the Pilot Project implementation process.
Communicate relevant ESMP mitigation, monitoring, safety, maintenance and decommissioning requirements to the contractor and post-handover responsible entity.	RePOS/GAFUN; contractor; the City of Niš, as applicable	Before commencement of works and again at handover/commissioning.
Implement construction-phase mitigation and monitoring measures.	Contractor under RePOS/GAFUN supervision	Throughout construction and installation.
Implement operation/maintenance monitoring for the rain garden and urban equipment in accordance with the Final ESMP.	Responsible entities specified in the Final ESMP	During operation; frequency as specified in the Monitoring Plan.
Continue stakeholder communication and grievance access during implementation.	RePOS Project Team / relevant local actors	Throughout Pilot Project implementation.

The public consultation process was considered successfully completed. The Final ESMP will incorporate the consultation record and the agreed institutional clarification described above.

Selected photographs (Figures 12 – 22) from the public consultation meeting held on 20 August 2026 in the Meeting Hall of the City Municipality of Medijana, Niš are given on pages 16 to 21.

Figure 12. Presentation of the RePOS Pilot Project and consultation setting

Figure 13. Presentation of the RePOS Pilot Project and consultation setting

Figure 14. Presentation of the RePOS Pilot Project and consultation setting

Figure 15. Participants during the public consultation meeting

Figure 16. Participants during the public consultation meeting

Figure 17. Participants during the public consultation meeting

Figure 18. Discussion among participants and RePOS team members

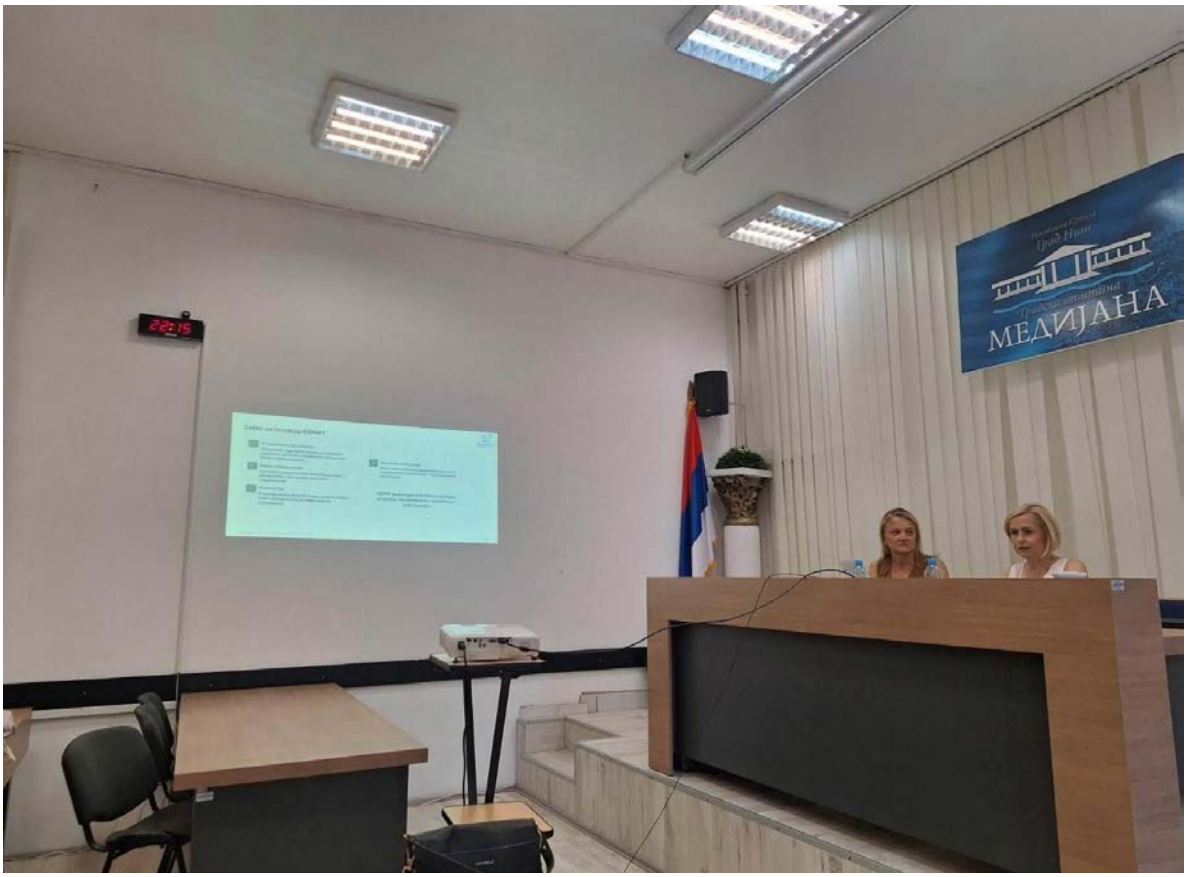


Figure 19. Discussion among participants and RePOS team members

Figure 20. Post-presentation stakeholder discussion

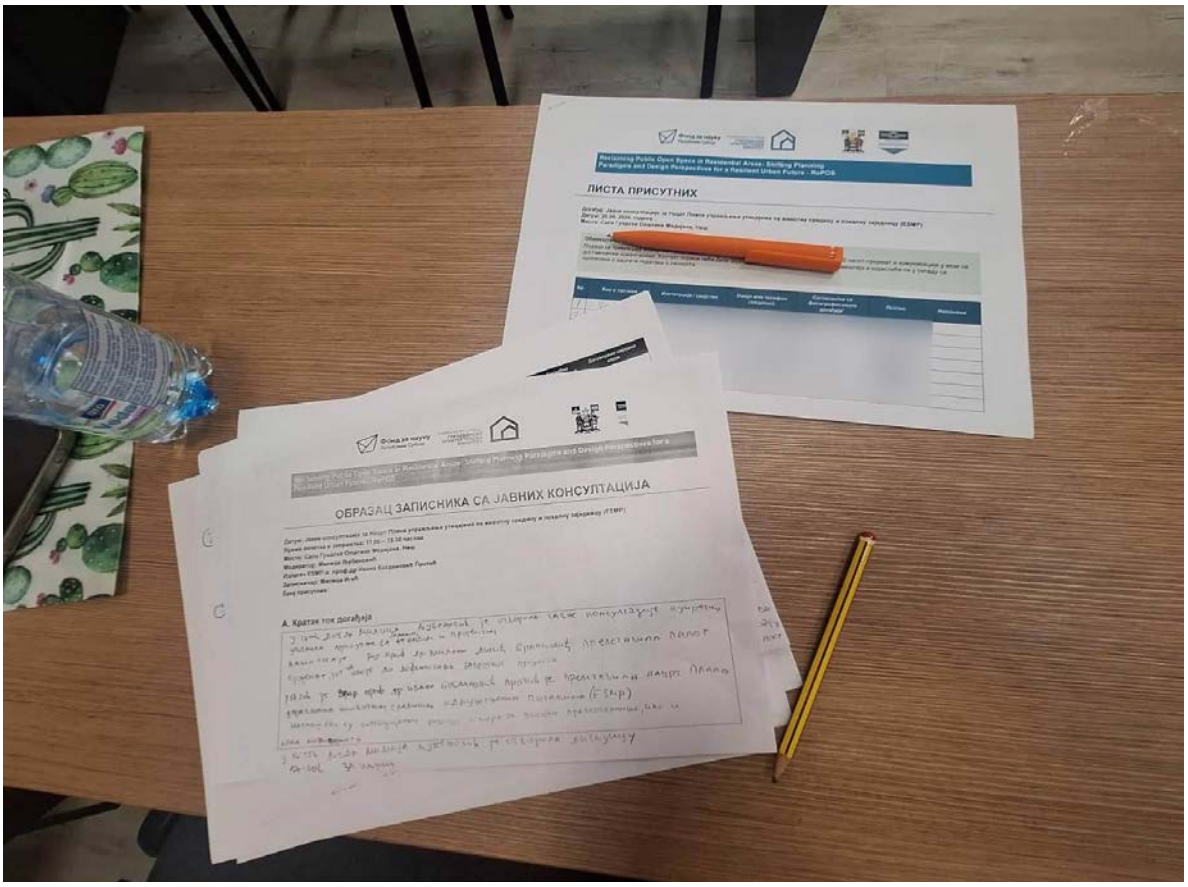


Figure 21. Presentation of environmental and social impacts and mitigation measures

Figure 22. RePOS project team members at the closing of the public consultation meeting

Public consultation report reviewed by Environmental and Social Expert:

Date:

Name:

Title: ESE/PIU SAIGE

Signature: