

PRIRODOM-INSPIRISANA REŠENJA U BEOGRADSKIM OSNOVNIM ŠKOLAMA

NATURE-BASED SOLUTIONS IN
BELGRADE PRIMARY SCHOOLS





PRIRODOM-INSPIRISANA REŠENJA U BEOGRADSKIM OSNOVNIM ŠKOLAMA:

Pet studija slučaja

**Nature-Based Solutions
in Belgrade Elementary Schools
Five Case Studies**

IMPRESUM

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UVOD

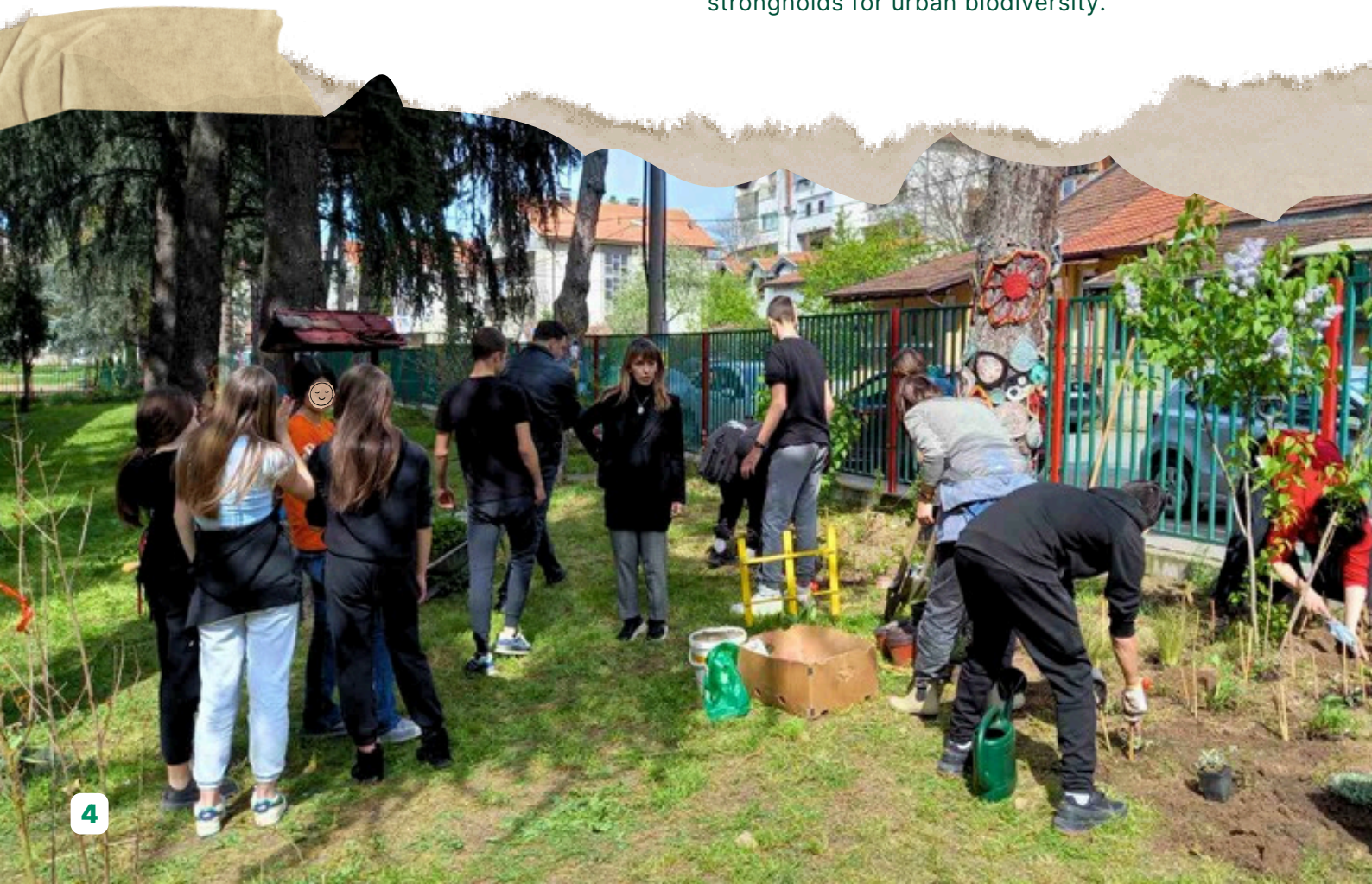
Školska dvorišta su važan deo urbanih ekosistema i zdravih, održivih gradova otpornih na klimatske promene. Ona su konstanta u dečijem odrastanju, sazrevanju i spoznavanju sveta - verovatno su jedini otvoreni prostori u kojima im je svakodnevni boravak zagarantovan. Ako su dobro osmišljena, ona mogu biti obrazovne žive laboratorije u kojima se formiraju nove generacije, utvrđujući svoje prve životne lekcije i vrednosti. Razmislimo: zar se ne sećamo svi do detalja svog „školskog“, ma koliko godina da je prošlo od tada?

Sa mnoštvom zelenih i multifunkcionalnih površina, mnoga školska dvorišta Jugoslavije bila su arhitektonski inovativna i progresivna, osmišljena da zadovolje potrebe učenika za rekreacijom, aktivnošću i igrom, omoguće nastavu na otvorenom, a raznovrsno zelenilo je obilato korišćeno da bi pružilo senku, zaklon, zaštitu od buke, zagađenja i vetra. A planirano ili ne, u takvim zelenim dvorištima zaklon i stanište pronašli su i pripadnici lokalne faune, pa ona predstavljaju važna uporišta urbanog biodiverziteta.

INTRODUCTION

Schoolyards are a vital part of urban ecosystems and of healthy, sustainable, climate-resilient cities. They are a constant presence in children's lives, likely the only open spaces they are guaranteed to experience daily. When well-designed, schoolyards can serve as educational living laboratories (NbS Living Labs), where new generations take shape, forming their first life lessons and values. Think about it: don't we all remember each detail of our own schoolyard, no matter how many years have passed?

With their abundance of green and multifunctional spaces, many schoolyards across former Yugoslavia were architecturally innovative and forward-thinking, designed to meet students' needs for recreation, action, and play, to enable outdoor learning, and to provide a variety of greenery that offered shade, shelter, and protection from noise, pollution, and wind. Whether intentionally or not, these green schoolyards also provided home and habitat for local wildlife, making them important strongholds for urban biodiversity.



Danas, uprkos svim svojim vrlinama i važnim funkcijama, školska dvorišta su uglavnom zapuštena i suočavaju se sa brojnim problemima u vezi održavanja i unapređenja; često nema ni jasne vizije njihovog budućeg razvoja.

Tokom 2024. i 2025. godine, **CEUS** je, kao strukovno udruženje urbanista, arhitekata i analičara životne sredine koje radi na neformalnom obrazovanju dece i odraslih u oblasti zaštite životne sredine u kontekstu urbanističkog planiranja, posebnu pažnju posvetio ovim prostorima. Kroz aktivnosti u okviru **Horizont Evropa projekta NBS EduWORLD**, naše iskustvo je nesumnjivo pokazalo da je namenska **primena prirodom-inspirisanih rešenja** efektivan način da se odgovori na kompleksne, multi-disciplinarne izazove: da svoje gradove učinimo zelenijim, otpornijim, komfornijim, a da pritom ostanu ili postanu oaze biološke raznovrsnosti. Ova rešenja posebno su korisna u školskom kontekstu, kada njihova edukativna komponenta multiplicira ostale višestruke koristi koje donose.

**Iako glasno zujim, dolazim u miru!
Najsladji nektar u gradu pronalazim
tamo gde ima dečije graje i smeha,
gde male ruke vredno sade i neguju
medonosno bilje... Da, u školskim
dvorištima!**

Despite my loud buzz, I come in peace!
I find the sweetest nectar in the city
where children laugh and giggle,
where tiny hands plant and care for
honey plants...
Yes, in schoolyards!

Today, despite their many virtues and vital functions, schoolyards are often neglected and face numerous challenges related to maintenance and improvement, frequently without a clear vision for their future development.

During 2024 and 2025, **CEUS**, as a professional association of urban planners, architects, and environmental analysts working on informal environmental education of both children and adults in the context of urban planning, dedicated special attention to these spaces. Through activities carried out within the **Horizon Europe NBS EduWORLD project**, our experience has clearly shown that joint **implementation of co-created nature-based solutions** is an effective way to address complex, multidisciplinary challenges: to make our cities greener, more resilient, and more comfortable, while also preserving or creating great examples of biological diversity. These solutions are particularly beneficial in the school context, when their educational component multiplies the other benefits they provide.

Pčela drvarica
(*Xylocopa violacea*)



Šta su prirodom-inspirisana rešenja?

What are Nature-based Solutions?

Prirodom-inspirisana rešenja (eng. *Nature-based Solutions - NbS*, a u lokalnim dokumentima poznata i kao „rešenja zasnovana na prirodi - RZP“), po poslednjoj, međunarodno usaglašenoj definiciji 2022. godine predstavljaju „akcije usmerene ka zaštiti, očuvanju, obnavljanju i održivom korišćenju i upravljanju prirodnim i izmenjenim kopnenim, slatkovodnim, obalnim i morskim ekosistemima, kojima se efektivno i prilagodljivo odgovara na društvene, ekonomske i ekološke izazove, dok se istovremeno obezbeđuju ljudsko blagostanje, usluge ekosistema, otpornost i koristi za biodiverzitet.“ [1]

Ono što je izuzetno u ovoj definiciji je što je briga i upravljanje prirodom i njenim resursima stavljena u kontekst simultane koristi i za biodiverzitet i za ljude [2], jer jedno ne može i ne sme isključiti drugo.

Kroz projekat NBS EduWORLD, primena prirodom-inspirisanih rešenja testira se u našim školama - i to ne samo kao ideja, već i kroz praktične aktivnosti i primenu. **Kako se kroz školski sistem oblikuju nove generacije, verujemo da je veoma važno integrisanje prirodom-inspirisanih rešenja u škole**, kako u fizičkom smislu, tako i u nastavnim planovima i programima. Tako poboljšavamo kvalitet nastave i života školskih zajednica, ali i postavljamo zdrave temelje za održivu budućnost.

According to the last, internationally agreed definition in 2022, Nature-based Solutions (NbS) are “actions aimed at protecting, conserving, restoring, and sustainably managing natural or modified terrestrial, freshwater, coastal, and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits”. [1]

What is exceptional about this definition is that care and the management of nature and its resources is framed in terms of delivering simultaneous benefits for both biodiversity and people [2], because one cannot exclude the other.

Through the NBS EduWORLD project, the application of nature-based solutions is tested in our schools - not only as a theoretical concept, but through practical activities and real-world application as well. **As new generations are shaped within the education system, we believe it is critically important to integrate nature-based solutions into schools**, both in physical spaces and in curricula and teaching programs. In doing so, we improve the quality of education and the daily lives of school communities, while also laying a healthy foundation for a sustainable future.



Uprkos određenim administrativnim, logističkim i finansijskim barijerama, smatramo da u našim školama postoji dobar potencijal za primenu prirodom-inspirisanih rešenja i njihovo uključivanje i obrazovni proces. Pored najčešće odličnog nastavnog kadra, iz perspektive arhitekture i dizajna školskih dvorišta, mnoge škole u Srbiji i bivšoj Jugoslaviji imaju odličnu osnovu i već postojeće zdrave mini-ekosisteme, koje samo treba negovati, blago modifikovati i obogatiti da bismo ojačali biološku zajednicu i omogućili bolje korišćenje zelenih površina. Naravno, arhitektura značajno varira zavisno od sredine i epohe u kojoj je škola izgrađena - u nekim dvorištima ipak dominiraju tvrde, nepropusne i jednolične površine, gde je neophodno planiranje ozelenjavanja „ispočetka“. Dakle, pri unapređenju naših školskih dvorišta primenom prirodom-inspirisanih rešenja, može se (i mora) razmišljati na oba načina.

Despite certain administrative, logistical, and financial barriers, we believe that our schools have strong potential to apply and integrate nature-based solutions into the educational process. In addition to generally excellent teaching staff, many schools in Serbia and the former Yugoslavia have, from the perspective of architecture and schoolyard design, a solid foundation and already existing healthy mini-ecosystems that simply need to be nurtured, gently modified, and enriched in order to strengthen the biological community and enable better use of green spaces. Of course, the architecture varies significantly depending on the context and the period in which the school was built — in some schoolyards, hard, impermeable, and uniform surfaces still dominate, where greening must be planned ‘from scratch.’ Therefore, when improving our schoolyards through nature-based solutions, it is possible (and necessary) to think in both ways.



O projektu NBS EduWORLD

About the NBS EduWORLD Project

NBS EduWORLD je projekat programa Horizont Evropa koji povezuje primenu prirodom-inspirisanih rešenja i obrazovanje. Rezultat je jedinstveni konzorcijum koji okuplja istraživače, prosvetne radnike, praktičare prirodom-inspirisanih rešenja, pa čak i članove sportske zajednice, sa zajedničkim ciljem kreiranja angažovanih i lokalno relevantnih obrazovnih materijala koji ističu ekološke i društvene vrednosti prirodom-inspirisanih rešenja.

Opšti cilj projekta NBS EduWORLD jeste razvijanje društva osvešćenog za primenu prirodom-inspirisanih rešenja, kako bi se podržala tranzicija ka održivijoj budućnosti. Projekat je izgradio zajednicu koja podstiče sinergiju između stručnjaka i obrazovnih institucija i obezbeđuje slobodan i jednostavan pristup znanju i resursima o prirodom-inspirisanim rešenjima. [3]

Kako bi lokalne, neformalne obrazovne inicijative dobile svoj zasluženi značaj u obrazovnim krugovima, projekat podržava i podstiče lokalne pilot-projekte, takozvane NBS EduSisteme (eng. *NBS EduSystems*). Kroz njih, projekat prepoznaje, istražuje, testira i replicira uslove i faktore uspeha vezane za modele upravljanja, strateške odluke i procese ko-kreacije, koji omogućavaju razvoj lokalnih obrazovnih inicijativa.

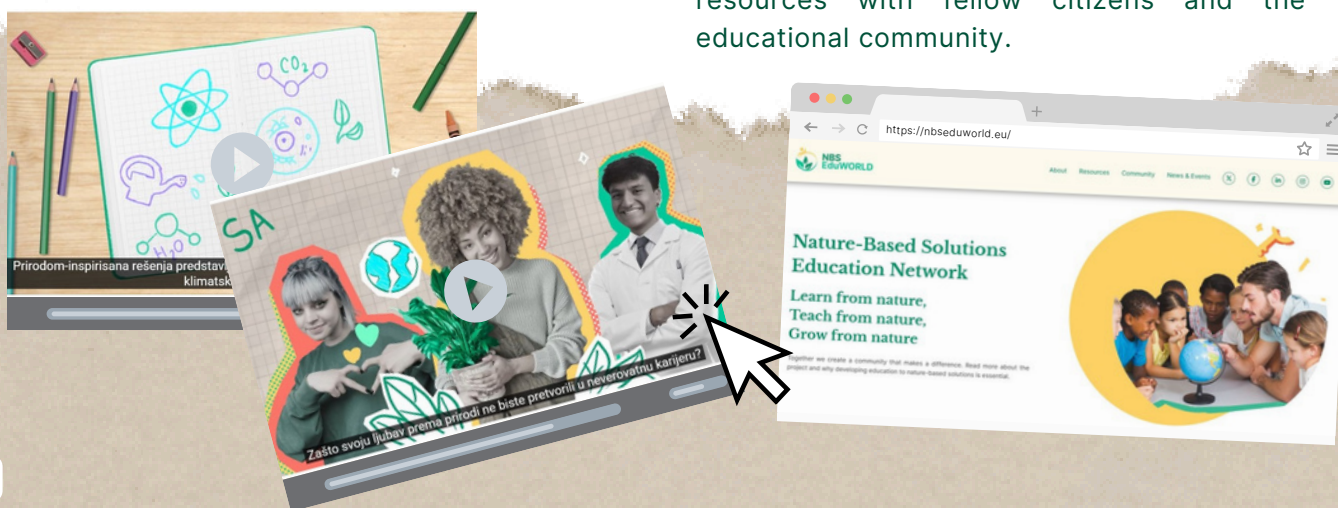
Upravo kroz NBS EduSistem, CEUS je dobio priliku da testira i sa sugrađanima i obrazovnom zajednicom podeli mnoge obrazovne aktivnosti i resurse.

NBS EduWORLD is a Horizon Europe program project that brings together the fields of nature-based solutions and education. The result is a unique consortium that unites researchers, educators, nature-based solution practitioners, and even members of the sports community, all working toward a common goal: creating engaging, locally relevant educational materials that highlight the ecological and social values of nature-based solutions.

The overarching goal of the NBS EduWORLD project is to foster a society literate in nature-based solutions, in order to support a transition toward a more sustainable future. The project has formed a community that promotes synergy between experts and educational institutions, ensuring free and easy access to knowledge and resources about nature-based solutions. [3]

To ensure that local, informal educational initiatives receive the recognition they deserve within educational circles, the project supports and studies local pilot projects, referred to as *NBS EduSystems*. Through these, the project identifies, explores, tests, and replicates the conditions and success factors related to governance structures, policies, and co-creation processes that enable the growth of local educational initiatives, including activities and learning resources.

It was precisely through the NBS EduSystem that CEUS was given the opportunity to test and share many educational activities and resources with fellow citizens and the educational community.



AKTIVNOSTI U BEOGRADU U OKVIRU PROJEKTA NBS EDUWORLD

Actions in Belgrade within the NBS EduWORLD Project

Iako je značajan deo projektnih aktivnosti bio usmeren na prenošenje znanja i alata, praktične aktivnosti izvođenja u realnom prostoru su te koje imaju ključnu edukativnu funkciju, a uz to i konkretan efekat na negu ekosistema koje nastanjujemo. Pored toga što je pružena prilika da određene dobre prakse testiramo u lokalnim uslovima, ostavljena je sloboda da se oprobamo i u sprovođenju svojih sopstvenih, malih ali jedinstvenih inicijativa.

U okviru projekta, od proleća 2024. godine do leta 2025. godine, CEUS je realizovao preko trideset edukativnih događaja i aktivnosti. Njihov grafički prikaz u vremenu može se pogledati na kraju ove publikacije.

Although a significant part of the project focused on access to and the transfer of knowledge and tools, it is the practical activities that play a key educational role and have a tangible impact on the care of the ecosystems we inhabit. In addition to providing an opportunity to test certain good practices in local conditions, there was also the freedom to try our hands at implementing our small but unique initiatives.

As part of the project, from spring 2024 until summer 2025, CEUS implemented more than thirty educational events and activities. The timeline of all the activities can be found at the end of this booklet.

Mislim da je ključno da zajedno sa decom osmislimo rešenja, i da ih onda testiramo u praksi... da stvarno izvedemo u školskom dvorištu ono što osmislimo, i da zajedno "budemo blatnjavi"...

I think it's essential that we co-create NbS with children, and then test them in practice... to really implement in the schoolyard what we co-designed, and to 'get muddy' together...



Konkurs za zelenije osnovne škole

Open Call for Greener Primary Schools

U mnogim školama širom Beograda vidljiva je potreba za obnovom i poboljšanjem zelene infrastrukture. Običnim jezikom rečeno - čak i kada imaju dovoljno zelenih površina, beogradske škole vaze za ozelenjavanjem. Nove školske bašte su već postale stvarnost u susednim državama, pa ne vidimo razlog da se ova lepa tradicija obnovi i kod nas - veliki broj škola svakako ima namenjen prostor za njih. Međutim, bašte nisu jedini mogući oblik zelenih intervencija. Postoji čitav spektar prirodom-inspirisanih rešenja idealnih za primenu u školskom okruženju.

Razmatrajući mogućnosti primene znanja i resursa iz projekta NBS EduWORLD, koji je pre svega fokusiran na kreiranje novih obrazovnih alata, edukaciju učenika i nastavnika i razvoj novih ideja u procesu ko-kreacije, CEUS tim je zaključio da je najbolje rešenje da se kroz sinergetsko delovanje sa drugim projektima napravi konkurs za škole sa vidljivim krajnjim rezultatom. To je podrazumevalo da, pored transfera znanja, (kroz predavanja, radionice, edukativne igre, šetnje, razvoj dodatnih nastavnih alata i druge obrazovne aktivnosti) dođe i do realizacije konkretnih prirodom-inspirisanih rešenja u određenom broju škola.

U 2024. i 2025. godini, pod okriljem dva projekta (*NBS EduWORLD* i *Energy efficiency in schools - HBS*) i uz dodatno finansiranje kroz saradnju sa privatnim sektorom, CEUS je sproveo „**Konkurs za zelenije osnovne škole**” - otvoreni poziv za male intervencije ozelenjavanja školskih dvorišta osnovnih škola na teritoriji grada Beograda. Pored samog nagrađivanja odabranih škola ozelenjavanjem dela školskih dvorišta i materijalom za održavanje bašte, intezivno se radilo i na uključivanju učenika i učenica u procese planiranja i nege školskog zelenila. Takođe, pruža se kontinualna podrška prosvetnim radnicima da na inovativne načine uvedu ove teme u nastavu i vremenom u svom školskom okruženju testiraju koncept žive laboratorije prirodom-inspirisanih rešenja (eng. *NbS Living Lab*).

In many schools across the City of Belgrade, there is a clear need to renew and improve green infrastructure. Put simply, even when they have sufficient green space, Belgrade's schools are craving green interventions. New school gardens have already become a reality in neighboring countries, so we see no reason why this tradition should not be revived here as well, especially since many schools have designated areas for formal gardens. However, gardens are not the only possible form of greening. There is a wide range of nature-based solutions ideally suited for application in the school environment.

Considering the possibilities for implementing the knowledge and resources from the NBS EduWORLD project, which is primarily focused on creating educational tools, educating students and teachers, and developing new ideas through a co-creation process, CEUS concluded that the best solution would be to create an Open Call for Schools through synergistic cooperation with other projects, with a tangible final outcome. This meant that, in addition to knowledge transfer (through lectures, workshops, educational games, walks, novel teaching tools, and other activities), nature-based solutions would also be implemented in several schools.

In 2024 and 2025, under the umbrella of two projects (*NBS EduWORLD* and *Energy Efficiency in Schools - HBS*) and with additional funding from collaborations with private-sector entities, CEUS created the “**Open Call for Greener Primary Schools**,” a call for small-scale greening interventions in the schoolyards of primary schools in the territory of the City of Belgrade. In addition to awarding selected schools the greening of parts of their schoolyards and providing materials for garden maintenance, significant effort was invested in involving students in planning and caring for school greenery. Furthermore, continuous support is provided to educators to introduce these topics into teaching in innovative ways and, over time, to implement the NbS Living Labs concept within their school environment.

Info sesija / Info Session



Po objavljivanju Konkursa za zelenije osnovne škole, želele smo da direktno čujemo glas školskih kolektiva i njihova razmišljanja i iskustva u vezi ozelenjavanja škola. Bilo je važno da se otvori prostor za **diskusiju o prirodom-inspirisanim rešenjima u školama**, s obzirom da je koncept i dalje prilično nepoznat kako široj javnosti, tako i prosvetnim radnicima.

U prostoru Kanvas u Beogradu okupili smo zainteresovane prosvetare. Poziv za info-sesiju distribuiran je preko društvenih mreža i u direktnoj komunikaciji sa nekim školama. Na sesiji su predstavljene osnove prirodom-inspirisanih rešenja i primeri iz evropskih škola i gradova, kao i kompatibilni edukativni alati iz **NBS Edu Toolkit-a**. Ipak, najdragocenija je bila prilika da prosvetni radnici međusobno razmene iskustva na ovu temu.

Posebno važna bila je i prezentacija **Vesele Mačkić**, učiteljice iz Novog Sada koja se godinama bavi školskim baštovanstvom i drugim prirodnjačkim aktivnostima u okviru nastave. Prikazani primeri mogućih intervencija i aktivnosti u školama bili su posebno relevantni jer su nastali i izvedeni u lokalnoj sredini; nadamo se da su preneli utisak o stvarnoj izvodljivosti prirodom-inspirisanih rešenja u našim školama. Takođe u okviru projekta, u julu 2024. godine Vesela Mačkić je uz podršku CEUS-a pohađala **Letnju školu NbS u Atini**.

Following the announcement of the Open Call for Greener Primary Schools, we wanted to hear from the school communities - their thoughts and experiences in school greening. It was important to open up for **discussion on nature-based solutions in schools**, given that the concept is still unfamiliar to both the wider public and education professionals.

In the Kanvas hub in Belgrade, we gathered teachers interested in participating in the project. The invitation for this Info Session was distributed via social media and through direct communication. The basics of NbS were presented, along with examples of implementation in EU schools and cities, along with educational tools from the **NBS Edu Toolkit**. The opportunity for educators to exchange their experiences on this topic was particularly valuable.

An important segment was the presentation by **Vesela Mačkić**, a primary school teacher from Novi Sad engaged in school gardening and other nature education activities within the curriculum. Her examples of interventions and school activities were highly relevant, as they were developed in the local context; they conveyed a sense of the realistic feasibility of NbS in Serbian schools. Moreover, in July 2024, Vesela Mačkić, supported by CEUS, attended the **NbS Summer School in Athens**, also within the framework of the NbS EduWORLD project.

Odabir škola / Selection of the Schools

Na Konkursu za zelenije osnovne škole proces odabira odvijao se u dve faze, uz jasno definisane kriterijume i transparentan tok. U prvoj fazi, stručni tim CEUS-a pregledao je 15 pristiglih prijava i odabrano je pet škola za radionice ko-kreacije. Kriterijumi su obuhvatali karakteristike predloženog prostora i rešenja, prethodno iskustvo škole u zelenim inicijativama, kao i ideje o integrisanju prirodom-inspirisanih rešenja u obrazovni proces. Poseban akcenat stavljen je na spremnost škola da uključe učenike, nastavnike i roditelje u zajednički rad, čime bi se podsticala participacija i razvoj svesti o značaju održivih praksi.

U drugoj fazi, nakon održanih radionica i razrade projekata sa predmerima i predračunima, izabrane su tri škole u kojima su sprovedene konkretne intervencije ozelenjavanja. Odluka je doneta na osnovu sprovodivosti inicijative u odnosu na raspoloživo vreme i budžet, motivacije učenika i nastavnog osoblja da se uključe u proces, kao i potencijalnog uticaja rešenja na širu zajednicu. Time je obezbeđeno da projekti ne budu samo estetski ili simbolični, već i održivi, edukativni i društveno relevantni.

Konačni rezultati pokazali su raznovrsnost ideja i distribucija širom gradskog područja. Od plastenika i učionica na otvorenom, preko mini botaničke bašte i hotela za insekte, do unutrašnje bašte u školskom holu – svaka odabrana škola ponudila je jedinstveno rešenje koje povezuje obrazovanje, ekologiju i zajednicu. Na ovaj način Konkurs je ostvario cilj: podsticanje kreativnih, prirodom-inspirisanih rešenja koja doprinose zdravijem okruženju i jačanju ekološke svesti kod najmlađih.

Konkurs se može videti na internet strani: <https://bellab.rs/konkurs-za-zelenije-osnovne-skole/>

In the Open Call for Greener Primary Schools, the selection process unfolded in two phases, with clearly defined criteria and a transparent course. In the first phase, the CEUS expert team reviewed 15 submitted applications and selected five schools for co-creation workshops. The criteria included the characteristics of the proposed space and solution, the school's previous experience with green initiatives, as well as ideas for integrating nature-based solutions into the educational process. Special emphasis was placed on the schools' readiness to involve students, teachers, and parents in joint work, thereby encouraging participation and raising awareness of the importance of sustainable practices.

In the second phase, after the workshops and the development of projects with simplified bills of quantities and cost estimates, three schools were chosen to implement concrete greening interventions. The decision was based on the feasibility of the initiative given the available time and budget, the motivation of students and teaching staff to engage in the process, and the potential impact of the solution on the wider community. This ensured that the projects were not merely aesthetic or symbolic, but sustainable, educational, and socially relevant.

The final results demonstrated the variety of ideas and the geographical diversity of schools across Belgrade. From greenhouses and outdoor classrooms, through mini botanical gardens and insect hotels, to indoor gardens in school halls—each selected school offered a unique solution that connects education, ecology, and community. In this way, the competition achieved its goal: encouraging creative, nature-based solutions that contribute to a healthier environment and strengthen ecological awareness among the youngest generations.

The Open Call can be viewed on the website: <https://bellab.rs/konkurs-za-zelenije-osnovne-skole/>

Studije slučaja

Case Studies



Učenici - prosečan broj i uzrast (razred)
Students - avg. N° and age (grade)



Nastavnici / Teachers

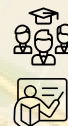
OŠ* „Starina Novak”



po radionici / N° per workshop: 30
razred / grade: I, IV, VII, VIII

Danijela Jukić

OŠ „Veljko Dugošević”



po radionici / N° per workshop: 30-40
razred / grade: V, IV

Slavoljub Marković

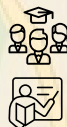
OŠ „Đura Daničić”



po radionici / N° per workshop: 28-40
razred / grade: IV

Sanja Vučić

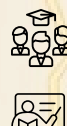
OŠ „Miroslav Antić”



po radionici / N° per workshop: 20-30
razred / grade: V, VIII

Milena Radović, Svetlana Jakšić

OŠ „Vojvoda Степа”



po radionici / N° per workshop: 20-40
razred / grade: V, VI, VII

Ivana Marković, Dželila Đerlek,
Darko Ristivojević



*OŠ = Primary School (PS)

Realizacija Stepinog Bubičnjaka

Implementation of Stepa's Insect Hotel

OŠ „VOJVODA STEPANA“



OŠ „Vojvoda Stepa“ poseduje pravo ekološko blago - prostrano školsko dvorište puno zelenila koje se naslanja na Kumodražku šumu. Ovakva pozicija i isprepletanost sa prirodnom sredinom pružaju izuzetne mogućnosti za obogaćivanje dvorišta prirodom-inspirisanim rešenjima pogodnim za korišćenje u nastavi, posebno s obzirom da trenutno ne postoji jasno usmerenje da se prirodni elementi dvorišta redovno koriste u te svrhe.

U okviru „Konkursa za zelenije osnovne škole“ OŠ „Vojvoda Stepa“ je konkurisala sa predlogom „hotela“ za pčele i druge insekte. Projekat je izveden u nekoliko faza, odnosno radionica, od kojih je svaka donela nova iskustva i znanja učenicima, nastavnicima i saradnicima. Krajnji cilj bio je da se deci što bolje približi značaj očuvanja prirodne sredine i biodiverziteta, a posebno insekata i oprašivača, kao i da se praktično dočara kako prirodom-inspirisana rešenja mogu da podrže kvalitetniji život i ljudske zajednice i čitavog ekosistema.

Primary School “Vojvoda Stepa” incorporates a true ecological treasure - a spacious green schoolyard bordering the Kumodraž Forest. The location and closeness of natural environment create exceptional opportunities to enrich the schoolyard with teaching-friendly nature-based solutions, especially considering that currently there is no regular, organised use of the yard's natural elements for educational purposes.

In our “Open Call for Greener Primary Schools,” the school proposed building a “hotel” for bees and other insects. The project was carried out in several stages, i.e., workshops, each of which brought new experiences and knowledge to students, teachers, and collaborators. The ultimate goal was to help children better understand the importance of preserving the natural environment and biodiversity, especially insects and pollinators, and to practically demonstrate how nature-based solutions can support a higher quality of life for human communities and the ecosystem as a whole.

1

OKTOBAR 2024: RADIONICA KO-KREACIJE

October 2024: Co-Creation Workshop

Prva jesenja radionica ko-kreacije sa učenicima uključivala je dosta razgovora o modularnim elementima skrovišta za insekte, zatim biologiji i raznovrsnosti divljih pčela poput zidarica, drvarica i bumbara, kao i o njihovim ključnim funkcijama u ekosistemu, posebno u oprašivanju cvetnica. Dodatni cilj je bio da se obrati pažnja i prouči deo dvorišta u kom je „Stepin bubičnjak” planiran. To je travnati deo dvorišta sa nekoliko stabala, sa kojim većina učenika nema posebnu interakciju, a u ekološkom smislu je interesantno stanište sa spontanom vegetacijom.

Četrdesetak učenica i učenika petog i šestog razreda podeljenih po grupama dobili su zadatak da predstave odabrani deo dvorišta skicom na hamer papiru, kao i da što realnije pozicioniraju postojeća stabla koja su im data u formi odštampanih i isečenih crteža. Zatim su dvorište bojili i dodavali elemente prirodom-inspirisanih rešenja. U toku rada na zadatku sa grupama su vođeni razgovori o onome što crtaju i koriste na svojim radovima, uz uključivanje prigodne literature radi informacija i inspiracije. Po okončanju ovog zadatka, crtali su i bubičnjake po sopstvenim zamislima i koristili elemente - odštampane ilustracije materijala - da ih „popune”.

The first autumn co-creation workshop with students included extensive discussions about the modular elements of insect shelters, as well as the biology and diversity of wild bees, such as mason bees, carpenter bees, and bumblebees, and their key functions within ecosystems, particularly in the pollination of flowering plants. An additional goal was to draw attention to and study the part of the schoolyard where the “Stepin Bug Hotel” was planned. This is a grassy section of the yard with several trees, with which most students have little interaction, yet which represents an ecologically interesting habitat with spontaneous vegetation.

Around forty fifth- and sixth-grade students, divided into groups, were tasked with presenting a selected part of the schoolyard through a sketch on flip-chart paper and positioning the existing trees as realistically as possible using printed and cutout drawings provided to them. They then colored the yard and added elements of nature-based solutions. During the task, discussions were held with the groups about what they were drawing and using in their designs, with relevant literature introduced for information and inspiration. After completing this task, they also drew bug hotels based on their own ideas and used printed illustrations of materials to “fill” them.

Radionica ko-kreacije / Izvor: CEUS + OŠ „Vojvoda Stepa”



Jesenja sadnja lukovica u OŠ „Vojvoda Степа” prošla je u entuzijastičnoj atmosferi. Dobro teoretski pripremljeni za zadatak od strane nastavnice biologije, đaci su orno prionuli na sadnju lukovica prolećnih šafrana (*Crocus sp.*) i preslica (*Muscari sp.*) pomoću alata koji su dobili u CEUS baštovanskom paketu. Ove lukovice su izabrane zbog srodnosti sa autohtonim vrstama koje privlače i hrane lokalne vrste oprašivača. Osim prednosti za insekte, važan pedagoški element je da u proleće cvetaju rano i bez posebne nege, pa učenici dobijaju relativno brzu cvetnu gratifikaciju za uloženi trud.

Osim doniranih lopatica i sadilica pogodnih za decu svih uzrasta, mnogi učenici su rado isprobali i velike alate - ašove i kopače rupa. Entuzijizam dece za ove zadatke bio je na izuzetnom nivou. Takođe smo zasadili ružmarin i lavandu, a i napravili privremena zimovališta za insekte (eng. „bug snug”) od štapova, kanapa i suvog lišća, na mestu gde je planirana instalacija bubičnjaka.

The autumn bulb planting at the “Vojvoda Степа” Primary took place in an enthusiastic atmosphere. Well theoretically prepared for the task by their biology teacher, the students eagerly set to work planting bulbs of spring crocuses (*Crocus sp.*) and grape hyacinths (*Muscari sp.*) using the tools donated in the CEUS gardening kit. These varieties were selected because they are related to native species that attract and provide food for local pollinators. In addition to their benefits for insects, an important educational aspect is that they bloom early in spring without special care, giving students a relatively instant floral reward for their efforts.

In addition to the trowels and planters suitable for all children of all ages, many students were also eager to try bigger tools - spades and hole diggers. We also planted rosemary and lavender and created temporary winter shelters for insects (“bug snugs”) from sticks, twine, and dry leaves at the site planned for a permanent insect hotel.



3

FEBRUAR 2025: SADNJA DRVEĆA

February 2025: Tree Planting

Iako u dvorištu ove škole postoji mnogo stabala, uključujući i nekoliko impresivnih starih hrastova, radi podrške biodiverzitetu i trebalo je povećati raznovrsnost drveća i žbunja, a posebno medonosnih vrsta pogodnih za oprašivače. Posadili smo deset mladica autohtonih vrsta, posebno odabranih da podrže i ekološke i estetske funkcije. U uvodnom delu, upoznali smo učenike sa značajem svake vrste - **divlje leske, zove i dretna**. Učenici su aktivno pomagali u kopanju, pozicioniranju i malčiranju drveća. Takođe, ovom prilikom školi su donirane dve kućice-kutije za gnežđenje ptica, kao i hranilica koju su deca lično napunila suncokretom. Dvadesetak masnih kugli za dohranu ptica podeljeno je učenicima koji su želeli da pokušaju da prihranjuju ptice u svojim dvorištima.

Nažalost, uprkos odličnom početku, do kraja proleća su preživela samo dva stabla - ostala su nehotice oštećena i uništena tokom održavanja lokacije od strane trećih lica, što podvlači važnost adekvatne fizičke zaštite mladih sadnica i stabala u javnim prostorima, a idealno i usklađivanje procedura za održavanje sa zelenim intervencijama u dvorištima.

Although the schoolyard already contains many trees, including several impressive old oaks, there was a need to increase the diversity of trees and shrubs, especially pollinator-friendly species, to better support biodiversity. We planted ten young saplings of native species, carefully selected to serve both ecological and aesthetic purposes. In the workshop introduction, students learned about the importance of each species - **wild hazel, elder, and cornelian cherry**. The students actively assisted with digging, positioning, and mulching the trees.

On this occasion, the school also received two bird nesting boxes and a bird feeder that the children personally filled with sunflower seeds. Around 20 suet balls were distributed to students who wished to try feeding birds in their own yards.

Unfortunately, despite an excellent start, by the end of spring, only two trees survived - the others were unintentionally damaged and destroyed during site maintenance by third parties. This highlights the importance of adequate physical protection of young saplings and trees in public spaces, as well as aligning maintenance procedures with green interventions in schoolyards.



Dopunske aktivnosti tokom zimsko-prolećne sadnje / Izvor: CEUS



4

MART 2025: FORMIRANJE BUBIČNJAKA

March 2025: Insect Hotel Installation

Nakon što je metalna konstrukcija postavljena nekoliko nedelja ranije uz nadzor dizajnerke bubičnjaka **Senke Bogavac**, učenici su napunili hotel za insekte materijalima za gnežđenje i skrivanje pčela i drugih insekata kroz još jednu edukativnu radionicu. Korišćene su sečene **trske i izbušene drvene oblice sa otvorima različitih obima, kao i slama i karton**. U uvodnom delu, učenici su se upoznali sa solitarnim („divljim“) pčelama, njihovom raznovrsnošću, specifičnostima nekih vrsta i značajem za čoveka i okolinu. Zatim smo istražili materijale i objasnili kako ih koristimo za stvaranje skloništa za insekte. Razgovarali smo i o tome zašto su hoteli za insekte potencijalno važni u svetu koji sve više koristi veštačke materijale za gradnju, ne ostavljajući prostore za životinjske stanovnike gradova i ne razmatrajući dobrobit ekosistema. Učenici su bili veoma uključeni i angažovani na stvaranju idealnog staništa za novu generaciju solitarnih pčela. **Poduhvat je bio vidljivo uspešan, jer su do kraja proleća desetine rupa bile pretvorene u gnezda**, ispunjena i zapečaćena od strane pčela zidarica, a zabeležili smo i prisustvo parazitskih „pčela kukavica“, normalno za sva gnezdilišta pčela. Na kraju uspešne radionice, da bismo povezali priču sa prethodnom sadnjom, simbolično smo se poslužili sokom od zove!

After the metal structure had been installed several weeks earlier under the supervision of insect hotel designer **Senka Bogavac**, the students filled the insect hotel with nesting and shelter materials for bees and other insects during another educational workshop. The materials used included cut **reeds and drilled wooden logs with holes of various diameters, as well as straw and cardboard**. In the introductory part, the students were introduced to solitary (“wild”) bees, their diversity, the characteristics of certain species, and their importance for humans and the environment. We then explored the materials and explained how they are used to build insect shelters. We also discussed why insect hotels can be important in a world that increasingly relies on artificial building materials, leaving little space for animal inhabitants of cities and often failing to consider ecosystem well-being. The students were highly involved and engaged in creating an ideal habitat for a new generation of solitary bees. **The initiative proved visibly successful: by the end of spring, dozens of holes had been turned into nests**, filled and sealed by mason bees, and we also recorded the presence of parasitic cuckoo bees, which is normal in all bee nesting sites. At the end of the successful workshop, to symbolically connect the activity with the previous planting, we enjoyed some elderflower syrup!





Степин бубичњак Хотел за мачете и породилице за дивље пчелице

Борба бива на планети. Овом што су шарени и интересни, латентно су мада искриве био превалут, не би имамо да отворе велике латентне плодном - равнотежа би била поремећена и мачет чине

TOMMY

MAJ I JUN 2025: „BUBIČNJAK U BOJI” – OSLIKAVANJE KROVA

5

May & June 2025: "Bug Hotel In Color" – Roof Painting

Poslednja aktivnost u vezi „Stepinog bubičnjaka” u ovoj školskoj godini bila je oslikavanje njegovog drvenog krova. Uključivanje likovnih aktivnosti u primenu prirodom-inspirisanih rešenja ima višestruke benefite. One daju stvaralački ventil učenicima, omogućuju da temu raznovrsnosti i važnosti insekata sagledamo i iz drugačijeg, ličnijeg i kreativnijeg ugla, a u idealnom slučaju, davanje ličnog pečata učiniće da đaci bolje prihvate i čuvaju inovaciju u svom dvorištu.

Škola je kao donaciju dobila set akrilnih boja, flomastera i prateći slikarski materijal. Tokom prve sesije slikanja, učenici su pokazali maštovitost, odlične crtačke i slikarske veštine i interesovanje; može se reći da je rezultat nadmašio sva očekivanja. Dominantne boje su plava i žuta zbog činjenice da privlače pčele. Tokom oslikavanja smo razgovarali o važnosti i opštoj percepciji insekata, a takođe smo posmatrali aktivnosti u „Bubičnjaku”. Deca su nastavila da rade na oslikavanju i u slobodnom trenutcima narednih dana uz podršku nastavnica. Rezultat je impresivna prirodna slika koja ne samo što će krasiti dvorište škole, već će i sprečiti propadanje krova bubičnjaka.

Posle ovako uspešne realizacije, nadamo se da će „Stepin bubičnjak” u budućnosti nastaviti da pruža mnogo radosti i novih otkrića učenicima i čitavoj školskoj zajednici.

The final activity related to the “Stepa’s Insect Hotel” during this school year was painting its wooden roof. Incorporating art activities into the implementation of nature-inspired solutions brings multiple benefits. It provides students with a creative outlet, allows the topic of insect diversity and importance to be explored from a different, more personal, and creative perspective, and, ideally, gives the project a personal touch that helps students better accept and care for the innovation in their schoolyard.

The school received a donated set of acrylic paints, markers, and accompanying art supplies. During the first painting session, the students demonstrated imagination, excellent drawing and painting skills, and a strong interest; it can be said that the results exceeded all expectations. The dominant colors were blue and yellow, as these are known to attract bees. While painting, we discussed the importance of insects and general perceptions of them, and we also observed activity in the insect hotel itself. In the days that followed, the children continued working on the painting in their free time, with support from their teachers. The result is an impressive nature-inspired artwork that will not only adorn the schoolyard but also help protect the insect hotel’s roof from deterioration.

After such a successful implementation, we hope that “Stepa’s Insect Hotel” will continue to bring joy and new discoveries to students and the entire school community.

Veselo oslikan bubičnjak / Izvor: CEUS



„Veljkova živa laboratorija“

Veljko's NbS Living Lab

OŠ „VELJKO DUGOŠEVIĆ“



OŠ „Veljko Dugošević“ je poznata po svom školskom humanitarnom bazaru i dvorištu koje je više puta nagrađivano kao najlepše na Zvezdari.

Dvorište je optimalno isplanirano da zadovolji različite potrebe učenika i poseduje negovanu vegetaciju. Osim uređenog dela sa prednje strane škole, ekološki je interesantan i severni deo iza glavne zgrade, gde postoji grmljem omeđena zelena površina bujnijeg rasta, pribežište za životinje u gusto izgrađenoj sredini. S obzirom da se u blizini škole nalazi Zvezdarska šuma i niz parkova, može se reći da je školsko dvorište važan deo lokalnog lokalne zelene mreže

U okviru Konkursa, škola je u svom predlogu projekta predvidela mali školski platenik za korišćenje u nastavi biologije i drugim prirodnjačkim predmetima, kao i za eksperimente iz proizvodnje rasada sobnih biljaka, koje bi potom bile prodavane na tradicionalnom humanitarnom bazaru. Spomenuto je interesovanje da se pokrene školsko kompostiranje i proizvodnja komposta.

“Veljko Dugošević” Primary is well-known for its charity bazaar and its award-winning schoolyard, which has held the title of the most beautiful in the Zvezdara municipality several times.

The schoolyard is thoughtfully designed to meet the diverse needs of students and features well-maintained vegetation. Besides the landscaped area at the front yard, the northern backyard is also ecologically interesting - it is a shrub-lined green space with more “rewilded” lush growth, offering a refuge for wildlife in a densely built-up environment. Given the school's proximity to Zvezdarska Forest and several nearby parks, the schoolyard can be considered an important part of the local green network.

As part of the Contest, the school's project application envisioned establishing a small greenhouse for use in biology classes and other natural science subjects, as well as for propagating houseplants for sale at the charity bazaar. The proposal also mentioned interest in launching a school compost production program.

1

OKTOBAR 2024: UPOZNAVANJE DVORIŠTA I RADIONICA KO-KREACIJE

October 2024: Schoolyard Exploration and Co-Creation Workshop

Zbog jake veze učenika sa dvorištem, glavni deo jesenje radionice činila je edukativna šetnja, uz zajedničko razmatranje ekološki pozitivnih aspekata dvorišta, ali i problema i njihovih potencijalnih rešenja. Učenici su takođe bili slobodni da nas upoznaju sa svojim iskustvima i interakcijama sa živim svetom u dvorištu, pa smo tako saznali o njihovom pokušaju pravljenja kućice za ježa, zalivanju grabova uz školski teren (koji su posečeni), posmatranju ptica i drugim prirodjačkim aktivnostima. Spomenuli su i problem buke koja ometa nastavu, jer je ovo idilično dvorište okruženo brojnim gradilištima novih višespratnica i prometnim saobraćajnicama, pa je diskusija otišla i u pravcu mogućnosti ublažavanja zvučnog zagađenja.

Posle istraživanja dvorišta, u školskoj biblioteci usledila je radionica ko-kreacije. Sumirali smo utiske o dvorištu i analizirali, tlocrt škole pripremljen za ovu priliku. Mapirali smo izazove i probleme, a pomoću grafičkih elemenata igara „Divlji grad” i „Renature ta Cour” upoznali smo učenike sa faunom koja bi mogla da se nađe u njihovom dvorištu i podstakli ih da promisle i na mapi implementiraju neka od ponuđenih prirodom-inspirisanih rešenja.

Because of the students' strong connection to the schoolyard, the main part of the autumn workshop was an educational tour with reflections on the yard's environmentally positive features, problems and potential solutions. The students were also encouraged to share their experiences and interactions with the living world in the schoolyard - attempt to build a hedgehog shelter, self-initiated watering of hornbeam trees along the school grounds (which were later cut down), bird sightings, and other nature-related activities. They mentioned the problem of noise pollution, as this otherwise idyllic schoolyard is surrounded by numerous construction sites for new multi-story buildings and busy roads; thus, we discussed ways to mitigate noise pollution.

After schoolyard exploration, a co-creation workshop followed in the school library. We summarized our impressions of the yard and analyzed the school site plan prepared for this occasion. We mapped challenges and problems and, using graphics from the games "Wild City" and "Renature ta Cour," introduced students to the fauna that could potentially appear in their schoolyard, encouraging them to consider and implement some of the proposed nature-based solutions on the map.



MART 2025: INSTALACIJA PLASTENIKA, LEJE I KOMPOSTARNIKA

2

March 2025: Installation of Greenhouse, Raised Beds, and Compost Bin

Kroz Konkurs, škola je kao donaciju dobila polikarbonatni plastenik, profesionalni sto za rasad, jednu spoljnu leju za sadnju koja je projektovana da bude s leve strane ulaza u plastenik, kao i komposter. Uz opremu, donirane su sadnice začinskih biljaka, cvetnica i semena medonosnih biljaka i povrća.

Sastavljanje i instalacija ovih elemenata urađena je uz pomoć profesionalaca, ali i uz aktivno učešće učenika i nastavnika. Kao svetao primer ueničkog angažovanja možemo da izdvojimo činjenicu da su potpuno samostalno sastavili metalnu leju. Po završetku tehničkog dela instalacije, na red je došla sadnja. Leja je pregrađena, pa je prva polovina napunjena kvalitetnim supstratom, a druga je ostavljena sa izvornim tlom kako bi učenici mogli da eksperimentišu i testiraju uslove rasta. Potom, učenici su u zemlju položili prva semena i sadnice trajnica.

U narednim nedeljama, učenici su se u više navrata oprobali u sadnji i obeležavanju biljaka, kako u okviru dodatne nastave u organizaciji predmetnog nastavnika, tako i tokom 2 radionice vođene od strane CEUS-a. Tokom radionica bila je očigledna velika zainteresovanost, ali i dotadašnji manjak kontakta dece sa zemljom, semenom i drugim elementima koji čine baštu. Samim tim, aktivnosti sadnje postale su još značajnije i dobile čak i jednu lepu, novu emotivnu dimenziju.

Through the Open Call, the school received a polycarbonate greenhouse as a donation, along with a professional seedling table, an outdoor planting bed designed to be placed on the left side of the greenhouse entrance, and a composting unit. In addition to the equipment, seedlings of herbs and flowering plants, as well as seeds of honey plants and vegetables, were donated.

The assembly and installation of these elements were carried out with the help of professionals, but also with the active participation of students and teachers. A shining example of student involvement is the fact that they independently assembled the metal planting bed. After the technical installation was complete, it was time to plant. The bed was divided: one half was filled with high-quality substrate, while the other was left with native soil so that students could experiment and test growing conditions. Then, the students planted the first seeds and perennial seedlings into the soil.

In the following weeks, the students repeatedly engaged in planting and labeling the plants, both as part of extracurricular lessons organized by the subject teacher and during two workshops led by CEUS. During the workshops, a strong interest was evident, as was the children's prior lack of contact with soil, seeds, and other garden elements. Consequently, the planting activities became even more meaningful, gaining a new emotional dimension.







3

MART, APRIL, MAJ 2025: RADIONICE KOMPOSTIRANJA I SADNJE

March, April, May 2025: Composting and Planting Workshops

Tokom prve dodatne radionice sadnje organizovali smo i mini-predavanje o oprašivačima, sa posebnim fokusom na solitarne pčele. Uz pomoć nastavnika biologije Slavoljuba Markovića, deca su napravila i postavila mali „hotel“, odnosno gnezdište za solitarne pčele od trske u blizini novog školskog vrta. U nastavku, učili smo o biljnim semenima i njihovoj raznolikosti i razgovarali o pravilnoj sadnji i održavanju biljaka, motivišući učenike da aktivno učestvuju u sadnji. Uvek pružajući i širu sliku, koristili smo prilike da istaknemo da baštovanstvo može da uveća biodiverzitet, odnosno biološko bogatstvo dvorišta. Nastavnik je takođe omogućio da učenici sade i van leje, slobodno po školskom dvorištu, kako bi svako dete imalo priliku da učestvuje i iskusi obradu zemljišta i sejanje.

During the first additional planting workshop, we organized a mini-lecture on pollinators, with a special focus on solitary bees. With the help of biology teacher Slavoljub Marković, the children built and set up a small “hotel,” or nesting site for solitary bees made of reeds, near the new school garden. Afterward, we learned about plant seeds and their diversity, and discussed proper planting and plant care, motivating students to actively participate in planting. Always providing a broader perspective, we used these moments to highlight that gardening can increase biodiversity - the biological richness of the schoolyard. The teacher also allowed students to plant outside the designated bed, freely around the schoolyard, so that every child could have the opportunity to participate and experience working the soil and sowing seeds.





Zemljište je ključni aspekt baštovanstva i uzgoja hrane, a tlo možemo obogatiti jednostavno napravljenim kompostom. Pošto kompostiranje i dalje nije rasprostranjena praksa u urbanim područjima Srbije, školi je potrebno dosta podrške da bi uspešno otpočela taj proces u svom dvorištu. Na prvoj radionici kompostiranja, učenicima su i putem razgovora i uzoraka predstavljene osnove kompostiranja, odnosno pet elemenata neophodnih za ovaj proces – to su zeleni i smeđi materijal, mikroorganizmi, voda i kiseonik.

Zatim smo razgovarali o dva glavna razloga zašto je njihovo angažovanje oko kompostiranja toliko važno. Prvi je pionirska uloga njihove škole u otpočinjanju kompostiranja u školskim uslovima (pa su i problemi dobrodošli, jer su deo procesa učenja). Drugi je globalna kriza kvaliteta i zdravija zemljišta sa kojom se suočavamo na globalnom nivou - zbog prestanka upotrebe komposta, stajnjaka i drugih prirodnih vidova đubrenja s jedne, i intenzivnu upotrebu hemikalija u poljoprivredi s druge strane, količina humusa u poljoprivrednom zemljištu u konstantnom je opadanju i ono je sve manje sposobno da podrži život. Ovo je bila njihova teorijska osnova za razumevanje značaja kompostiranja.

U praktičnom delu radionice, dodali smo malo novog materijala u kompostnu gomilu, učenici su usitnjavali ostatke kartonske ambalaže od elemenata za baštu kako bi ih uključili u proces kruženja materije, a iz gomile smo uklonili neke ostatke hrane koji nisu korisni za proces i objasnili zašto.

Soil is a key aspect of gardening and food cultivation, and it can be enriched with simply made compost. Since composting is still not a widespread practice in urban areas of Serbia, the school needs considerable support to successfully start this process in its yard. In the first composting workshop, students were introduced to the basics of composting through discussions and sample demonstrations, focusing on the five essential elements of the process: green and brown materials, microorganisms, water, and oxygen.

We then talked about two main reasons why their involvement in composting is so important. The first is their school's pioneering role in initiating composting in a school setting (which means that even problems are welcome as part of the learning process). The second is the global crisis concerning soil quality and health, due to the decline in the use of compost, manure, and other natural fertilizers on one hand, and the intensive use of chemicals in agriculture on the other, the amount of humus in agricultural soil is steadily decreasing, making it less capable of supporting growth. This served as their theoretical foundation for understanding the importance of composting.

In the practical part of the workshop, we added a bit of new material to the compost pile. Students shredded cardboard packaging leftovers from garden elements to include them in the matter cycling process, and we removed some food waste from the pile that isn't useful for composting and explained why.





Na sledećoj radionici o kompostiranju analizirani su problemi sa kojima su se učenici u međuvremenu susretali, kao i oni koji su realna mogućnost, preventivno. Pošto je kompostiranje deo vannastavnih aktivnosti iz biologije, u saradnji sa nastavnikom biologije, povezali smo praksu kompostiranja sa elementima školskog programa: plavozelene alge, značaj i rasprostranjenost aerobnih sredina, uloga predatora, antropocentrično značenje termina korovi i štetočine i slično.

Jako važan aspekt ovih radionica je i uključivanje nastavnog osoblja i jačanje njihovih kapaciteta za izvođenje praktične, interaktivne nastave. U saradnji sa nadležnim nastavnikom, u toku je razvoj sveobuhvatnog plana koji bi uputio celokupnu školsku zajednicu - uključujući i roditelje i trenutno neuključene nastavnike - u načine na koji bi se mogli uključiti u održavanje bašte i korišćenje plastenika. Takođe, radi se na osmišljavanju eksperimenata i vremenske skale korišćenja plastenika.

At the next composting workshop, students analyzed the problems they encountered so far, as well as those that could realistically occur in a preventative manner. Since composting is part of extracurricular biology activities, we collaborated with the biology teacher to link composting practice with elements of the school curriculum: blue-green algae, the significance and prevalence of aerobic environments, the role of predators, the anthropocentric interpretation of weeds and pests, and more.

A very important aspect of these workshops is the inclusion of teaching staff and the strengthening of their capacity to conduct hands-on, interactive lessons. In cooperation with the teacher, a comprehensive plan is being developed to guide the entire school community, including parents and currently uninvolved teachers, on how they can participate in garden maintenance and greenhouse use. Work is also underway on designing experiments and a timeline for greenhouse usage.

„Mikina mala botanička bašta“

“Mika’s Little Botanical Garden”

OŠ „MIROSLAV ANTIĆ“



OŠ „Miroslav Antić“ nalazi se na Čukarici, u naselju Bele vode. Poznato je po svom pažljivo uređenom školskom dvorištu i školskoj bašti, o kom uz pomoć učenika i kolega brine nastavnica istorije Milena Radović. Prostrano školsko dvorište ujedno predstavlja i važnu javnu zelenu površinu u životu susedstva.

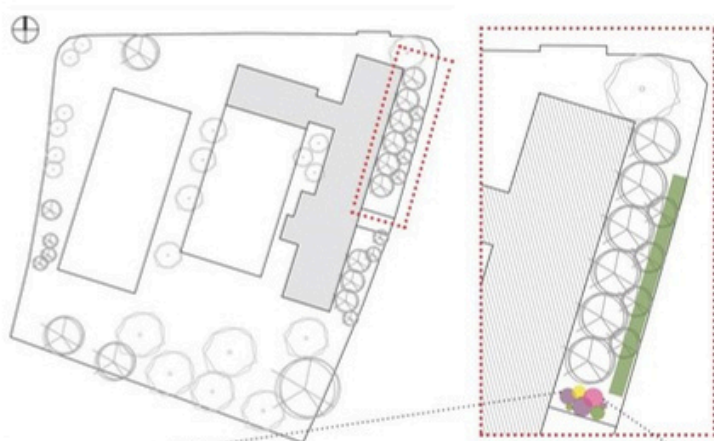
Na Konkursu, škola je izrazila želju da proširi i diversifikuje zasade u bašti, tako kreirajući „mini-botaničku baštu“. Biljke bi bile obeležene i površina bi se kao i do sada koristila se u nastavi, samo sa više mogućnosti.

Planirana je i info tabla koja bi približila plan bašte, kao i tipove i ekosistemske uloge zasađenih biljaka svim posetiocima. Osim toga, u razgovoru sa osobljem i upravom škole identifikovan je i problem zalivanja bašte zbog za tu svrhu neprilagođenih vodoinstalacija (nije postojala spoljna česma, niti hidrant).

“Miroslav Antić” Primary is located in the municipality of Čukarica. It is known for its carefully maintained schoolyard and garden, which are looked after by history teacher Milena Radović with the help of pupils and colleagues. The spacious schoolyard also represents an important public green space for the surrounding neighborhoods.

The school expressed a desire to expand and diversify the plantings in the garden, thus creating a “mini botanical garden.” The plants would be labeled, and the area would continue to be used for teaching, as before, but with more possibilities.

An information board is also planned to present the garden layout and the types and ecosystem roles of the planted species to all visitors. In addition, through discussions with school staff and management, an issue related to garden irrigation was identified: the water installations were not suited for this purpose (there was no outdoor tap or hydrant).



Kombinacija medonosnih vrsta žbunova i perena, ukrasnih trava i lukovica za osunčane prostore:
žbunovi: lavanda, ruzmarin, Potentilla sp, patuljasti bor, mini indijski jorgovan...
perene: ehinacea, rudbekija, santolina, smilje, Sedum spectabile, žalfija, Caryopteris sp, hajdučka trava, vres, Astilbe sp, Veronica spicata, Verbena sp, Cerastium sp, Artemisia sp, zečje uši
trave: Stipa tenuissima, Pennisetum sp.
lukovice: šafran, muskari, zumbuli

Mala medonosna botanička bašta

Površina ca. 25 -30 m²

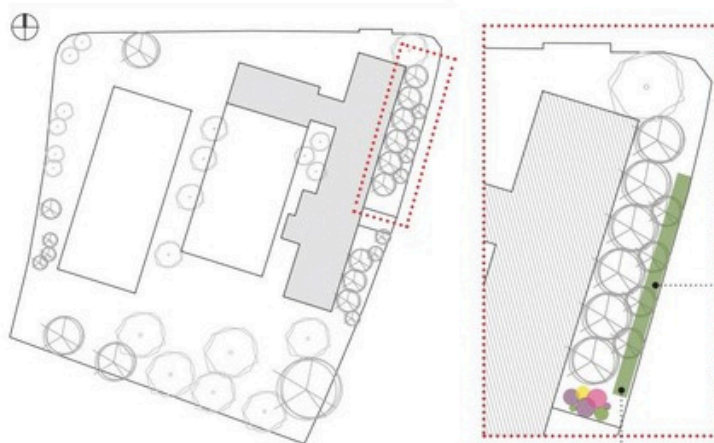
Staze širine min 50 cm za održavanje

Malčirati ispod biljaka i na površinama za staze

Obeležiti nazive vrsta malim info tablama



Predlog uređenja delova dvorišta OŠ "Miroslav Antić" na Čukarici



Žbunovi na osunčanim pozicijama:

jorgovan, forzicija, hibiskus, dren, vatreni grm, berberisi ...



jorgovan

forzicija

hibiskus

Berberis t. 'Atropurpurea'

Zaštitna zona ka ulici

Žbunovi u senovitom prostoru ispod visokih četinar:

kombinacija nekih od vrsta: lovor višnja, aukuba, božikovina i/ili svib, a u polusenci sibirski šarenolisni dren, u grupacijama od 2-3 kom. ispod postojećih borova i kedrova



Prunus laurocerasus 'Otto Luyken'

Prunus l. (lovor višnja)



Aucuba japonica

Cornus alba 'Sibirica' (dren)

1

OKTOBAR 2024: „RENATURE TA COUR” PRVI PUT U ŠKOLI I JESENJA SADNJA

October 2024: "Renature ta cour" Debut in School and Autumn Planting

S obzirom da su u ovoj školi u projekat bili uključeni stariji učenici (8. razred, 14-15 g.), bili su idealna grupa za probu prevedene i prilagođene verzije francuske igre „**Naše zeleno školsko dvorište**” (*Renature ta cour*). U 2024. godini, CEUS tim započeo je rad na prilagođavanju ove igre za upotrebu u lokalnom kontekstu. Prilagođavanje je obuhvatilo prevođenje same igre, lokalizaciju rešenja - proveru da li su ona izvodljiva i realistična u lokalnim uslovima - kao i izmenu mape školskog dvorišta i nekih elemenata dizajna.

Prisutni učenici bili su podeljeni u timove, a svaki tim je imao svog „mentora” (osobu iz CEUS tima) čiji je zadatak bio da osigura da učenici razumeju svoju ulogu i rešenja koja treba da primene u svom školskom dvorištu. Učenici su pokazali veliko interesovanje za igru i dodeljene uloge, birali su akcije uz kvalitetnu argumentaciju, ali je primećeno i da su izražavali određene stereotipe i zadržke prema nekim prirodom-inspirisanim rešenjima (npr. uvreženo mišljenje da kompostna gomila mora da emituje neprijatne mirise). Testiranje je pokazalo da bi pre primene igre u školskom okruženju trebalo uvesti neki oblik obuke ili nastave koji bi proširio znanje učenika o prirodom-inspirisanim rešenjima.

Posle radionice „Naše zeleno školsko dvorište”, usledila je jesenja aktivnost sadnje lukovica cvetnica - *Crocus* sp, *Muscari* sp, božura i lala, koja je pripremila učenike za obimnije prolećne aktivnosti sadnje. Učenici su pokazali za uzrast nadprosečnu veštinu u korišćenju baštenskih alata, što je rezultat njihovog dugogodišnjeg učestvovanja u negovanju bašte uz uključenje nastavnice.

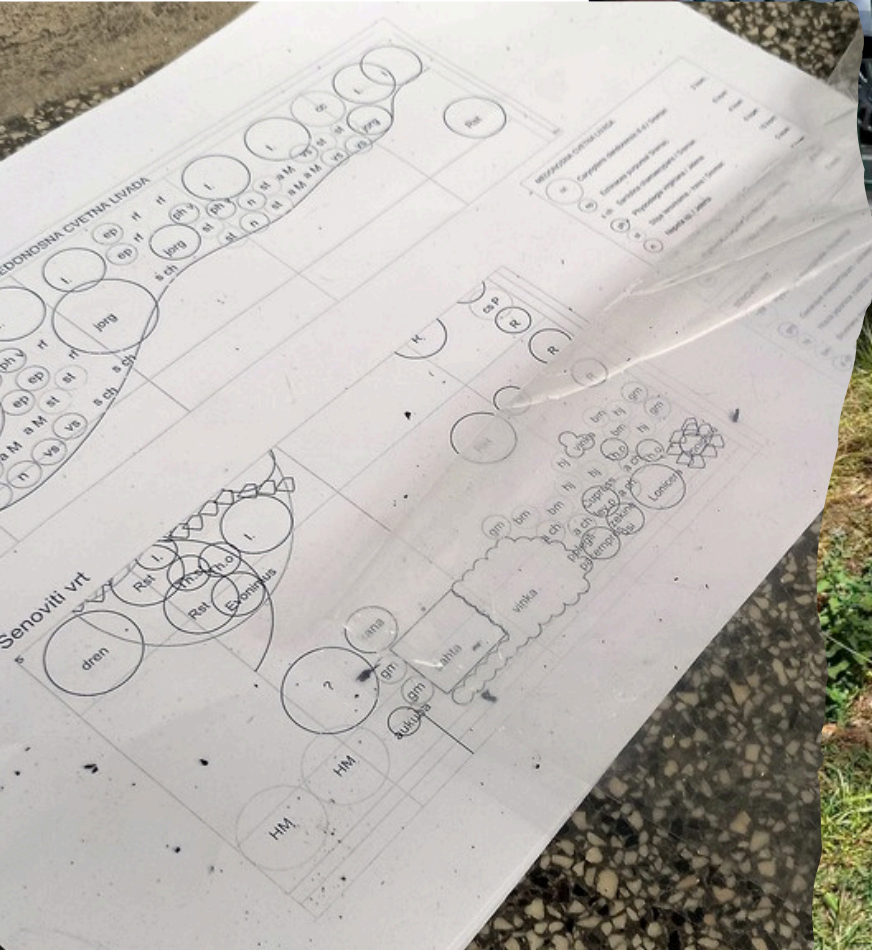
Since the students involved in the project in this school were older (8th grade, 14–15 y.o.), they were an ideal group to test the translated and adapted version of the French game “*Renature ta cour*”. In 2024, the CEUS team began adapting the game for use in the local context. The adaptation involved translating the game, localizing the solutions - i.e., checking whether they were feasible and realistic under local conditions - as well as modifying the schoolyard map and some design elements.

The students present were divided into teams, and each team had its own CEUS team mentor who ensured that the students understood their role and the NBS they were to apply. The students showed great interest in the game and their assigned roles, choosing actions with well-reasoned arguments, though some stereotypes and reservations toward certain solutions were observed (e.g., the common belief that a compost pile must emit unpleasant odors). The test showed that, before implementing the game in a school setting, it would be useful to introduce training or education to increase students’ understanding of nature-based solutions.

Following the “*Renature ta cour*” workshop, a fall planting activity took place involving flower bulbs - *Crocus* sp., *Muscari* sp., peonies, and tulips, which served as preparation for more extensive spring planting activities. The students demonstrated above-average skill in using gardening tools for their age, a result of their long-standing involvement in the garden maintenance and teacher guidance.







APRIL 2025: ŠKOLSKA BOTANIČKA BAŠTA 2

April 2025: School Botanical Garden

Tim pejzažnih arhitekata, saradnice CEUS-a Slavica Čepić i Senka Bogavac. osmislile su koncept mini-botaničke bašte u kom svaki deo vrta ima svoju ekološku ulogu. U aprilu 2025. godine u roku od dva dana zasađeno je oko tri stotine novih sadnica. Poduhvat je podrazumevao angažovanje velikog broja učenika i dela nastavnika predvođenih nastavnicom istorije Milenom Radović. Naknadno, sve sadnice su obeležene njihovim narodnim i latinskim nazivima.

Osim učenja o diverzitetu biljaka i poboljšanja estetike dvorišta, novi zasadi pomoći će protiv buke i efekta toplotnog ostrva, omogućujući prijatniji boravak u dvorištu. Posebno je vođeno računa o tome da vrste biljaka budu u skladu sa potrebama lokalne faune; kreirali smo i posebnu „divlju zonu“ koja sadrži mali hotel za solitarne pčele i posađenu običnu koprivu (*Urtica dioica*) radi podrške lokalnoj populaciji leptira.

Our team of landscape architects designed the concept of a mini-botanical garden in which each part of the garden has its own ecological function. In April 2025, around three hundred new plants were planted in the school garden over the course of two days. The endeavor involved a large number of students and several teachers, led by history teacher Milena Radović. Afterward, all the seedlings were labeled with their common and Latin names.

Beyond learning about plant diversity and enhancing the yard's aesthetics, the new plantings will help reduce noise and mitigate the urban heat island effect, making the schoolyard a more pleasant place to spend time. Special care was taken to ensure that the plant species matched the needs of the local fauna; a designated "wild zone" was also created, featuring a small hotel for solitary bees and a patch of stinging nettle (*Urtica dioica*) to support the local butterfly population.



Razmena iskustava sa Milenom Radović bila je izuzetno interesantana s obzirom da ona dolazi iz oblasti društvenih nauka i ima dugogodišnje dragoceno iskustvo u baštovanstvu. Saznali smo da bašta u ovoj školi ima pozitivnih efekata na učenike; oni se ogledaju kako u školskim rezultatima, tako i u poboljšanju ponašanja, posebno kod učenika koji imaju disciplinskih problema. Nadamo se da će profesorka Radović u budućnosti stručno dokumentovati ove već dobro poznate pozitivne efekte prirodom-inspirisanih rešenja.

Za opstanak i dalji razvoj bašte bilo je izuzetno važno postizanje efikasnijeg navodnjavanja, pošto je dotadašnja praksa priključivanja starog creva na unutrašnji morki čvor otežavao i usporavao redovno zalivanje. U sklopu Konkursa izvedena je nova česma na spoljnom zidu škole na koju se kači novo baštensko crevo. Postojanje spoljne česme daje mogućnost i za automatizaciju navodnjavanja u budućnosti.

Krajem maja i krajem septembra, idejne autorke bašte su posetile školu. Ciljevi posete bili su praćenje mini-botaničkog vrta i razgovor sa uključenim nastavnicima o nezi i raznovrsnosti biljaka. Tokom posete sve biljne vrste su vidljivo obeležene kako bi se unapredilo obrazovanje o biljnoj raznovrsnosti i „formalizovao“ koncept botaničke bašte. Takođe, nastavnici uključeni u projekat dobili su savete i praktičnu pomoć u vezi brige o bašti.

As someone coming from the field of humanities but also with many years of valuable gardening experience, teacher Milena Radović gained new insights into garden ecology and best practices for biodiversity conservation. Through this exchange of experiences, CEUS also gained equally valuable insights - we learned how school gardens positively affect students, as reflected both in academic performance and in improved behavior, especially among students with disciplinary issues. We hope that Professor Radović will professionally document these already well-known positive effects of nature-based solutions in the future.

For the survival and further development of the garden, irrigation was extremely important, as the previous solution - connecting a long hose to an indoor water outlet - made regular watering difficult and time-consuming. As part of the Contest, a new faucet was installed on the exterior wall and connected to a new garden hose. Future automation of irrigation is considered.

In May and September, landscape architects and CEUS collaborators Slavica Čepić and Senka Bogavac visited the garden. The purpose of the expert visits was to monitor and advise teachers about plant care and biodiversity, and also to offer hands-on assistance. The team labeled all plants in order to improve education and to “formalize” the concept of a botanical garden.





Uprkos najboljoj volji i olakšanom zalivanju, sadnice su u letnjem periodu prepele štetu, posebno sitnije perene čiji je korenov sistem bliže površini tla - oko 70% ovih sadnica nije preživelo. Ovo nije iznenađujuće s obzirom da je leto 2025. bilo treće najtoplije u istoriji merenja, sa istorijski najsušnijim junom; u Beogradu je ovo leto ocenjeno kao „veoma sušno” sa padavinama u opsegu 26-50% normale [4]. Ovakve klimatske uslove jako je teško kompenzovati, a posebno u toku letnjeg raspusta kada je prisustvo školskog osoblja drastično smanjeno. Uprkos tome, gotovo sve drvenaste sadnice su preživele, izvesno zbog dubljeg korenovog sistema i senke viskoih kedrova.

Zbog budućih neizbežnih suša, sa školom se razmatra automatizacija zalivanja, ukoliko može da se osigura bezbednost opreme. Pored unapređivanja navodnjavanja, za proleće 2026. godine planirana je dopuna inventara biljaka po potrebi i pomoć pri izvođenju alpinetuma i info-table za baštu, kako bi se zaokružila planirana celina ovog jedinstvenog školskog zelenog kutka.

Despite the best intentions and facilitated watering, the plants suffered damage during the summer, especially smaller perennials whose roots are closer to the soil surface - around 70% of these plants did not survive. The summer of 2025 was the third-hottest on record, with June the driest on record; in Belgrade, this summer was marked as “very dry,” with precipitation at only 26–50% of the average [4]. Such climatic conditions are very difficult to compensate for, especially during the summer school break when the presence of school staff is drastically reduced. Nevertheless, almost all woody seedlings survived, most likely due to their deeper root systems and the shade provided by tall cedars.

In light of inevitable future droughts, the school is considering automating irrigation, provided that equipment safety can be ensured. In addition to improvements in irrigation, for autumn 2025 and spring 2026, the supplementation of the plant inventory is planned as needed, along with assistance in creating an alpine garden section and the info-board for the garden to complete the planned concept of this unique green corner of the school.



Prvi školski BioBlic u Srbiji

The First School BioBlitz in Serbia

OŠ „ĐURA DANIČIĆ“



OŠ „Đura Daničić“ nalazi se u naselju Braće Jerković, na opštini Voždovac. Dvorište ove osnovne škole ima zanimljivu topografiju terena, pošto postoji značajan nagib od dvorišnog ulaza za učenike do same zgrade škole. Škola se nalazi na nižem, zaravnjenom terenu, dok je najveći deo dvorišta uzdignut u odnosu na školu. Ovo stvara zanimljive uslove za fizičku i istraživačku aktivnost učenika; s druge strane, stvara velike probleme sa odvođenjem vode, koja se pri većim padavinama akumulira u nižim, ravnim i betoniranim delovima dvorišta.

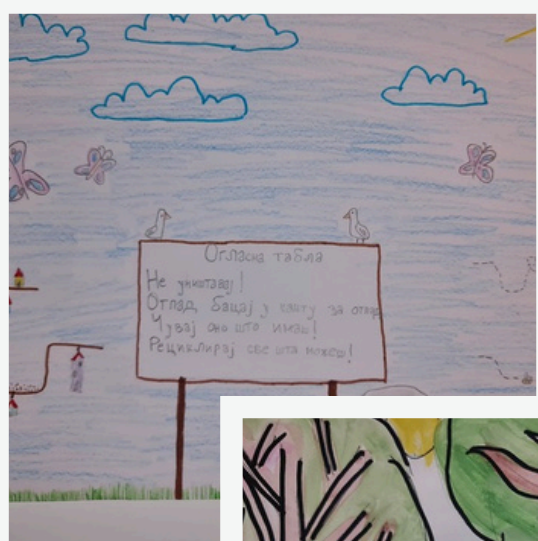
“Đura Daničić” Primary School is located in the Braće Jerković neighborhood of the municipality of Voždovac. The schoolyard features interesting topography, with a pronounced slope from the student entrance to the school building. The school sits on a lower, leveled area, while the majority of the yard is elevated relative to the building. This creates interesting opportunities for students' physical and exploratory activities; on the other hand, it also causes serious drainage issues, as water tends to accumulate in the lower, flat, and paved parts of the yard during heavy rainfall.

U svojoj prijavi, glavni fokus škole bio je mogućnost pravljenja učionice na otvorenom i formiranje školske bašte sa začinskim biljem koje bi učenici sakupljali, sušili i možda prodavali u okviru malih lokalnih trgovina kako bi sakupili prilog za školske aktivnosti. Međutim, uvidom na terenu u problem oticanja vode i kroz posmatranje šablona učeničkog korišćenja prostora, CEUS tim je utvrdio da bez ozbiljne sanacije i uređivanja terena, koji uključuju zemljane radove, nema uslova za postavljanje učionice na otvorenom ni na jednoj od predloženih tačaka u dvorištu, a takvi radovi prevazilaze okvire Konkursa. Takođe, zbog velikog broja površina pod nagibom, broj mesta za formiranje bašte takođe je ograničen, jer se zaravnjene površine uglavnom koriste za druge namene (sport i slobodna igra), a slobodne zelene površine uz školsku ogradu nisu lako dostupna za održavanje i ne mogu biti pod nadzorom školskog osoblja jer su potpuno van vidokruga.

Zbog dosta elemenata neizvesnosti, odlučeno je da se pokuša sa probnim malim zelenim intervencijama - sadnjom lukovica medonosnog cveća, formiranjem male senovite bašte pored đačkog ulaza u školu, da bi se u realnosti testiralo koliko je moguće održati ova zelena rešenja.

In its application, the school's main focus was the possibility of creating an outdoor classroom and establishing a school herb garden where students would harvest, dry, and potentially sell the herbs in small local shops to raise funds for school activities. However, after an on-site assessment of the drainage problem and an observation of how students use the space, the CEUS team concluded that, without serious land remediation and landscaping work, including earthworks, there were no suitable conditions for setting up an outdoor classroom in any of the proposed yard locations. Such works exceed the scope of the Contest. Furthermore, due to the large number of sloped areas, the number of suitable spots for a garden is also limited, as the flat surfaces are mainly used for other purposes (sports and free play), while the green areas along the school fence are difficult to maintain and cannot be supervised by school staff since they are entirely out of sight.

Given the many uncertainties, it was decided to attempt small pilot green interventions - planting bulbs of nectar-producing flowers and establishing a small shaded garden near the student entrance to the school, in order to realistically test how maintainable these green solutions would be.





1

OKTOBAR 2024: RADIONICE KO-KREACIJE ŠKOLSKIH BAŠTI

October 2024: Co-Creation Workshops for School Gardens

Prva jesenja radionica u OŠ „Đura Daničić“ upoznala je đake sa prirodom-inspirisanim rešenjima i njihovom značaju za školske zajednice. Važan aspekt ko-kreacije bio je i omogućiti im da zaista uživaju u kreativnom procesu zamišljanja i dizajniranja tematske školske bašte, što im je bio glavni zadatak, saživljavajući se sa svojim dvorištem. Osnovni nacrt su pravili posmatranjem realnog dvorišta, pa je zadatak zahtevao angažovanje prostorne inteligencije. Pošto su značaj života u dvorištima i podrška bioraznornosti ključne teme, po završetku likovnog dela zadatka pomoću CEUS igre „Divlji grad“ razgovarali smo o tome koje životinje već viđaju u školskom dvorištu, a koji bi mogli da se pojave kada bi se sprovele ideje iz njihovih zamišljenih bašti. Akcenat je bio na interakciji i isprepletanosti biljnog i životinjskog sveta, ali i na uticaju vegetacije na lokalnu klimu i temperature u dvorištu. Usput, učenici su entuzijastično delili svoje doživljaje sa spomenutim i nespomenutim životinjama, a od ideja za baštenske podvige istakli su se mali povrtnjaci i jedan alpinetum. Takođe, učenici nižih razreda su na incijativu CEUS-a i učiteljica, a kao deo procesa ko-kreacije, nacrtali i priložili čak 113 crteža koji prikazuju njihove vizije idealnog školskog dvorišta.

The first fall workshop at “Đura Daničić” Primary School introduced pupils to nature-based solutions and highlighted their importance for school communities. A crucial aspect of co-creation was to enable them to truly enjoy the creative process of imagining and designing a themed school garden, which was their main task, fostering a deeper connection with their schoolyard. Students created layouts based on their observations of the school grounds, requiring the use of spatial intelligence.

Since biodiversity was among the main focus areas, after completing the drawings, we used the CEUS game “Wild City” to discuss which animals students had already observed in their schoolyard and which new ones might be attracted by the NBS proposed in their artwork. The emphasis was placed on plant-animal interactions and connections, as well as on the impact of vegetation on the local climate and yard temperatures.

Students enthusiastically shared their experiences with the animal world. Among their garden ideas, small vegetable plots and alpine garden stood out. Moreover, as part of the co-creation process, students created and submitted 113 drawings showcasing their visions of the ideal schoolyard.



NOVEMBAR 2024: RADIONICA SADNJE

2

November 2024: Planting Workshop

Druga jesenja radionica u OŠ „Đura Daničić“ izvela je decu iz učionica u samo dvorište. Tokom ove male jesenje sadnje, zasađeno je stotinak lukovica krokusa i preslica, prolećnih biljaka koje lako cvetaju i korisne su oprašivačima. Zbog mešovitog nagiba terena, traženje idealnog mesta za lukovice predstavljalo dodatni izazov sa edukativnom komponentom. Takođe, izveden je i prvi pokušaj pravljenja školske bašte - drvenom ogradom je ograđena zemljana površina pored ulaza u školu koji je izvorno i trebalo da ima tu funkciju, sa idejom da se vremenom pretvori u senovitu školsku baštu sa dekorativnim biljkama. Utabana i ispošćena zemlja poboljšana je dodatkom humusnog supstrata, a za testiranje, zasađene su otporne vrste, vinka (*Vinca minor*) i bršljan (*Hedera helix*), kao i lukovice grozdastog zumbula ili preslica. Kuriozitet je da je jedan od učenika na trenutak je od baštovana postao arheolog - kopajući zemlju u baštici pronašao je stari engleski peni.

Treći element ovih aktivnosti u dvorištu bila je briga o pticama - porazgovarali smo o njihovim potrebama i razlozima zašto je školsko dvorište dobro mesto za njih, postavljene su masne kugle i jedna velika hranilica za ptice koju su učenici napunili suncokretovim semenom.

The second fall workshop at “Đura Daničić” Primary School brought the children out of the classroom and into the schoolyard itself. During this small autumn planting session, around one hundred bulbs of crocuses and grape hyacinths were planted spring-blooming plants that flower readily and are beneficial to pollinators. Due to the mixed slopes of the terrain, finding the ideal spots for the bulbs posed an additional challenge with an educational component.

A first attempt at creating a school garden was also carried out: a soil area near the school entrance, originally intended for this purpose, was enclosed with a wooden fence, with the idea that it would gradually become a shaded school garden featuring ornamental plants. The compacted and depleted soil was improved by adding humus-rich substrate, and to test the space, hardy plant species were planted: periwinkle (*Vinca minor*), ivy (*Hedera helix*), and grape hyacinth bulbs. A fun moment occurred when one of the students, briefly shifting from gardener to archaeologist, found an old British penny while digging in the garden.

The third element of these yard activities focused on bird care - we discussed their needs and why the schoolyard is a good habitat for them, then installed suet balls and one large bird feeder, which the students filled with sunflower seeds.

Škola je kao donaciju dobila baštovanski „stareter paket“, koji se sastojao od osnovnog baštenskog alata za učenike i tehnički tim škole, supstrata i dodatnih elemenata. Lukovice i sadnice su takođe bile deo ovog paketa.

Napori da ove male zelene intervencije zažive u OŠ „Đura Daničić“ doneli su nove lekcije i pomešane rezultate. Neke probleme dvorišta su dodatno naglasili, a uočeni su i neki novi. Situaciju je dodatno otežala jednomesečna obustava nastave koja se dogodila u mnogim osnovnim školama u sklopu masovnih anti-korupcijskih protesta koji su počeli u novembru 2024. godine. Obustava nastave i promena uobičajenog ritma škole neminovno je dovela do problema u održavanju i obezbeđivanju primenjenih rešenja, od kojih su neka oštećena, a neka zapuštena.

The school received a “starter gardening kit” as a donation, which included basic gardening tools for students and the school’s technical staff, substrate, and additional materials. Bulbs and seedlings were also part of this package.

Efforts to bring these small green interventions to life at “Đura Daničić” Primary School brought new lessons and mixed results. Some existing issues with the schoolyard became even more apparent, and new challenges were observed as well. The situation was further complicated by a month-long school closure in many primary schools during the mass anti-corruption protests that began in November 2024. This disruption to the regular school rhythm inevitably led to maintenance problems and difficulties in securing the implemented solutions; some were damaged, and others were neglected.



3

ŽIVI SVET „ĐURINOŠ“ DVORIŠTA – ŠKOLSKI BIOBLITZ

The Living World of “Đura’s” Schoolyard – School BioBlitz

Zbog toga što se pokazalo da se u navedenim okolnostima ne može očekivati da zelene intervencije budu negovane kako treba, odlučeno je da se energija usmeri na prirodnjačke aktivnosti umesto intervencija. Tako su u petak, 25. aprila 2025. godine, učenici odeljenja IV-3 imali priliku da budu pioniri školskog BioBlitz događaja - prvog takvog na teritoriji Beograda i Republike Srbije.

Cilj BioBlitz događaja je da se u unapred određenom vremenskom periodu pronađe što više vrsta na prostoru koji se istražuje, a ti podaci se posle kače u baze kao što je iNaturalist. Na ovaj način, učesnici od običnih đaka, studenata, građana, postaju građanski naučnici, čiji se podaci mogu koristiti za istraživanje biodiverziteta. Najveći globalni BioBlitz događaj je Izazov urbane prirode (eng. *City Nature Challenge - CNC*), koji se 2025. godine održao od 25. do 28. aprila, pa je datum naše radionice namenski izabran da se poklopi sa CNC. Iako grad Beograd nije zvanično učestvovao u ovoj globalnoj inicijativi, kroz predano ad-hoc istraživanje svog dvorišta učenici OŠ „Đura Daničić“ su nas upisali na njenu mapu i dali su svoj doprinos upoznavanju bogatog živog sveta naših gradova.

Because it became clear that, under the given circumstances, green interventions could not be properly maintained, the focus was shifted toward nature-related activities rather than physical interventions. Thus, on Friday, April 25, 2025, students from class IV-3 had the opportunity to be pioneers of the school’s BioBlitz event - the first of its kind held in Belgrade and in the Republic of Serbia.

The goal of a BioBlitz is to find as many species as possible within a designated period of time in a specific area, with the collected data later uploaded to platforms like iNaturalist. In this way, participants ranging from students and citizens to researchers become citizen scientists, contributing data that can be used for biodiversity research. The largest global BioBlitz event is the City Nature Challenge, which in 2025 took place from April 25 to 28, so the date of our workshop was intentionally chosen to align with CNC. Although the city of Belgrade did not officially participate in this global initiative, through their dedicated ad hoc exploration of their own schoolyard, the students of “Đura Daničić” Primary School put us on the map and made their contribution to discovering and understanding the rich living world of our cities.



Kako smo izveli prvi školski BioBlic?

- U pripremnom delu, učiteljica Sanja Vučić zamoljena je da instalira i isproba iNaturalist aplikaciju; CEUS tim je sastavio sopstveni Bioblic protokol sakupivši najbolje i najprimenljivije prakse - prikaz u Prilogu 3 ove publikacije.
- U kratkom uvodnom obraćanju, odeljenje je upoznato sa pravilima BioBlic-a, značaju građanske nauke i osnovnim protokolom za identifikaciju vrsta.
- Podeljeni su na četiri slikovito nazvana tima - tu su bili „Breze“, „Maslačci“, „Pužići“ i „Vrapčići“. U skladu sa nazivima timova, svaki tim dobio je zadatak da traži određenu grupu organizama - drvenaste biljke, zeljaste biljke, beskičmenjake ili kičmenjake u dvorištu.
- Svaka grupa imala je svog mentora - učiteljicu Sanju Vučić i troje CEUS saradnika, koji su pomoću iNaturalista radili fotografisanje, učitavanje u aplikaciju i identifikaciju organizama, dok su učenici tražili nove organizme, postavljali pitanja i pravili svoje fotografije koje su ubačene u iNaturalist projekat kasnije.
- Dobili su i šarene papirne washi tračice kojima su obeležavali zanimljive statične nalaze u dvorištu.
- Učenici su imali 20 minuta da uz stručnu pomoć pronađu što više vrsta iz njima dodeljene grupe organizama, plus desetominutno zaokruživanje i razmatranje nalaza obeleženih trakama. Posle toga, sledila je diskusija. Ukupno trajanje radionice bilo je 60 minuta.
- Diskusija i u toku i posle radionice je bila puna zanimljivih utisaka, pametnih pitanja i sjajnih zapažanja. Jako nam je važno bilo i da čujemo lične utiske i favorite đaka. Od nalaza, deci su se najviše dopale kupine, pčele drvarice (koje su videli u retkom trenutku parenja), bubamare, ptica pevačica - crna crvenrepka i „neobična smrdibuba“.
- Poslednja faza radionice bilo je sakupljanje fotografija i dodatna edukacija učiteljice u korišćenju iNaturalist-a i administriranju iNaturalist projekta.

How we organized the first school BioBlitz

- In the preparation phase, teacher Sanja Vučić installed and tested the iNaturalist app, while the CEUS team compiled an original BioBlitz protocol, combining the best and most applicable current practices - in Annex 3 of this Publication.
- In a short briefing, the class was introduced to the rules of BioBlitz, the importance of citizen science, and the basic protocol for species identification.
- The students were divided into four colorfully named teams - “Birches,” “Dandelions,” “Snails,” and “Sparrows.” Each team searched for a specific organism group in the schoolyard: woody plants, herbaceous plants, invertebrates, or vertebrates.
- Each team had a mentor-teacher, Sanja Vučić, and three CEUS team members, who helped with photographing, uploading to the iNaturalist app, and identifying organisms, while the students actively searched for new organisms, asked questions, and took their own photos, which were later added to the iNaturalist Project.
- They were also given colorful paper washi tape to mark interesting discoveries in the schoolyard.
- Groups had 20 minutes to find as many species as possible from their assigned organism group, followed by 10 minutes to review the findings. A discussion session followed. In total, the workshop lasted 60 minutes.
- The discussion during and after the workshop was full of fascinating impressions, clever questions, and excellent observations. It was especially important to hear the students' personal impressions and favorite finds. They were most excited about blackberries, carpenter bees (which they saw mating - a rare moment), ladybugs, the singing black redstart, and a “weird stink bug.”
- The final phase of the workshop involved collecting photos and providing additional training to the teacher on how to use iNaturalist and manage an iNaturalist project.
-

Međutim, u kontekstu dece, najveća vrednost BioBlic-a je u tome što ovaj način posmatranja deci otvara nove vidike u vezi živih bića i života koji se nalazi pod njihovim nogama, u krošnjama i vazduhu koji ih okružuje. U njihovim radoznalim, probuđenim očima, obični travnjak transformiše se u cvetnu livadu, gde jedna jedina biljka može da sadrži desetinu neobičnih sićušnih organizama. Odjednom spoznaju mnoštvo detalja u vezi svog svakodnevnog okruženja i počinju bolje da razumeju mrežu života u kojoj se i sami nalaze.

Nadamo se i verujemo da će učenici nastaviti da jednako širokih očiju posmatraju i promišljaju prirodno bogatstvo koje nas okružuje, čak i u gradu!

However, for children, the greatest value of a BioBlitz lies in how this method of observation opens new perspectives for them on living beings and the life beneath their feet, in the treetops, and in the air around them. In their curious, awakened eyes, an ordinary lawn transforms into a blooming meadow, where a single plant can host dozens of unusual, tiny organisms. Suddenly, they become aware of countless details about their everyday surroundings and begin to better understand the web of life in which they themselves are a part.

We hope and believe that pupils will continue to observe and reflect on the natural richness around us with the same wide-eyed wonder, even in the city!



Cvetni predah među betonom

A Floral Pause Amid the Concrete

OŠ „STARINA NOVAK“



OŠ „Starina Novak“ je škola koja se nalazi u samom jezgru grada i deli probleme sa drugim školama u sličnom položaju - evidentna je dominacija neporoznih, betonskih površina u odnosu na zelene površine. Osim zelenila u direktnom kontaktu sa tlom, školskom dvorištu ove škole nedostaje mesta za mirnije aktivnosti, sedenje i pasivnu socijalizaciju - sa izuzetkom malog dela dvorišta namenjenog isključivo mlađim osnovcima, u svim ostalim delovima dvorišta dominiraju sportske aktivnosti starijih učenika.

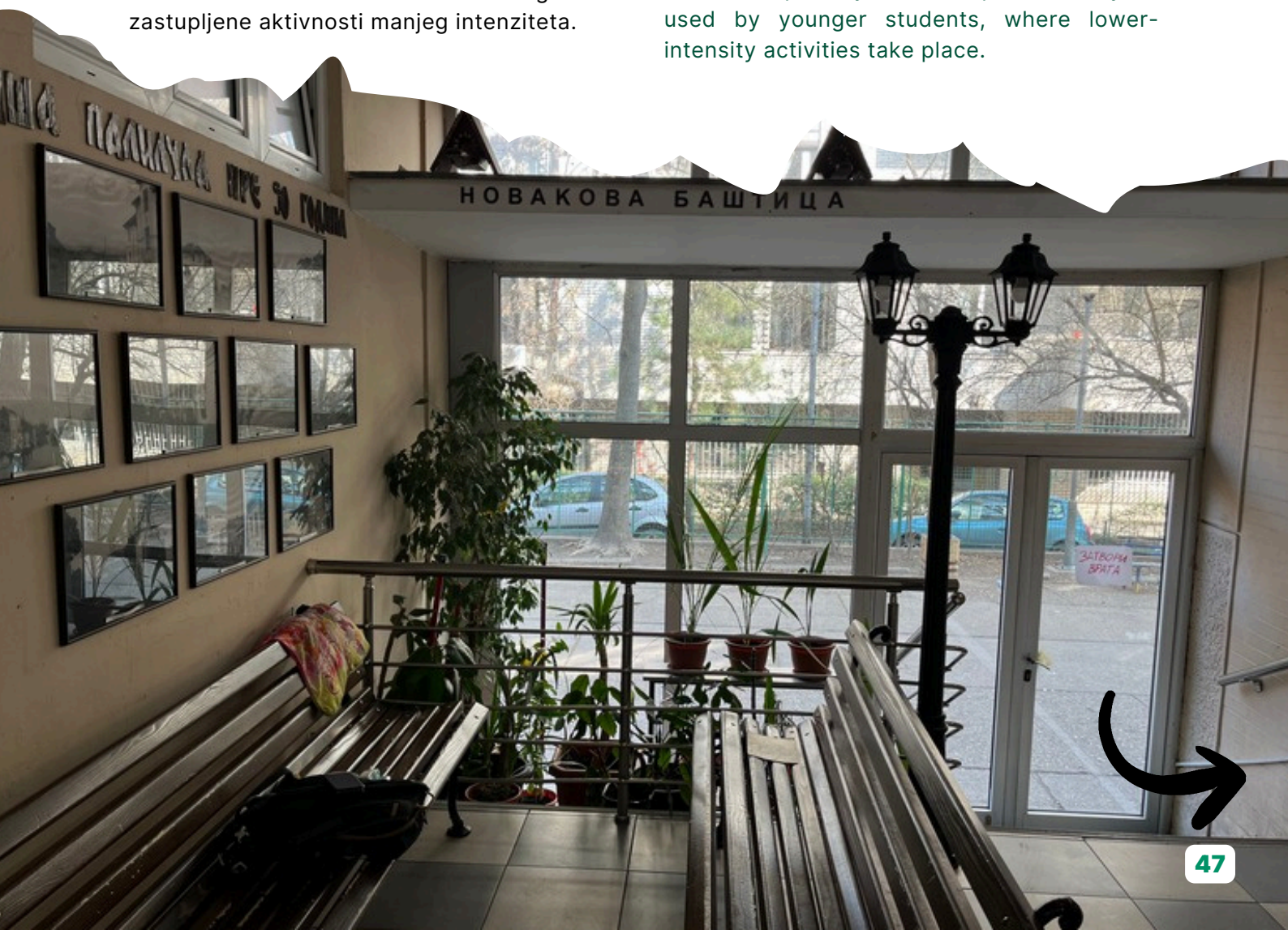
“Starina Novak” Primary School is located in the very heart of the city and shares common challenges with other urban schools - most notably, the overwhelming dominance of non-porous, concrete surfaces over green areas. Aside from vegetation in direct contact with the soil, the schoolyard lacks spaces for quiet activities, seating, and passive socialization - with the exception of a small section designated for younger students, most of the yard is dominated by sports activities of older pupils.

Ipak, i u tim ograničenim uslovima, škola je uspela da izvede oplemenjivanje prostora zelenilom. U holu škole nalazi se zastakljeni unutrašnji vrt - „Novakova baštica”, koji gleda na deo dvorišta za mlade učenike. U okviru ovog zelenog segmenta nalazi se i školski akvarijum. Upravo „Novakova baštica” bila je glavni fokus konkursne prijave - škola je predložila obogaćivanje i širenje bašte, uz dodatne police za biljke i sistem za navodnjavanje i poboljšanje postojećeg akvarijuma.

Iako je zamisao CEUS tima bila da se prostor „Novakove bašte” redizajnira tako da može da se aktivno koristi u nastavi i za dodatne aktivnosti poput proizvodnje pelcera, sagledavanjem realnog prostora i pozicije, procenjeno je da nema uslova za ovakvu upotrebu bašte. Međutim, s obzirom na nedovoljno prisustvo prirodnih i zelenih elemenata u dvorištu, doneta je odluka da se pre svega ono oplemeni kroz ovaj projekat, sa posebnim fokusom na zadnji deo dvorišta u kom borave mlađi učenici i gde su zastupljene aktivnosti manjeg intenziteta.

Still, even under these limited conditions, the school has managed to enhance the space with greenery. Inside the school hall, there is a glass-enclosed indoor garden - “Novak’s Little Garden”, overlooking the section of the yard for younger students. This green area also includes a school aquarium. “Novak’s Little Garden” was the main focus of the school’s Open Call application, which proposed enriching and expanding the garden with additional plant shelves, an irrigation system, and upgrades to the existing aquarium.

Although the CEUS team initially envisioned redesigning the “Novak’s Garden” space to make it more functional for active teaching and additional activities like plant cutting propagation, after assessing the actual space and its layout, it was concluded that such use was not feasible. However, given the lack of natural and green elements in the schoolyard, it was decided to focus project efforts on greening the outdoor space instead, especially the back part of the yard used by younger students, where lower-intensity activities take place.



1

OKTOBAR 2024: PRVA RADIONICA KO-KREACIJE

October 2024: First Co-Creation Workshop

Radionica je bila namenjena učenicima šestog i osmog razreda i predstavljala je deo procesa zajedničkog osmišljavanja ozelenjavanja škole u okviru CEUS konkursa.

U radionici je učestvovalo tridesetak učenika, koji su imali priliku da saznaju više o radu urbanista, arhitekata, pejzažnih arhitekata i ekologa, kao i o tome kako prostori koje svakodnevno koristimo mogu da podrže život velikog broja biljnih i životinjskih vrsta.

U prvom delu radionice, kroz šetnju školskim dvorištem i diskusiju sa CEUS timom, učenici su izneli ideje za njegovu „ozelenjavanje“ (što je zapravo bila mala vežba iz zamišljanja i promišljanja prirodom-inspirisanih rešenja). Tako je predloženo postavljanje klupa u dvorištu radi stvaranja male zelene oaze, sadnje medonosnih biljaka i loze u žardinjerama između velikog i srednjeg dvorišta, kao i u malom dvorištu, ozelenjavanja prostora iza tribina u srednjem dvorištu postavljanjem uzdignutih leja za gajenje biljaka i postavljanja kućica za ptice.

The workshop was intended for sixth and eighth-grade students and was part of the co-creation process for greening the school through the CEUS Open Call.

Around thirty students participated, gaining insight into the work of urban planners, architects, landscape architects, and ecologists, as well as learning how the spaces we use daily can support a wide variety of plant and animal species.

In the first part of the workshop, during a walk through the schoolyard and a discussion with the CEUS team, students shared ideas for “greening” the space (essentially a creative exercise in imagining and reflecting on nature-based solutions). Suggestions included installing benches to create a small green oasis, planting nectar-rich plants and vines in planters between the large and middle yards, as well as in the small yard, greening the area behind the bleachers in the middle yard by adding raised beds for growing plants, and installing birdhouses.



U drugom delu radionice, koji je održan u učionici i holu škole, prva grupa učenika koristila je CEUS društvenu igru „Divlji grad“ kako bi proučila na koji način primena prirodom-inspirisanih rešenja doprinosi povećanju biodiverziteta.

Druga grupa učenika radila je na predlogu za ozelenjavanje školskog hola. Zajednički smo osmislili postavljanje dodatnih biljaka iznad nadstrešnice na ulazu iz malog dvorišta, čime bi bašta dobila više vertikalnog prostora, uz primenu jednostavnog sistema za navodnjavanje; dodavanje više zelenila u sam hol, kao nadogradnju akvarijuma tako da se formira **sistem za akvaponiku** – istovremeni uzgoj riba i biljaka u zatvorenom sistemu sa pumpom, gde se hranljive materije iz akvarijuma koriste za rast biljaka.

In the second part of the workshop, held in a classroom and the school hall, the first group of students used the CEUS board game “Wild City” to explore how implementing nature-based solutions can increase biodiversity.

The second group of students worked on a proposal for greening the school hall. Together, we developed ideas such as placing additional plants above the canopy at the entrance from the small yard, which would give the garden more vertical space, along with a simple irrigation system; and adding more greenery to the hall itself by upgrading the aquarium into an **aquaponics system** - a closed-loop setup for growing fish and plants simultaneously, where nutrients from the aquarium support plant growth.





2

DECEMBAR 2024: "NOVAKOVA BAŠTICA" IZLAZI U DVORIŠTE

December 2024: "Novak's Little Garden" Steps into the Schoolyard

Zbog nedostatka zemljanih površina i zelenila u direktnom kontaktu sa tlom, CEUS tim je odlučio da ne uzurpira malo prostora takvog tipa za sadnju (pošto ga deca već koriste na različite načine), već smo instalirali dve drvene žardinjere za sadnju trajnica otpornih na mraz. Takođe, planira se instalacija klupe sa dve žardinjere i đubrijera.

Oko 20 učenica uzrasta od 7 do 12 godina - jedini primer tima koji čine samo devojčice u okviru čitavog projekta - učestvovalo je u sadnji zajedno sa nastavnicom biologije. Tokom aktivnosti razgovarali smo o značaju zelenih elemenata u školama i o vrstama biljaka, a nastavnica biologije Danijela Jukić je postavljala pitanja u skladu sa nastavnim planom, testirajući stečena znanja učenica i povezujući ih sa praksom.

Due to the lack of soil surfaces and greenery in direct contact with the ground, the CEUS team decided not to take over the small existing patches of such space for planting (as children already use them in various ways). Instead, two wooden planters were installed for planting frost-resistant perennials. Additionally, the installation of a bench with two planter combos and a waste-bin is planned.

Around 20 girls aged 7 - 12, the only all-girl team in the entire project, participated in the planting activity along with the biology teacher. During the activity, discussions were held about the importance of green elements in schools and various plant species, while biology teacher Danijela Jukić asked curriculum-aligned questions to test the students' knowledge and connect it to practical application.



Sadili smo biljke i u postojećim školskim betonskim lejamama na prednjem, glavnom ulazu u školu, iako smo bili svesni rizika zbog njihovog izloženog položaja. Iako te biljke nisu dugo opstale, obogaćivanje zemljišta će svakako pomoći budućim pokušajima ozelenjavanja ili spontanom ozelenjavanju. Sa druge strane, sadnja u doniranim lejamama bila je u potpunosti uspešna. Takođe smo postavili i napunili doniranu hranilicu za ptice, namenjenu pre svega lokalnoj populaciji vrabaca koja redovno koristi školsko dvorište.

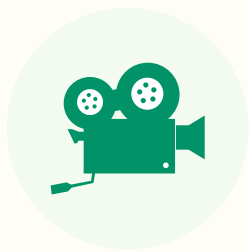
Problemi u vezi obustava nastave i širih društvenih nemira zaustavile su dalji razvoj zelenih intervencija u ovoj školi u protekloj školskoj godini, ali materijali za neka poboljšanja su obezbeđeni.

Unutrašnja „Novakova baštica“ nije zapostavljena u našim aktivnostima i postala je bogatija za nekoliko novih sobnih biljaka, a inovativne ideje za poboljšanja koja su razrađena na radionicama ko-kreacije će, nadamo se, biti ostvarene u nekom budućem kontekstu.

We also planted in the existing concrete beds at the school's main entrance, despite being aware of the risks posed by their exposed location. As expected, the plants there did not survive long, but enriching the soil will still support future greening attempts or spontaneous growth. On the other hand, planting in the donated planters was fully successful. Additionally, a donated bird feeder was installed and filled, primarily intended for the local sparrow population, which regularly uses the schoolyard.

School closures and broader social unrest halted further development of green interventions at the school during the past academic year, although materials for certain improvements have already been secured.

The indoor “Novak’s Little Garden” was not neglected in our activities; it was enriched with several new houseplants, and the innovative ideas for improvements developed during the co-creation workshops will, we hope, be realized in some future context.



Naš film o Konkursu za zelenije osnovne škole

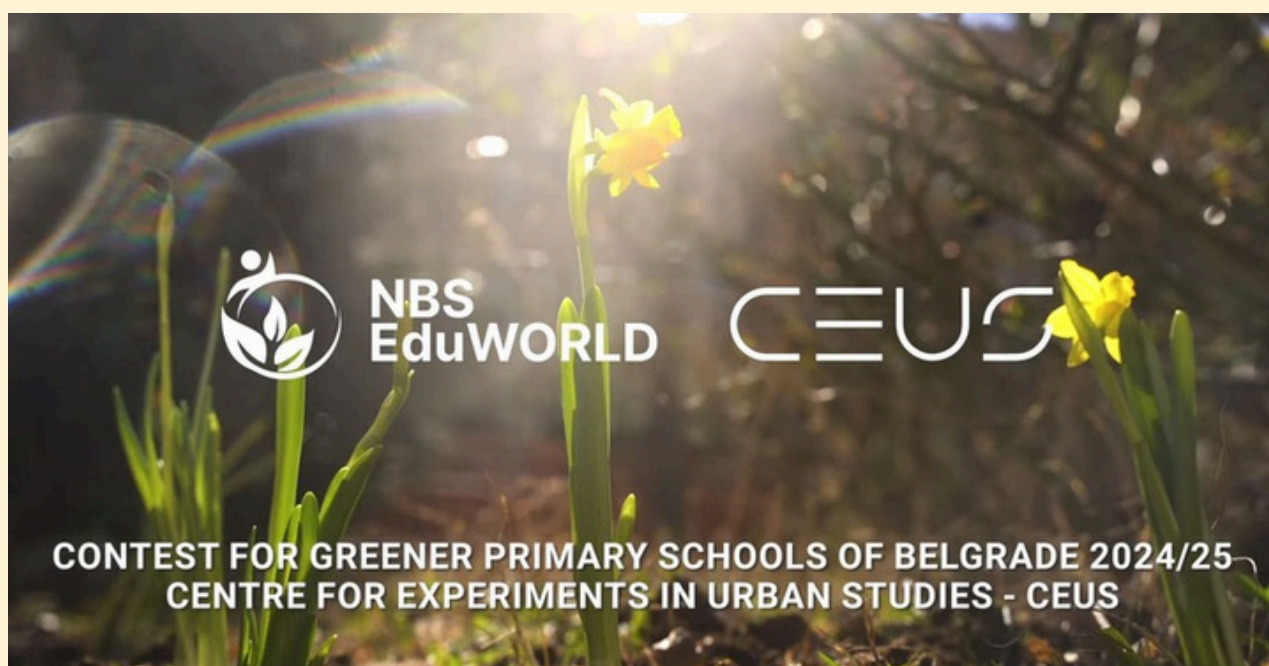
Our Movie about the Open Call for Greener Primary Schools

„Konkurs za zelenije osnovne škole” bio je izrazito živopisan i projekti škola su omogućili prikazivanje raznovrsnih prirodom-inspirisanih rešenja. Zbog slabe informisanosti javnosti o prirodom-inspirisanim rešenjima i njihovim mogućim funkcijama u ekosistemu i društvu, odlučili smo da iskoristimo ovu priliku da napravimo kvalitetnu video i foto-dokumentaciju. Uz pomoć saradnika iz JK Media, snimili smo tri implementacije zelenih rešenja u školama i te snimke pretvorili u kratke edukativne filmove koji opisuju značaj svakog od primenjenih prirodom-inspirisanih rešenja. Osim obrazovanja javnosti, film predstavlja i lepu afirmaciju uključenih škola i njihovog truda oko izvođenja projekta, pa se nadamo da će inspirisati i druge na slične akcije.

Pored sopstvene video produkcije, u sklopu aktivnosti NBS EduWorld urađeni su i srpski titlovi za kratke projektne informativno-edukativne filmove kako bi mogli da se efikasnije koriste lokalno za upoznavanje principa prirodom-inspirisanih rešenja i uvod u aktivnosti uživo.

The “Open Call for Greener Primary Schools” was particularly vibrant, with school projects showcasing a wide variety of nature-based solutions. Due to the general public’s limited awareness of these solutions and their potential ecological and social functions, we decided to seize this opportunity to produce high-quality video and photo documentation. With the support of our collaborators at JK Media, we filmed three green solution implementations in schools and turned these recordings into short educational videos that explain the significance of each nature-based solution applied. In addition to raising public awareness, the films also serve as a meaningful recognition of the schools’ efforts and dedication to their projects. We hope they will inspire others to undertake similar actions.

Alongside our own video production, Serbian subtitles were also created for the project's informational and educational short films as part of the NBS EduWorld activities. This makes them more accessible for local use in introducing the principles of nature-based solutions and complementing live activities.

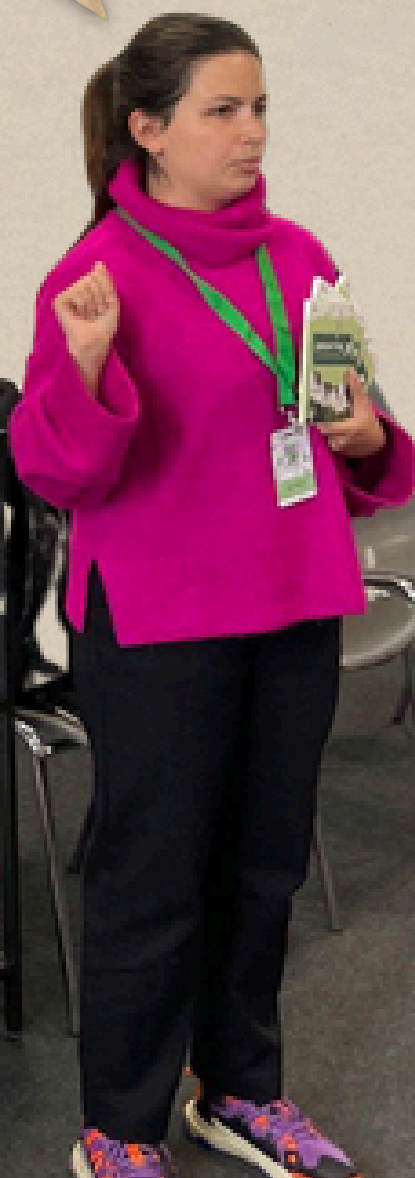
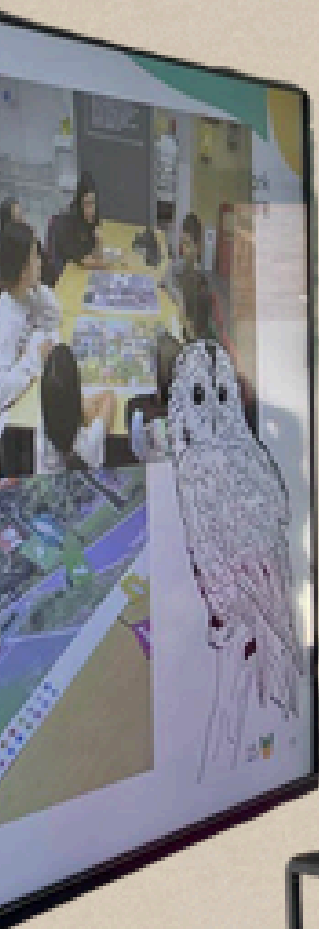


TESTIRANJE EDUKATIVNIH ALATA

TESTING OF EDUCATIONAL TOOLS

Hajde da se igramo i učimo zajedno!
U gomili šarenih kartica kriju se
neverovatna saznanja i svet prirodom-
inspirisanih rešenja!

Let's play and learn together!
The colourful stock of cards hides
incredible insights and a world of
nature-based solutions!



„Posle škole” - NBS EduWORLD Youth Inclusion Toolkit i van učionice

“After School” – The NBS EduWORLD Youth Inclusion Toolkit Beyond the Classroom

Tokom trajanja projekta, učesnici NBS EduWORLD istraživali su alate koji mogu da se koriste u prenošenju znanja o prirodom-inspirisanim rešenjima u različitim kontekstima, a posebno među mladima. Tako je nastao Vodič za uključivanje mladih u planiranje prirodom-inspirisanih rešenja (eng. *NBS EduWORLD Youth Inclusion Toolkit*).

CEUS je uspešno primenio mnoge od ovih ideja i istražio načine kako da ih što bolje prenesemo i prilagodimo našem okruženju i van učionice i u što širem opsegu ciljnih grupa. Potraga za tim načinima vodila je razvoju naših sopstvenih alata, kao i organizaciji i učešću na raznovrsnim događajima i radionicama. Ovi događaji su bili izvori lepih saradnji i susreta, omogućivši da vremenom razvijemo još prijatnije, efikasnije i tačnije metode za širenje ekoloških i urbanističkih znanja u neprestanoj interakciji sa zajednicom.

During the course of the project, the participants of NBS EduWORLD explored tools that can be used to convey knowledge about nature-based solutions across various contexts, especially among youth. This led to the creation of the NBS EduWORLD Youth Inclusion Toolkit.

CEUS successfully applied many of these ideas and explored ways to best convey and adapt them to our local context, beyond the classroom and across a wide range of target groups. This search led to the development of our own tools, as well as the organization of and participation in various events and workshops. These events became sources of meaningful collaborations and encounters, allowing us to gradually develop more engaging, effective, and accurate methods for spreading ecological and urban planning knowledge through constant interaction with the community.





Društvena igra (Board Game) -

“Divlji grad - za decu i mnoga druga bića”
“Wild City - For Children and Many Other Creatures”


Igra „Divlji grad - za decu i mnoga druga bića” je originalno izdanje, nastalo u želji da se deci, ali i odraslima, približi raznovrsni živi svet naših gradova koga često nismo svesni, kao i da se naznači kompleksnost veza u urbanoj prirodi. Način na koji pristupamo uređenju grada, broj zelenih površina u direktnom kontaktu sa tlom, njihovo stanje i održavanje odlučujući su faktori kako za opstanak drugih bića, tako i za kvalitet života i zdravlje naše vrste.

Od strane partnera sa projekta NBS EduWORLD, igra je prepoznata kao jedinstven, inovativan i veoma koristan alat za komunikaciju i edukaciju na temu prirodom-inspirisanih rešenja. Kao takvoj pružena joj je prilika da u okviru “The Nature of Cities” festivala (TNO) u Berlinu 2024. godine, bude predstavljena globalnoj publici zajedno sa drugim netipičnim oblicima i alatima komunikacije kao što su stripovi, dečije slikovnice i društvene igre. U toku sesije testiranja i poređenja ponuđenih alata, pohvaljena je sa aspekta primenjivosti na različite uzraste i jasnoće prikaza informacija.

The game “Wild City – For Children and Many Other Creatures” is an original creation, developed with the aim of introducing both children and adults to the diverse living world of our cities, life we often overlook and to highlight the complexity of relationships in urban nature. The way we design cities, the number of green spaces in direct contact with soil, and their condition and maintenance are crucial factors not only for the survival of other species but also for the quality of life and health of our own.

Recognized by partners from the NBS EduWORLD project as a unique, innovative, and highly useful tool for communication and education on nature-based solutions, the game was given the opportunity to be presented to a global audience at “The Nature of Cities” Festival (TNO) in Berlin in 2024. There, it was featured alongside other unconventional forms and tools of communication, such as comics, children’s picture books, and board games. During a session focused on testing and comparing presented tools, it was praised for its adaptability across different age groups and the clarity of its information delivery.





Set sadrži kartice sa trideset životinjskih vrsta koje nastanjuju Beograd, kao i podloge sa pet vrsta urbanih staništa u njihovim ekološki optimalnim i suboptimalnim verzijama. Tražeći koja vrsta životinje sa kartica opstaje na kom staništu, igrači uz pomoć edukatora počinju da razumeju ove pravilnosti i sagledavaju posledice preintezivne urbanizacije, usput saznajući zanimljive činjenice o našim divljim komšijama. U brojnim testiranjima u različitim uslovima (škole, vrtići, edukativne radionice, festivali, humanitarni događaji), igra se pokazala pogodnom za sve starosne grupe. Nivo kompleksnosti naracije, kao i način igranja igre, može se lako prilagoditi uzrastu.

The set includes cards featuring thirty animal species that inhabit Belgrade, along with boards representing five types of urban habitats in both ecologically optimal and suboptimal versions. As players search for which animal species can survive in which habitat, they begin, guided by an educator, to understand these patterns and see the consequences of over-intensive urbanization, all while discovering interesting facts about our wild urban neighbors. Through extensive testing in various settings (schools, kindergartens, educational workshops, festivals, and humanitarian events), the game has proven suitable for all age groups. The complexity of the narrative and the gameplay can be easily adjusted according to the players' age.



Igranje uloga (Role Play Game) -

Adaptacija igre "Renatur ta cour" Game Adaptation "Renatur ta cour"

Francuska edukativna društvena igra s karticama „**Renatur ta cour**” (u adaptaciji: „**Naše zeleno školsko dvorište**”) odlična je platforma za igranje uloga - i približava igračima problematiku uvođenja prirodom-inspirisanih rešenja u školama iz različitih uglova.

Originalna igra nastala je u okviru programa Vigie-Nature École koji sprovode francuski Nacionalni prirodnjački muzej (*Muséum national d'Histoire naturelle*) i Francuska kancelarija za biodiverzitet (*Office français de la biodiversité*, OFB).

U nedostatku ovakvih edukativnih alata na našem području, CEUS je odlučio da ceo edukativni set prevede i adaptira. Adaptacija je podrazumevala prevod igre, lokalizaciju rešenja - proveru da li su sva sprovodljiva i realna u lokalnom kontekstu, poboljšanje dizajna i ilustracija i pisanje dodatne knjižice sa pravilima i pojašnjenjima u vezi biodiverziteta, prirodom-inspirisanih rešenja i njihove primene.

The French educational card-based role-playing game “**Renatur ta cour**” (adapted as “**Our Green Schoolyard**”) is an excellent platform for roleplay, allowing players to explore the challenges and opportunities of implementing nature-based solutions in schools from various perspectives.

The original game was developed as part of the *Vigie-Nature École* program, led by the French National Museum of Natural History (*Muséum national d'Histoire naturelle*) and the French Office for Biodiversity (*Office français de la biodiversité*, OFB).

Due to the lack of similar educational tools in our region, CEUS decided to translate and adapt the entire educational set. The adaptation involved translating the game, localizing the proposed solutions, ensuring their feasibility and relevance in the local context, enhancing the design and illustrations, and creating an additional booklet with rules and explanatory content about biodiversity, nature-based solutions, and their application.



Krajem maja 2024. godine okupili smo mali radni tim za testiranje sprovodljivosti igre u lokalnim uslovima, kako bismo proverili razumljivost pravila, kartica sa aktivnostima, uloga, ali i uzrasta sa kojim je moguće igrati ovu igru. Prilikom ovog okupljanja utvrđeno je da testirani uzrast od 10 do 12 godina nema dovoljno znanja o rešenjima korišćenim u igri, što automatski isključuje i mlađe uzraste. Moguće je da ova starosna grupa efektno igra igru ukoliko edukator - vodič posveti dovoljno pažnje pojašnjenjima u vezi aktivnosti sa kartica, ali i skretanjem pažnje na specifičnosti uloga (npr., jednaestogodišnjacima još uvek nije intuitivno jasno zašto je upravi škole najvažniji ugled ustanove, a ne biološko bogatstvo dvorišta).

Sledeće testiranje sprovedeno je u osnovnoj školi „Miroslav Antić“, sa učenicima osmog razreda (14-15 god) u okviru aktivnosti ko-kreacije Konkursa za zelenije osnovne škole. Prisutni učenici podeljeni su u timove, a svakom timu dodeljen je mentor (osoba iz CEUS tima), kako bi osigurali razumeju svoju ulogu i rešenja koja se mogu primeniti u školskom dvorištu.

At the end of May 2024, we assembled a small working team to test the feasibility of the game under local conditions, aiming to assess the clarity of the rules, activity cards, roles, and the appropriate age group for gameplay. During this session, it was determined that the tested age group (10 to 12 years old) lacked sufficient knowledge about the solutions featured in the game, which effectively ruled out younger players as well. However, this age group can still play the game effectively if the educator or facilitator dedicates enough time to explaining the activities on the cards and guiding students through the role-playing process. For instance, it may not be immediately intuitive to an eleven-year-old why a school principal would prioritize the institution's public image over the schoolyard's biodiversity.

The next round of testing was conducted at “Miroslav Antić” Primary School with eighth-grade students (ages 14–15), as part of the co-creation activities within the Open Call for Greener Primary Schools. The pupils were divided into teams, with each team assigned a mentor (a member of the CEUS team) to ensure they understood their roles and the solutions applicable in their schoolyard.



Uključivanje učenika bilo je na zavidnom nivou. Pokazali su izuzetnu zainteresovanost za igru i dodeljene uloge, argumentovano su birali akcije, ali je zapažen manjak znanja o prirodom-inspirisanim rešenjima i ekologiji uopšte, a prisutni opšteprihvaćeni stereotipi koji izazivaju rezervisanost prema rešenjima (npr., pošto kompost čine otpaci, očekuje se da će obavezno biti izvor neprijantih mirisa). U okviru daljeg testiranja i sprovođenja igre u školskom okruženju potrebno je primeniti i neki oblik predavanja kako bi se proširilo znanje učenika o prikazanim prirodom-inspirisanim rešenjima.

Što se budućih korisnika tiče, osnovna ciljna grupa su nastavnici i edukatori koji bi igru koristili kao dodatni alat u nastavi i na radionicama, s obzirom da je igra previše kompleksna da bi je učenici igrali samostalno. Prvi mali tiraž štampan je krajem leta 2025. godine.

Student engagement was at an impressive level. They showed exceptional interest in the game and their assigned roles, making well-reasoned choices during gameplay. However, a lack of knowledge about nature-based solutions and ecology in general was observed, along with common stereotypes that create hesitancy toward such solutions (e.g., the belief that compost, being made of waste, must inevitably produce unpleasant odors). For future implementation and testing of the game in school settings, it is necessary to include some form of introductory lecture or lesson to expand students' understanding of the nature-based solutions presented.

As for future users, the primary target group includes teachers and educators, who would use the game as a supplementary tool in classes and workshops, since the game is too complex to be played independently by students. The first small print run of the game was produced at the end of summer 2025.





Treća mesta (Third Spaces) -

Edukativne šetnje i radionice u javnom prostoru Educational Walks and Workshops in Public Space

Učenje se može odvijati i van prostora koji pripada institucijama. Javni prostori i mesta okupljanja mladih posebno su i izazovni i inspirativni za neformalno ekološko obrazovanje.

Sprovođenje obrazovnih aktivnosti u parkovima ne samo da daje novu dimenziju obrađivanoj temi ili gradivu, već predstavlja odličnu priliku za transfer znanja van originalne ciljane grupe. Zahvaljujući pažljivom urbanističkom planiranju u prošlosti, Beograd i dalje ima izuzetne parkovske površine, a posebno se ističu one sa velikom površinom i udelom zelenila (npr. Košutnjak, Ušće, Šumice, Bajfordova šuma). Činjenica da u njima opstaje veliki udeo divljine čini ih i funkcionalnim ekosistemima i prostranim zonama rekreacije - i upravo zato su i idealna mesta za „nastavu u prirodi“ za sve generacije. Ovi prostori imaju enorman potencijal, a na nama je kako ćemo ih koristiti.

Upravo da bismo ih validirali i približili sugrađanima, jedna od prvih radionica koju je CEUS organizovao u okviru projekta bila je šetnja „Prirodom-inspirisana rešenja u gradskim sredinama“ u aprilu 2024. godine. U fokusu je bila urbana priroda novobeogradskih blokova 15, 16. i 21, a tura je završena na ekstenzivnom zelenom krovu garaže dve kule Ušće. Sa kolegama i sugrađanima, pričali smo o njegovim koristima, ali i manama i problemima, zatim o medonosnim žardinjerama i zasadima, mozaičkom košenju i mnogim drugim prirodom-inspirisanim rešenjima. Cilj ove šetnje bio je poziv da vrednujemo dobra rešenja koja već imamo, ali i da razmislimo i o novim o prirodom-inspirisanim rešenjima koja su poželjna i potrebna ovom gradu.

Learning can take place outside institutional settings. Public spaces and youth gathering spots are particularly both challenging and inspiring for informal environmental education.

Conducting educational activities in parks not only adds a new dimension to the topic or curriculum but also offers an excellent opportunity for transferring knowledge beyond the original target group. Thanks to careful urban planning in the past, Belgrade still boasts exceptional park areas, with standout examples being those with vast green spaces, such as Košutnjak, Ušće, Šumice, and Bajford's Forest. The fact that these parks sustain a significant share of wild nature makes them both functional ecosystems and expansive recreational zones, making them ideal places for “outdoor classrooms” for all generations. These spaces hold enormous potential; it's up to us how we use them.

To highlight and bring these spaces closer to citizens, one of the first workshops CEUS organized within the project was the walk “Nature-Based Solutions in Urban Environments” in April 2024. The focus was on the urban nature of New Belgrade blocks 15, 16, and 21, ending at the extensive green roof atop the garage of the two Ušće towers. Alongside colleagues and fellow citizens, we discussed its benefits, but also its shortcomings and challenges, as well as pollinator-friendly planters and plantings, mosaic mowing, and many other nature-based solutions. The aim of this walk was to encourage appreciation of the good solutions we already have, while also reflecting on new nature-based interventions that are both desirable and necessary for this city.

Tokom trajanja projekta, imali smo zadovoljstvo da budemo pozvani na dva događaja u beogradskim parkovima, oba angažovanog karaktera i organizovana od strane građanskih inicijativa - Humanitarni bazar za studente u parku Šumice (Voždovac), i skup „Sačuvajmo park Ušće”. Na obe radionice korišćena je igra „Divlji grad”, ali na dva potpuno različita načina. U Šumicama, naš štand nalazio se u sklopu dečijih radionica, pa smo je koristili da bismo sa decom razgovarali o biodiverzitetu i životinjskim stanovnicima Šumica, uz pokazivanje nekih lokalno pronađenih bioloških uzoraka (stari osinjak, pera, košuljice insekata, itd.), akcentujući koliko je značajno što njihov komšiluk ima toliko zelenila.

U parku Ušće, koje se suočava se neprimerenim razvojem i povećanjem površine izgrađenog zemljišta za potrebe EXPO 2027 međunarodnog sajma, posetioci štanda bili su uglavnom odrasli; sa svojim paralelno prikazanim optimalnim i suboptimalnim gradskim staništima, naša igraodlično je poslužila da ilustruje nestanak vrsta u slučaju preterane urbanizacije. Zanimljivo je da su efektnost „Divljeg grada” prepoznali i studenti Fakulteta dramskih umetnosti, koji su deo demonstracije igre uvrstili u svoj dokumentarac „EXPO 2027: Skok u budućnost”.

During the course of the project, we were pleased to be invited to two events in Belgrade parks, both civic-driven and organized by grassroots initiatives: the Humanitarian Bazaar for Students in Šumice Park (Voždovac) and the “Save Ušće Park” gathering. At both workshops, the game “Wild City” was used but in two entirely different ways.

In Šumice, our booth was part of the children’s workshop area, so we used the game to talk with kids about biodiversity and the animal residents of the park. We showed local biological samples (an old wasp nest, feathers, insect exuviae, etc.), emphasizing how valuable it is that their neighborhood has so much greenery.

At Ušće Park, which is currently facing threats from inappropriate development and an increase in built-up land to accommodate the EXPO 2027 World Fair, our booth was mostly visited by adults. With its side-by-side displays of optimal and suboptimal urban habitats, “Wild City” served as a powerful illustration of how excessive urbanization leads to species loss.

Interestingly, the game’s effectiveness was also recognized by students from the Faculty of Dramatic Arts, who included a segment of the game demonstration in their documentary “EXPO 2027: A Leap into the Future.”







Građanska nauka (Citizen Science)

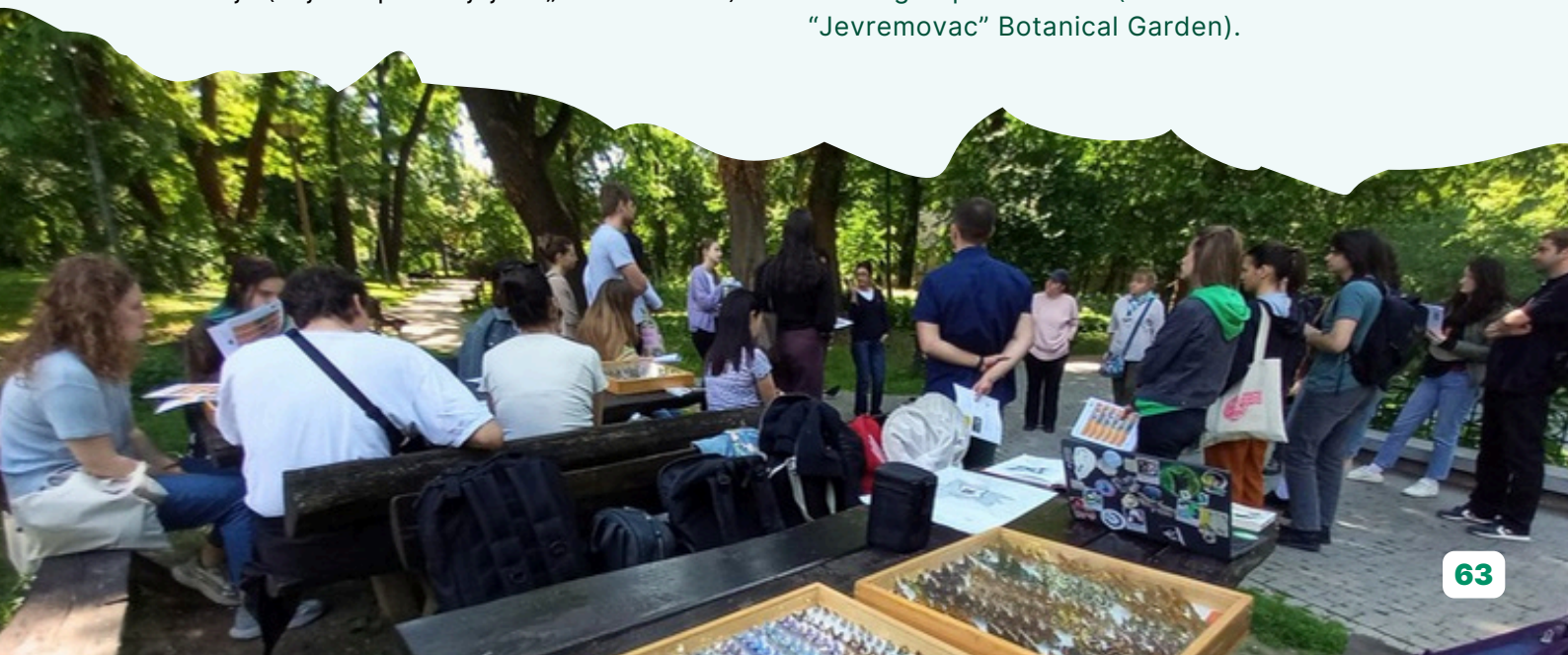
Istraživanje beogradskih leptira Exploring Belgrade's Butterflies

Osim BioBlic radionice koja neminovno uključuje i element građanske nauke, u proleće 2025. godine, u sinergiji sa drugim Horizont Evropa projektom UNPplus i lokalnim ekspertima za leptire dr Milošem Popovićem i Milicom Zlatić, CEUS je organizovao tri radionice identifikacije dnevnih leptira Beograda. Projekat UNPplus bavi se testiranjem izrade Planova urbane prirode (eng. *Urban Nature Plans*) u skladu sa Regulativom o obnovi prirode EU (eng. *Nature Restoration Regulation*), što u urbanim sredinama zahteva ozelenjavanje i povećanje površina pod krošnjama. Ozelenjavanje uključuje različita prirodom-inspirisana rešenja - od zelenih fasada i krovova do gradskih vrtova, pa je prilika za sinergiju sa projektom NBS EduWORLD bila očigledna.

Uvodna radionica održana je Botaničkoj bašti „Jevremovac“ u Beogradu. Prijavljeni građani, ljubitelji leptira od početnika do iskusnih entuzijasta, okupili su se kako bi naučili osnove praćenja leptira u okviru Evropskog programa za praćenje leptira (eBMS), upoznali se sa raznovrsnošću leptira u Beogradu i Srbiji, kao i sa metodama koje naučnici koriste za proučavanje leptira u prirodi. Poseban akcenat bio je na prirodnim rešenjima koja podržavaju populacije leptira, poput uzgoja medonosnih biljaka i mozaičkog košenja (koje se primenjuje u „Jevremovcu“).

In addition to the BioBlitz workshop, which inherently involves elements of citizen science, in spring 2025, CEUS organized three butterfly identification workshops in synergy with another Horizon Europe project UNPplus, and local butterfly experts Miloš Popović and Milica Zlatić. The UNPplus project focuses on testing the development of *Urban Nature Plans* in line with the *EU Nature Restoration Regulation*, which, in urban areas, requires greening and expanding tree canopy cover. Greening involves various nature-based solutions, from green facades and green roofs to urban gardens, so the opportunity for synergy with the NBS EduWORLD project was evident.

The introductory workshop was held at the “Jevremovac” Botanical Garden in Belgrade. Registered participants, citizens, and butterfly enthusiasts, ranging from beginners to experienced hobbyists, gathered to learn the basics of butterfly monitoring as part of the European Butterfly Monitoring Scheme (eBMS), to explore butterfly diversity in Belgrade and Serbia, and to understand the scientific methods used to study butterflies in the wild. Special attention was given to nature-based solutions that support butterfly populations, such as growing nectar-producing plants and implementing mosaic mowing practices (as used in the “Jevremovac” Botanical Garden).



U nedeljama koje su usledile, priređena su dva onlajn predavanja i jedan terenski izlet, na kojima su učesnici poboljšali svoja znanja i veštine „leptirašenja“. Još jedna bitna stvar je da je oformljen njuzleter „Metamorfoza“ [5] i digitalna zajednica ljubitelja leptira voljnih da rade brojanje u ulozi građanskih naučnika. Oni ostaju informisani putem mejling liste, a u svakom trenutku mogu postaviti pitanja, podeliti nalaze i proćaskati sa drugim entuzijastima u posebnoj Whatsapp grupi ili mejlom.

Ovogodišnji rezultati brojanja leptira:

- Na ukupno 21 lokaciji u gradu, 12 građanskih naučnika aktivno broji leptire u okviru 15-minutnih transekata.
- **Tokom maja, juna i jula 2025. godine, ova zajednica je pribeležila 351 nalaz leptira** u okviru eBMS Butterfly Count aplikacije, što je skoro pet puta više od zbira nalaza u istoj aplikaciji za 2020, 2022 i 2024. godinu *zajedno*, kada je zabeležen ukupno 71 nalaz.

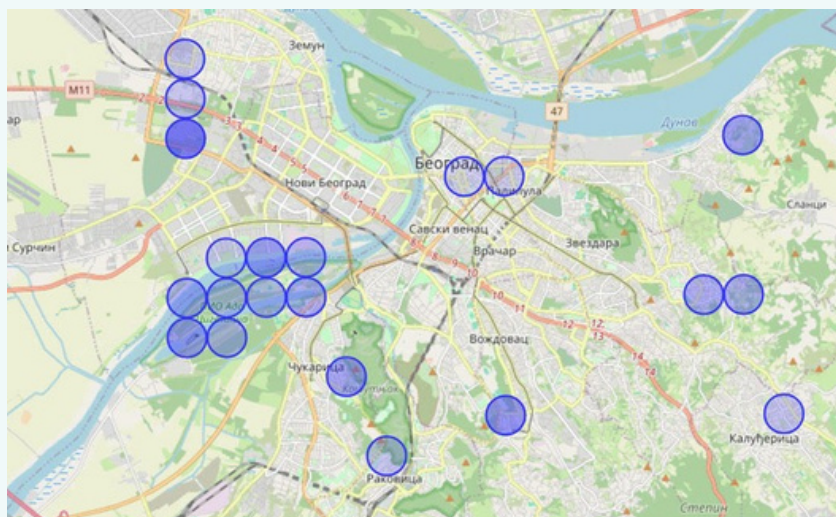
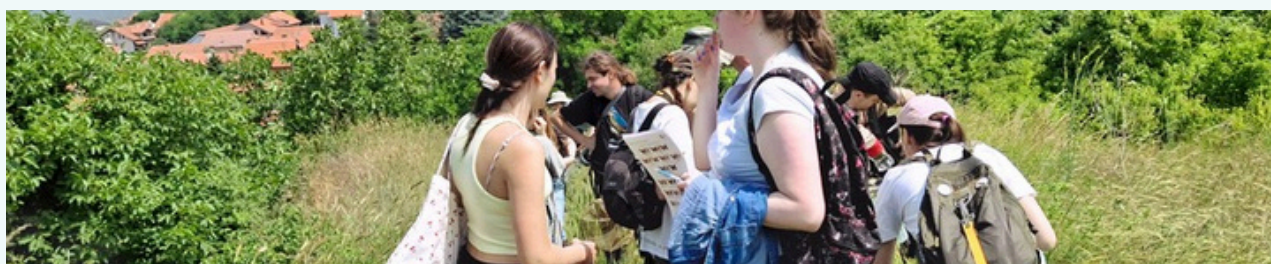
Zajednica beogradskih „leptiraša“ nastavlja da raste, a tim se nada da će ih proširiti i na osnovne škole u kojima ima uslova za posmatranje i brojanje leptira. U **Prilogu IV** ove publikacije možete pronaći **identifikacionu listu dnevnih leptira Beograda** napravljenu od strane tima u toku projekta.

In the weeks that followed, two online lectures and one field excursion were organized, during which participants enhanced their knowledge and skills in “butterflying.” Another important outcome was the creation of a newsletter, “Metamorfoza” [5], and a digital community of butterfly enthusiasts committed to citizen science. Members stay informed via the mailing list and can ask questions, share observations, and chat with fellow enthusiasts at any time via a dedicated WhatsApp group or email.

Initial results of citizen butterfly counts:

- At 21 locations across the city, 12 citizen scientists are actively conducting butterfly counts through 15-minute transects.
- **During May, June, and July 2025, the community recorded 351 butterfly observations** in the eBMS Butterfly Count app, nearly five times more than the combined total of 71 records in the same app for the years 2020, 2022, and 2024.

Belgrade’s butterfly-watching community continues to grow, and the extended team hopes to expand these efforts to elementary schools where conditions are suitable for observing and counting butterflies. **Annex IV** of this publication contains a **butterfly ID sheet** created by the team during the project.



Biodiverzitet na blic - BioBlic

BioBlitz

BioBlic je metoda popisa biodiverziteta neke lokacije koja je vremenski ograničenog, kratkog trajanja, sa krajnjim ciljem unosa nalaza u neku od baza podataka o biološkoj raznovrsnosti baziranih na građanskoj nauci.

Za BioBlic se koriste različiti protokoli, a mi smo za lokalne potrebe ovom prilikom napravili selekciju najprimenljivijih primera i iskombinovali ih sa sopstvenim idejama, što je rezultiralo novim originalnim protokolom. Prvi školski BioBlic u Srbiji odigrao se u OŠ „Đura Daničić“ u izvedbi učenika četvrtog razreda. Zaključak CEUS tima je da je, makar za ovaj uzrast, BioBlic zapravo najefektniji alat za direktno upoznavanje učenika i mladih sa biodiverzitetom i prirodom nekog kraja, posebno ako im se dozvoli da svoje telefone koriste na konstruktivan način - isključivo za fotografisanje i identifikaciju vrsta.

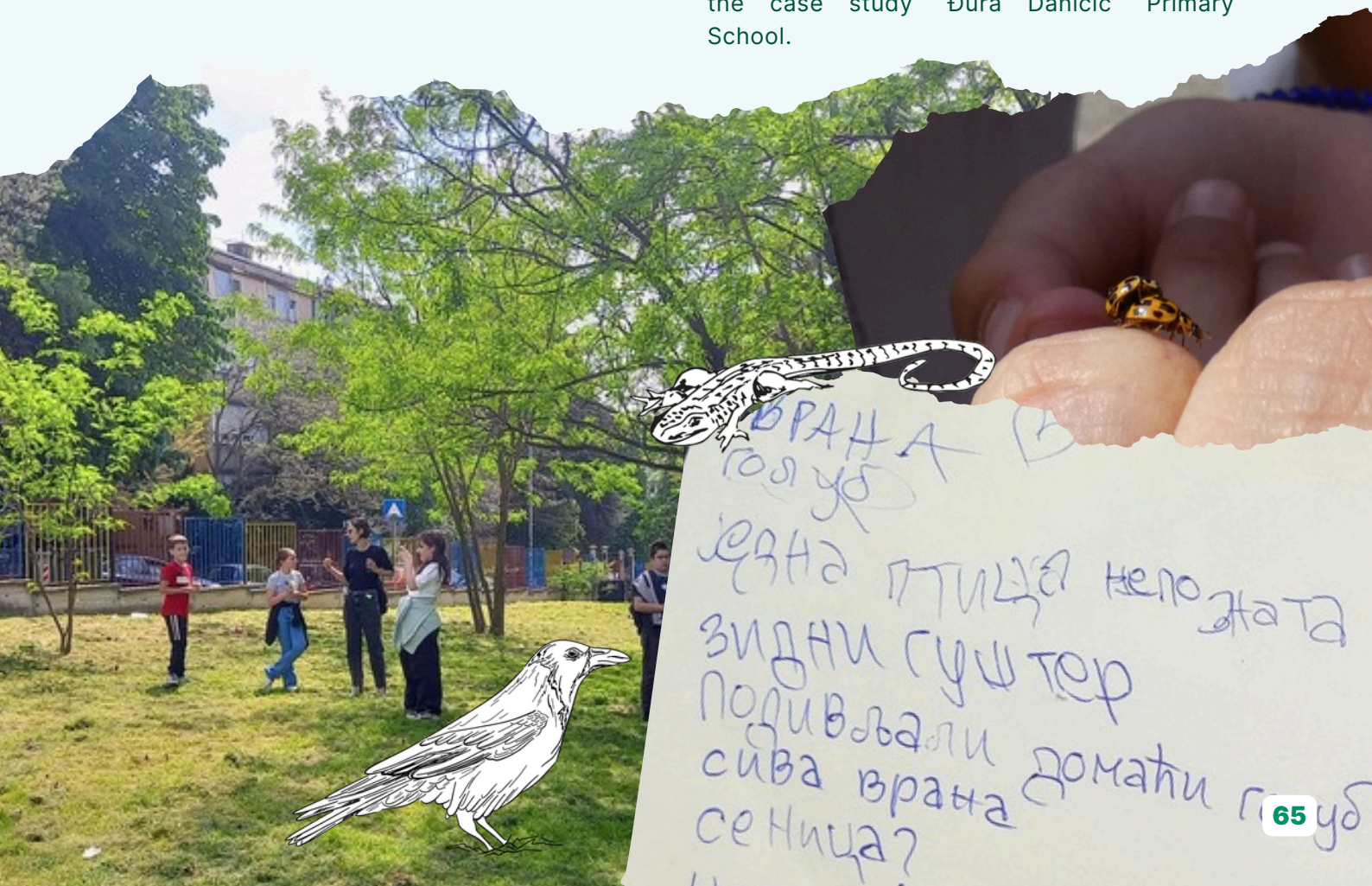
Više detalja o ovom događaju možete pronaći u studiji slučaja „OŠ Đura Daničić“.

BioBlitz is a biodiversity survey method focused on recording as many species as possible at a specific location within a limited (and short) timeframe, with the ultimate goal of submitting findings to biodiversity databases based on citizen science.

Various protocols are used for BioBlitz events, and for local needs, we created a selection of the most applicable examples and combined them with our own ideas, resulting in a new, original protocol.

The first school BioBlitz in Serbia took place at “Đura Daničić” Primary School, conducted by fourth-grade students. The CEUS team concluded that, at least for this age group, BioBlitz may be the most effective tool for directly introducing students and young people to local biodiversity and nature, especially when they are allowed to use their phones constructively - exclusively for photographing and identifying species.

You can find more details about this event in the case study “Đura Daničić” Primary School.



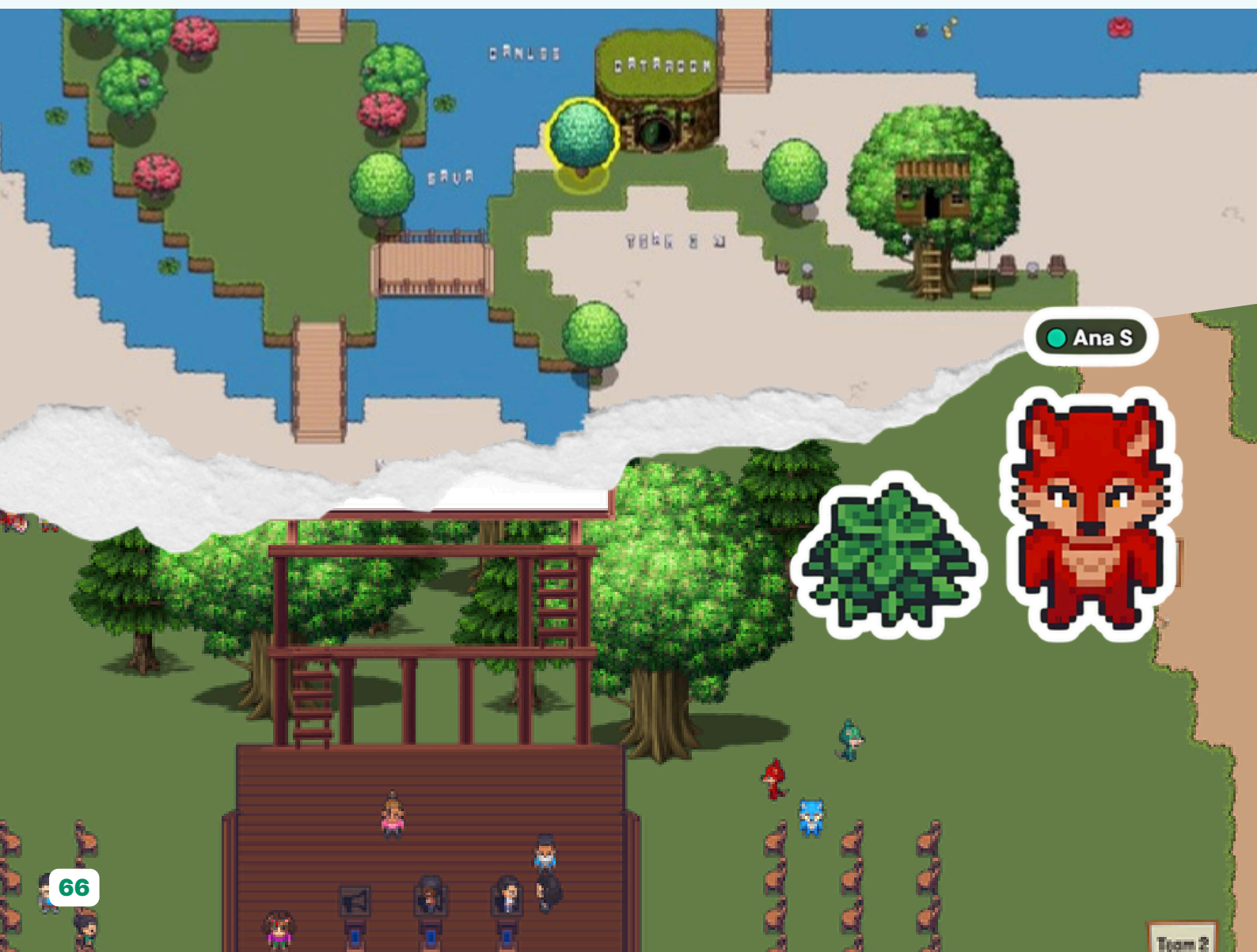
Hakaton

U maju 2024, članice CEUS-a su imale priliku da budu mentori (coach-evi) na velikom NBS EduWORLD Hakatonu koji se odigravao u virtuelnom okruženju platforme Gather Town. Internacionalni timovi studenata imali su zadatak da osmisle projekat (re)aktivacije zadatog lokaliteta koristeći prirodom-inspirisana rešenja. Jedan od lokaliteta bila je i beogradska bara Reva sa okolnim vlažnim staništima - izuzetno biološki bogato i funkcionalno značajno područje uz dunavski nasip Krnjače, ugroženo planiranim komercijalnim razvojem. Upravo je tim koji se bavio revitalizacijom Reve pobedio sa najboljim rešenjem, uz čuvanje divljine kao jako značajnim prirodom-inspirisanim rešenjem - koje se često previdi.

Hackathon

In May 2024, CEUS members had the opportunity to serve as mentors (coaches) at the large NBS EduWORLD Hackathon, held in the virtual environment of the Gather Town platform. International student teams were tasked with designing a project to (re)activate a designated site using nature-based solutions.

One of the selected sites was Belgrade's Reva Pond and its surrounding wetland habitats - a biologically rich and ecologically important area located along the Danube levee in Krnjača, currently threatened by planned commercial development. The team working on the revitalization of Reva won first place for the best solution, emphasizing the preservation of wilderness as a highly valuable, yet often overlooked, nature-based solution.



SARADNJA SA PRIVATNIM SEKTOROM KROZ JAVNE DOGADJAJE

COLLABORATION WITH PRIVATE SECTOR VIA PUBLIC OUTREACH ACTIVITIES

Gde god da su bile radionice, sa kim god da se saradivalo - ja sam uvek bio prisutan! Ali mnogo više mi gode zgrade sa puno okolnog zelenila, nego ogromne staklene fasade sa ponekim kvadratom zelenog krova.

Wherever the workshops were held, and with whomever the collaboration took place – I was always present! But I much prefer buildings surrounded by abundant greenery, rather than huge glass facades with just a patch of green roof.

Golub
(*Columba livia*)



Radionice na krovnoj bašti između kula Ušće

Workshops on the Roof Garden Between the Ušće Towers

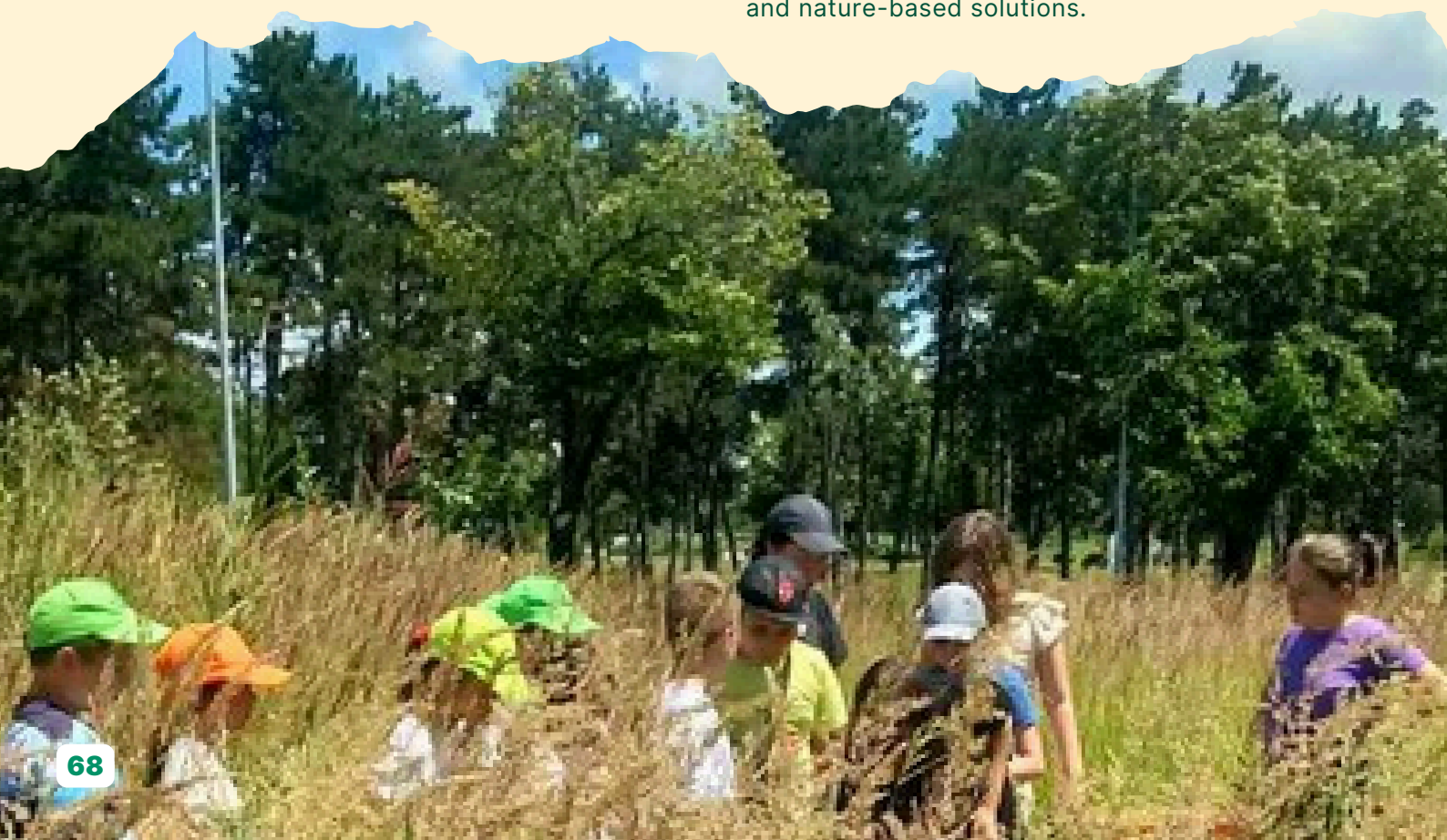
Kompanija MPC Properties je u okviru kompleksa kule Ušće 1 i 2 oformila krovnu baštu sa mnoštvom pratećih sadržaja. Neki od sadržaja koji se nalaze na ovom bogato ozelenjenom krovu, a značajni su za promociju prirodom-inspirisanih rešenja, su dekorativno-medonosna bašta i povrtnjak u uzdignutim lejama kao primer urbane poljoprivrede. Kako se u privatnom sektoru sve više teži održivom poslovanju i uspostavljanju i postizanju visokih ESG ciljeva, MPC je u svoje aktivnosti uvrstio i organizaciju različitih ekološko-edukativnih radionica usmerenih na decu i mlade sa saradnicima iz različitih institucija i udruženja, a najveća od tih aktivnosti je Ušće EkoFest.

U 2024. godini, CEUS je bio pozvan da bude deo edukativnih aktivnosti i učestvovali smo na ukupno tri izuzetno posećene radionice u krovnoj bašti, koja je činila idealnu pozadinu za naše igre i razgovore.

As part of the Ušće Towers 1 and 2 complex, the company MPC Properties established a rooftop garden with a variety of accompanying features. Some of the elements on this lushly green rooftop that are particularly relevant to promoting nature-based solutions include a decorative, pollinator-friendly garden and a vegetable garden in raised beds, an example of urban agriculture.

With the private sector increasingly pursuing sustainable practices and striving to meet high ESG (Environmental, Social, and Governance) standards, MPC has incorporated a range of ecological and educational activities for children and youth, in collaboration with various institutions and organizations. The largest of these initiatives is Ušće EkoFest.

In 2024, CEUS was invited to participate in the educational program and took part in a total of three well-attended workshops held in the rooftop garden, an ideal setting for our games and discussions on urban biodiversity and nature-based solutions.



Radionice “Grad ima drugo lice: pčele, drveće i ptice!”

Workshops “The City has Another Face: Bees, Trees and Birds!”

Prve dve MPC Properties radionice sproveli smo zajedno sa kolegama sa Biološkog fakulteta Univerziteta u Beogradu i iz Društva pčelara Beograda. Ciljna grupa ovih radionica bili su mlađi osnovci koji su u organizovanim grupama dolazili iz odabranih škola u pratnji svojih učiteljica. Svaka radionica bila je podeljena u tri rotirajuća segmenta baziranih na grupama organizama - zavisno od ekspertize, po jedna grupa edukatora približila je deci svet biljaka, životinja i (zasebno) pčela. Tako je postignuto da u toku trajanja radionice oko stotinak dece čuje i nauči ponešto iz svake oblasti.

Radionice CEUS-a bile su podeljene u dva dela. Prvi deo obuhvatao je obilazak bašte – najpre povrtnjaka, sa fokusom na prepoznavanje različitih tipova i vrsta povrća i razumevanju značaja organske urbane poljoprivrede, a zatim i ostatka bašte, u kome smo posmatrali i upoznavali zanimljive biljne vrste i sitne životinje.

Drugi segment radionice bio je posvećen igri „**Divlji grad**“. Zajedno smo istraživali koje životinjske vrste naseljavaju različita staništa i kako se njihova raznovrsnost gubi usled degradacije staništa i prekomerne urbanizacije.

The first two workshops organized by MPC Properties were conducted in collaboration with colleagues from the Faculty of Biology at the University of Belgrade and the Beekeepers’ Association of Belgrade. The target group for these workshops was younger elementary school students, who arrived in organized groups from selected schools, accompanied by their teachers. Each workshop was divided into three rotating segments, based on groups of organisms - plants, animals, and bees, with one team of educators per group, depending on their expertise. This structure ensured that, over the course of the event, approximately 100 children were introduced to and learned from each thematic area.

CEUS workshops were split into two parts. The first involved a tour of the garden - starting with the vegetable beds, focusing on recognizing different vegetable species, and discussing the importance of organic urban agriculture. This was followed by exploring the rest of the garden, where we observed and examined interesting examples of plants and small animals.

The second segment of the workshop centered around the game “Wild City.” Together, we explored which animal species inhabit different types of habitats and how species diversity is lost due to habitat degradation and excessive urbanization.





Ušće EkoFest 2024

Jednodnevni Beogradski EkoFest 2024 uključivao je različite naučne radionice i predavanja, umetničko-kreativne aktivnosti sa ciljem promocije održivosti i zelenih rešenja, kao i bazar malih lokalnih i zelenih biznisa.

Naziv CEUS radionice bio je „Urbana poljoprivreda, uz biljke i životinje grada“, što je dobro reflektovalo njen sadržaj. Obilazak krovne bašte bio je prilagođen i deci i odraslima; akcentovao je značaj urbane poljoprivrede, principa organske proizvodnje, kao i medonosnih i začinskih biljaka. Za to vreme, za stolovima u kutku za dečije radionice priredili smo igru „Divlji grad“, ovog puta obogaćenu pravim uzorcima, od kojih se najviše istakla kolekcija pera gradskih ptica. Za najmlađe učesnike, koji još ne mogu da isprate tok društvene igre, priredili smo kutak za bojenje ilustracija iz igre.

Šarenoliku publiku festivala činili su uglavnom posetioци obližnjeg tržnog centra, među kojima su najbrojniji bili roditelji sa decom koje su privukle aktivnosti i muzika. Reakcije na igru, obilazak i umetničke poduhvate bile su veoma pozitivne. Nažalost, CEUS edukatorke primetile su nešto što je deo šireg globalnog fenomena - kod mlađih uzrasta, sposobnost identifikacije divljih životinja, čak i onih najčešćih (golub, vrana, vrac, pacov...) u značajnom je padu u odnosu na prethodne generacije. Fenomen poznat kao „slepilo za biljke“, neopažanje biljaka i biljne raznolikosti, kao da se širi i na percepciju divljih životinjskih vrsta. Ovo zapažanje svakako unosi nespokoj, ali i daje dodatnu motivaciju za ulaganje napora u neformalno ekološko obrazovanje.

Zahvaljujući ovim aktivnostima, obezbeđen je značajan deo budžeta za materijalne intervencije u okviru „Konkursa za zelenije osnovne škole“.

The one-day Belgrade EkoFest 2024 featured a range of scientific workshops and lectures, artistic and creative activities promoting sustainability and green solutions, as well as a market for small local and eco-friendly businesses.

CEUS's workshop, titled "Urban Agriculture, with the Plants and Animals of the City," aptly reflected its content. The rooftop garden tour was tailored for both children and adults, emphasizing the importance of urban agriculture, organic farming principles, and the role of nectar-producing and aromatic plants. Meanwhile, in the children's workshop corner, we hosted the game "Wild City," this time enriched with real-life samples, the most popular of which was a collection of feathers from urban bird species. For the youngest visitors, who were not yet able to follow the gameplay, we provided a coloring station featuring illustrations from the game.

The festival's diverse audience consisted mainly of visitors from the nearby shopping mall, with parents and children the most represented group, drawn by the activities and music. Feedback on the game, garden tour, and artistic activities was overwhelmingly positive. Unfortunately, CEUS educators observed a broader, concerning global trend: among younger children, the ability to identify even the most common wild animals (pigeon, crow, sparrow, rat...) has significantly declined compared to previous generations. The phenomenon known as "plant blindness", the failure to notice plants and plant diversity, now seems to be extending to the perception of wild animal species as well. This realization is unsettling, but it also reinforces our commitment to investing in informal ecological education.

Thanks to these activities, a significant portion of the budget for material interventions in the "Open Call for Greener Primary Schools" was secured.

Publikacija „Principi ozelenjavanja školskih dvorišta sa analizom pravilnika i praksi iz regiona”

Publication "Principles of Greening Schoolyards with an Analysis of Rulebooks and Practices from the Region"

Tokom rada sa školama u okviru projekta NBS EduWORLD, postalo je jasno da nedostaje literature na srpskom jeziku koja se bavi prirodom-inspirisanim rešenjima u kontekstu ozelenjavanja škola, kao i da je domaća regulativa koja se bavi problematikom uređenja školskih dvorišta nepotpuna, a ona regionalna nedovoljno poznata na lokalu.

Publikacija „**Principi ozelenjavanja školskih dvorišta sa analizom pravilnika i praksi iz regiona**” približava principe prirodom-inspirisanih rešenja prosvetnim radnicima, školskim zajednicama, stručnjacima i donosiocima odluka. Cilj je bio validirati i usmeriti postojeće dobre prakse i približiti slične primere i iskustva iz Evrope. Inspiracija za publikaciju došla je od OASIS projekta ozelenjavanja pariskih školskih dvorišta sa ciljem jačanja otpornosti gradske zajednice na klimatske promene, kao i iz drugih resursa i znanja stečenih u toku sprovođenja NBS EduWORLD projekta. Značajan deo fotografija i analiza rezultat je „Konkursa za zelenije osnovne škole”.

During collaboration with schools under the NBS EduWORLD project, it became evident that there is a lack of Serbian-language literature on nature-based solutions (NbS) in the context of schoolyard greening. Additionally, national regulations concerning the design and development of schoolyards are incomplete, and regional practices are not well known at the local level.

The publication “Principles of Greening Schoolyards with an Analysis of Regulations and Practices from the Region” aims to bring the principles of nature-based solutions closer to educators, school communities, professionals, and decision-makers. Its goal is to validate and guide existing good practices while introducing similar examples and experiences from across Europe.

The inspiration for the publication came from the OASIS project in Paris, which focuses on greening schoolyards to increase community resilience to climate change, along with other resources and knowledge gathered throughout the implementation of the NBS EduWorld project. A significant portion of the photos and analysis featured in the publication resulted from the “Open Call for Greener Primary Schools”.



Analize u ovoj publikaciji su celovite i mutlidisciplinarnе i uključuju arhitektonske, pejzažne, ekološke, klimatološke i socijalne perspektive, kao i aktuelne teme upotrebe prirodnih i inovativnih materijala i poboljšanja energetske efikasnosti. Veliki fokus je na postizanju ekološke ravnoteže i mogućnosti da se dvorište koristi kao „živa laboratorija”- poligon za upoznavanje dece sa prirodom, a samim tim i kao nastavno sredstvo.

S obzirom da je ova oblast u Republici Srbiji nedovoljno zakonski uređena, sadržaj upotpunjuje analiza zakonskih akata iz regiona u vezi školskih dvorišta i kvaliteta njihovih zelenih površina. One donose brojne primere pravne validacije važnosti zelenih školskih dvorišta i vrtova, koje se zasnivaju na naučnim referencama o značaju ozelenjenih prostora, igrališta i aktivne slobodne igre za sveukupni razvoj dece.

Iako je fokus bio na osnovnim školama, analize i principi su primenljivi i na druge obrazovne institucije - pre svega predškolske ustanove i srednje škole.

Publikacija je deljena pre svega nastavnicima koji su učestvovali u „Konkursu za zelenije osnovne škole” kao dodatna edukativna podrška i način da se produbi tema prirodom-inspirisanog rešenja. Izuzetno nam je drago i da je značaj ove publikacije prepoznat od strane žirija XI Salona pejzažne arhitekture u Beogradu, koji joj je dodelio Pohvalu. S obzirom da je tema salona glasila „Šta bi bilo da nas nema?”, sa fokusom na značaj pejzažne arhitekture i posledicama njenog isključivanja iz planiranja, nadamo se da naša publikacija može da posluži kao dodatni element dublji uvid u tematiku iz perspektive uređenja školskih dvorišta.

The analyses in this publication are comprehensive and multidisciplinary, encompassing architectural, landscape, ecological, climatological, and social perspectives, as well as current topics such as the use of natural and innovative materials and improvements in energy efficiency. A major focus is placed on achieving ecological balance and the potential for schoolyards to function as a NbS Living Lab - spaces for children to connect with nature and serve as educational tools.

Given that this field is underregulated in the Republic of Serbia, the publication is enriched by an analysis of regional legal acts concerning schoolyards and the quality of their green areas. These regional examples provide numerous cases of legal validation of the importance of green schoolyards and gardens, based on scientific evidence about the benefits of green spaces, playgrounds, and active free play for children's overall development.

Although the focus is on primary schools, the analyses and principles are applicable to other educational institutions - particularly preschools and secondary schools.

The publication was primarily distributed to teachers who participated in the “Greener Schools Contest” as an additional educational resource and a way to deepen the topic of nature-based solutions. We are especially pleased that the significance of this publication was recognized by the jury of the XI International Landscape Architecture Salon in Belgrade, which awarded it a Special Mention. As the theme of the salon was “What if we weren't there?”, highlighting the role of landscape architecture and the consequences of its exclusion from planning, we hope our publication contributes meaningful insights into the topic from the perspective of schoolyard design.

IZAZOVI I NAUČENE LEKCIJE

CHALLENGES AND LESSONS LEARNED

CEUS smatra da je transparentnost u vezi problema ključna za proces kolektivnog učenja o prirodom-inspirisanim rešenjima i njihovim ograničenjima u određenim sredinama. Iz obrade ovih zapažanja iz prakse, problemi mogu da se prevaziđu. Studije slučaja se često bave samo pozitivnim i neproblematičnim aspektima projekata, a izostavljaju ono što je predstavljalo problem ili kočnicu, što povećava rizik da oni koji ih repliciraju naprave iste greške. Potrudili smo se da izbegnemo takav pristup, i da realno sagledamo i prikažemo izazove i ograničenja.

CEUS believes that transparency regarding challenges is essential for the collective learning process about nature-based solutions and their limitations in specific contexts. By processing these real-world insights, such issues can be overcome. Case studies often focus solely on the positive and unproblematic aspects of projects, leaving out the obstacles or bottlenecks encountered, thereby increasing the risk that those attempting to replicate them will make the same mistakes. We made an effort to avoid such an approach and to realistically assess and present the challenges and limitations.

Možda žmirim na svetlu, ali ne žmurim na probleme i izazove... kada je teško - trudim se da izvučem pouke za buduće akcije.

Maybe I squint at the light, but I don't turn a blind eye to problems and challenges - I try to learn my lessons for future actions.

Šumska sova
(*Strix aluco*)



Održavanje školskih dvorišta (i zelenila u njima)

Maintenance of Schoolyards (and Greenery)

Najveći deo štete koje su pretrpele primenjene zelene intervencije i prirodno-inspirisana rešenja dogodio se zbog neadekvatnog održavanja. Na primer, sadnice drveća u jednoj od škola su potpuno uništene tokom košenja od strane angažovanog trećeg lica.

Oštećivanje stabala od strane službi održavanja poznat je problem u gradskim sredinama. Preventivne mere uključuju:

- ograđivanje sadnica „štitnicima“ (eng. *tree guards*); oni se mogu lako i jeftino napraviti od plastičnih cevi ili plastičnih flaša, mada su cevi kvalitetnije i praktičnije (upadljivo) obojene.
- ograđivanje zasada baštenskim ogradama
- razgovor sa timom za održavanje (nema uticaja ako se angažuju ljudi sa strane).

Ove preventivne mere se ne smeju odlagati, već ih treba obaviti na kraju same sadnje ili neposredno posle.

Nedovoljno zalivanje takođe može biti prepreka za opstanak novih biljaka. Školama često nedostaje oprema za zalivanje. Delegiranje odgovornosti za zalivanje novih zasada takođe ulazi u pitanje održavanja.

Most of the damage sustained by implemented green interventions and nature-based solutions resulted from inadequate maintenance. For example, tree seedlings in one school were completely destroyed during mowing by a contracted third party.

Damage to tree trunks by maintenance crews is a well-known issue in urban environments. Recommended preventive measures include:

- Installing “tree guards” around seedlings, these can be easily and cheaply made from plastic pipes or bottles, though pipes are more durable and practical, especially when in bright colors for visibility.
- Fencing garden plots with small protective barriers.
- Communicating with the maintenance team, although this has limited impact when external contractors are involved.

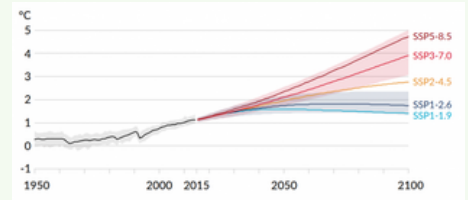
These preventive steps must not be postponed and should be carried out at the end of the planting process or immediately afterward.

Insufficient watering is another common obstacle to the survival of new plants. Schools often lack adequate watering equipment. Assigning responsibility for watering new plantings is also a key aspect of maintenance planning.



Efekti klimatskih promena na zasade

Climate Change Effect on Plants



Iako su efekti klimatskih promena i povećanje kako prosečnih, tako i ekstremnih temperatura nešto što je zabeleženo u čitavom svetu, ne zagrevaju se svi delovi planete podjednako. Nažalost, Srbija je jedna od „vrućih tačaka“ gde se srednja temperatura povećala znatno više od globalne - za **1,8°C u proseku**, a sa letima koja su čak **2,6°C toplija** nego pre. [6]

U Beogradu, svih 10 najtoplijih leta u istoriji merenja desila su se u poslednjih 25 godina - posle 2000. godine. Aktuelni temperaturni rekord iz glavnog grada je iz jula 2007. godine, kada je na Vračaru izmerena temperatura od 43.6°C. Leto 2025. godine, kada su se biljke zasađene kroz naš konkurs aklimatizovale, ušlo je u istoriju kao jedno od najtoplijih i najsušnijih. Za jun, jul i avgust ni na jednoj mernoj stanici nije dostignuta ni prosečna količina padavina. [7] Uz povećanje temperatura, nepravilan raspored padavina takođe utiče na fiziološki stres kod biljaka i čini ih podložnijim patogenima i isušivanju.

Ove okolnosti su bez sumnje loše uticale na vitalnost i preživljavanje biljaka. Intenzivne letnje suše su naša nova realnost koja zahteva promišljanje i adaptaciju kako u kontekstu sadnje, tako i u kontekstu svih drugih intervencija u javnom prostoru. Zbog svesti o ovoj problematici, CEUS je doneo odluke kao što je instalacija spoljne česme u OŠ „Miroslav Antić“ umesto ulaganja u neki možda estetski atraktivniji i kreativno interesantniji poduhvat. **Naša preporuka je da se pri planiranju urbanih zasada pre svih ostalih stavki razmišlja o dugoročnom preživljavanju biljaka, obezbeđivanju vode i zalivanju**, posebno u sušnim mesecima kada najveći broj novozasađenih sadnica strada.

Although the effects of climate change and the rise in both average and extreme temperatures are being recorded worldwide, not all parts of the planet are warming at the same rate. Unfortunately, Serbia is one of the “hot spots” where the average temperature has increased significantly more than the global average - by **1.8°C on average**, with summers that are even **2.6°C hotter** than in the past. [5]

In Belgrade, all 10 of the hottest summers in recorded history have occurred in the past 25 years - since 2000. The current temperature record in the capital was set in July 2007, when 43.6°C was measured in Vračar. The summer of 2025, during which the plants planted through our contest were in the process of acclimatisation, entered the record books as one of the hottest and driest. In June, July, and August, not a single weather station recorded average monthly rainfall. [6] Alongside rising temperatures, the irregular distribution of precipitation further contributes to physiological stress in plants, making them more vulnerable to pathogens and dehydration.

These conditions undoubtedly had a negative impact on plant vitality and survival. Intense summer droughts are a part of our new climate reality, demanding thoughtful adaptation in terms of planting and all other types of interventions in public space. In light of this, CEUS made decisions like installing an outdoor faucet at “Miroslav Antić” Primary School, rather than investing in a potentially more aesthetically appealing or creatively engaging initiative. **Our recommendation is that for planning urban greening, long-term plant survival, water access, and irrigation, especially during dry months when most new plantings fail, should be the primary considerations, before all other factors.**



Izbor biljnih vrsta je takođe jako važan, jer često dolazi do sudara naše nove klimatske realnosti i želja planera ili korisnika, koji u prvom planu imaju estetiku, koristi za biodiverzitet ili lične afinitete. Međutim, za uspeh je neophodno kao osnovni kriterijum razmatrati otpornost na urbane i sušne uslove. Nadamo se da će semena i sadnice otpornih i izuzetno lepih autohtonih vrsta cvetnica kao što su pucavac (*Silene vulgaris*), lisičina (*Echium sp.*) i mnoge druge postati dostupnije na tržištu u budućnosti, pošto su idealne za ozelenjavanje školskih, urbanih i oprašivačima naklonjenih vrtova.

Poreklo sadnica takođe može imati važnu ulogu u preživljavanju. Sadnice u dobrom stanju, gajene u lokalnim rasadnicima ili uvezene iz obližnjih zemalja imaju daleko bolje izgleda da opstanu. Korišćenjem lokalnih sadnica takođe izbegavamo uvoz patogena i invazivnih vrsta. Iz našeg iskustva, kvalitet sadnica treba da bude prioritet iznad nabavke konkretne vrste.

Poslednje - ukoliko su mali izgledi da se navodnjavanje i dugoročno preživljavanje zasada obezbedi, **nije nužno odustati od sadnje!** U školskom kontekstu, sadnja oglednih zasada, koji će deci služiti za isprobavanje i eksperimentisanje sa sejanjem, presađivanjem, negovanjem biljaka, kao i sa zemljištem i drugim materijalima, i dalje su izuzetno vredan dodatak dvorištu. Dobar plan rada čak i od male izdignute leje može napraviti veliki obrazovni poduhvat.

The selection of plant species is also crucial, as there is often a conflict between our new climate reality and the preferences of planners or users, who tend to prioritise aesthetics, biodiversity benefits, or personal tastes. However, for a planting effort to succeed, resilience to urban and drought conditions must be the primary criterion. We hope that seeds and seedlings of hardy and exceptionally beautiful native flowering species, such as Bladder Campion (*Silene vulgaris*), Viper's Bugloss (*Echium sp.*), and many others, will become more readily available on the market in the future, as they are ideal for greening schoolyards, urban spaces, and pollinator-friendly gardens.

The origin of the plants can also play a significant role in their survival. Well-maintained seedlings grown in local nurseries, or imported from nearby regions, have a much better chance of adapting and surviving. Using local seedlings also helps avoid the introduction of pathogens and invasive species. Based on our experience, the quality of plants should take priority over acquiring a specific plant species.

Finally, if the chances of ensuring irrigation and long-term survival of plantings are low, **that doesn't mean planting should be avoided altogether!** In a school context, experimental planting plots serve as a valuable educational addition to the yard, allowing children to engage in sowing, transplanting, growing, and working with soil. With a well-thought-out plan, even a small raised bed can become a significant educational project.

Obezbeđivanje dvorišta i samih rešenja

Securing the Schoolyard and the NbS

Vandalizam predstavlja čestu i očekivanu pojavu u školskim dvorištima, posebno ako ona služe i kao mesta neformalnih okupljanja van radnog vremena škole. Recimo, usled vandalizma je uništene su dve hranilice za ptice iz paketa donacija.

S druge strane, prirodom-inspirisano rešenje treba da izgleda pristupačno kako bi ga učenici doživeli kao pozitivnu pojavu i nešto s čim se mogu povezati, što isključuje mere obezbeđenja koje izgledaju previše preteće (ograde odbojnog izgleda, grubi znakovi upozorenja, itd).

Glavna mera koja se može preduzeti je da se izabrano prirodom-inspirisano rešenje kreira ili instalira na površini koja je često ili stalno pod nadzorom. Ova mera ne može u potpunosti da spreči štetu, međutim smanjuje verovatnoću da do nje dođe. Izbor dizajna za prirodom-inspirisano rešenje takođe treba da bude takav da je ili lako popravljiv, ili lako zamenljiv.

Vandalism is a frequent and often expected occurrence in schoolyards, especially when these spaces also serve as informal gathering places outside of school hours. For instance, two bird feeders from the donation package were destroyed due to vandalism.

On the other hand, a nature-based solution should appear approachable so that students perceive it as a positive feature, something they can connect with. This excludes overly intimidating security measures such as harsh fencing or aggressive warning signs.

The main preventative measure is to install the chosen nature-based solution in an area that is frequently or continuously monitored. While this won't entirely eliminate the risk of damage, it significantly reduces the likelihood of it happening. Additionally, the design of the nature-based solution should be either easily repairable or easily replaceable.

Opseg pažnje

Attention Span

Tokom radionica, a posebno onih koje uključuju kratko teorijsko izlaganje napolju, u nekim slučajevima je bilo primetno da je učenicima teško da se fokusiraju na verbalno prezentovan sadržaj i statične slike. Iako CEUS ne favorizuje upotrebu digitalnih uređaja u nastavi, pokazalo se da ograničena i namenska upotreba telefona može biti korisno sredstvo za „povratak pažnje“. Zvuči neobično, ali slika pokazana na telefonu u nekim slučajevima više privlači pažnju učenika nego ista slika na posteru! Tokom naših radionica, najuspešnije korišćenje telefona dogodilo se tokom BioBlic događaja, kada su aktivno korišćeni za fotografisanje nalaza (korišćenje u druge svrhe nije bilo dozvoljeno, ali deca nisu ni pokušavala da zloupotrebe situaciju).

During the workshops, especially those that included short outdoor theoretical segments, some students had difficulty focusing on verbal presentations and static visual materials. While CEUS does not promote the use of digital devices in education, it became clear that limited, purposeful use of phones can be an effective tool for “recapturing attention.” Surprisingly, a photo shown on a phone screen sometimes attracted more student interest than the exact same image displayed on a poster. Among our activities, the most successful use of phones occurred during the BioBlitz event, where they were used to photograph observations. Use of phones for other purposes was not permitted, and notably, the students made no attempts to misuse them.

Socio-politički pejzaž

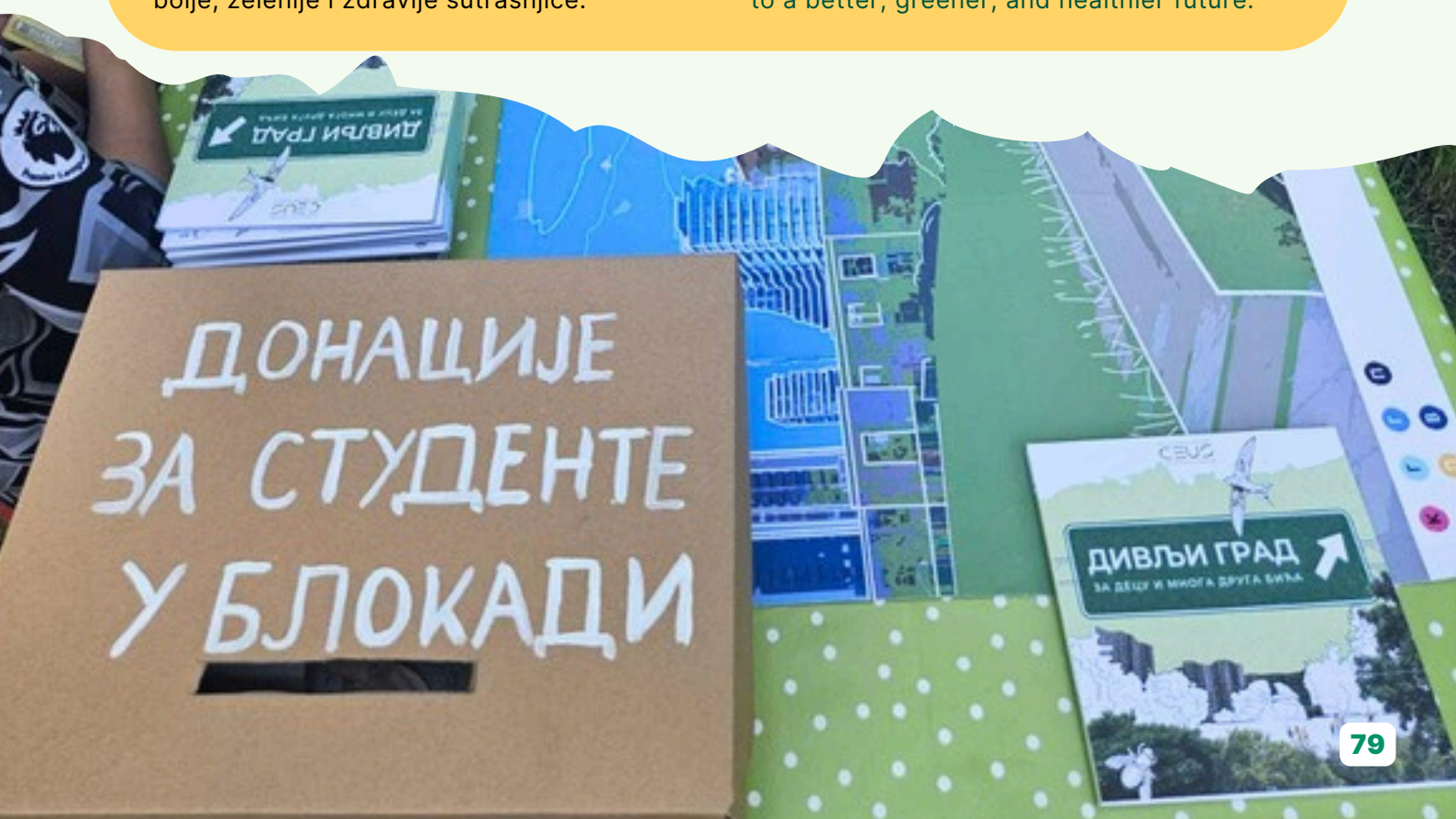
Socio-Political Landscape

Sticajem okolnosti, najaktivnija faza čitavog projekta se odigrala u vreme velikih društvenih i političkih tenzija izazvanih smrtonosnim padom nadstrešnice u Novom Sadu. Školstvo je bilo prvo pogođeno ovom krizom, pa su neizvesnost i napeta atmosfera, prožeta delimičnim ili potpunim obustavama nastave, svakako uticale i na kolektive sa kojima smo radili. Aktivnosti su mnogo puta odlagane, a promovisanje istih je često stavljano u drugi plan ili izostavljeno zbog neprikladnosti takvog čina u teškim trenucima za širu zajednicu.

Dok je ono što proživljavamo kao društvo osujetilo neke elemente projekta, kao i elementarna građanska prava i dostojanstvo, sa druge strane je interesovanje za ekološka pitanja i problematiku prostornog planiranja izuzetno poraslo i društvo se više otvorilo za učenje. CEUS je izuzetno zahvalan na pozivima građanskih inicijativa da prezentujemo naše radionice na humanitarnim i protestnim događajima, jer smatramo da ovakvi događaji dovode do odličnih sinergijskih razmena, kohezije građanskog društva i na kraju krajeva - neke bolje, zelenije i zdravije sutrašnjice.

By a twist of circumstances, the most active phase of the entire project took place during a period of significant social and political tension, triggered by the fatal collapse of a canopy in Novi Sad. The education sector was among the first to be affected by this crisis, and the resulting uncertainty and tense atmosphere, marked by partial or full school closures, undoubtedly influenced the school communities we worked with. Many activities were postponed multiple times, and promoting them was often deprioritized or omitted entirely, as it felt inappropriate in moments of collective grief and societal distress.

While these societal challenges obstructed certain elements of the project - along with basic civil rights and dignity - they also sparked a marked increase in public interest in environmental issues and spatial planning. Society became more open to learning about these topics. CEUS is deeply grateful for invitations from civic initiatives to present our workshops at humanitarian and protest events, as we believe such occasions foster meaningful exchanges, strengthen cohesion within civil society, and ultimately contribute to a better, greener, and healthier future.



Anekdote: najlepší trenuci

Anecdotes: the Most Beautiful Moments

- Spoznaja da su pčele napunile i zapečatile svoja prva gnezda u „Stepinom bubičnjaku“, praćena aplauzom.
- Fascinacija đaka OŠ „Veljko Dugošević“ raznovrsnim semenima i molbe da li poneko seme ponesu kući i zasade ga.
- Prepuštanje bojama i idejama tokom oslikavanja „Stepinog bubičnjaka“.
- Druženje sa koleginicama i saradnicama na XI Međunarodnom salonu pejzažne arhitekture i sa izloženom pohvaljenom publikacijom i mnogim drugim predstavljajima prirodom-inspirisanih rešenja.
- Baštovanski razgovori sa decom u OŠ „Miroslav Antić“ sa sadnjom koprive.
- Učenici koji sa entuzijazmom fotografišu stvorenja i dive se činjenici da u dvorištu imaju kupinu za koju nisu ni znali, tokom BioBlic događaja u OŠ „Đura Daničić“.
- Trenutak kada smo ugledale bujne cvetove ponikle iz semenki zasejanih u leji OŠ „Veljko Dugošević“.
- Preko stotinu crteža mlađih osnovaca sa njihovim sjajnim vizijama zelenijih i razigranijih školskih dvorišta.

- The realization that bees had filled and sealed their first nests in the “Stepa Bug Hotel,” met with applause.
- The fascination of students at “Veljko Dugošević” Elementary School with the diversity of seeds and their eager requests to take a few home to plant.
- Surrendering to colors and creativity while painting the “Stepa Bug Hotel.”
- Connecting with colleagues at the 11th International Landscape Architecture Salon, standing beside our honored publication and many other nature-based solution showcases.
- Gardening chats with children at “Miroslav Antić” Elementary School with nettle planting
- Students photographing creatures and marveling at the discovery of a blackberry bush in their own schoolyard, during the BioBlitz event at “Đura Daničić” Elementary School.
- The moment we saw the lush blooms from plants that started out as seeds we planted in the raised bed of “Veljko Dugošević” Elementary School.
- More than a hundred drawings by younger elementary school pupils, showcasing their wonderful visions of greener and more playful schoolyards.



Još **ovolicno** pažnje, nege i zaštite fali da naša prirodno-inspirisana rešenja potpuno zažive!

Just **a pinch** more attention, care, and protection is needed for our nature-based solutions to fully come to life!



Planovi za budućnost

Future Plans

Zvanično, projekat NBS EduWORLD završio se 31. avgusta 2025. godine. Pružio nam je dragoceno iskustvo, koje nam je omogućilo pokretanje svežih inicijativa, povezivanje sa kolegama iz zemlje i sveta, razmene iskustava i ideja, sejanje i negu novih mladica - i bukvalno i figurativno. Smatramo da je rad sa školama bio neprocenjivo iskustvo za sve učesnike u ovom procesu.

Međutim, naše aktivnosti sa školama ne završavaju se sa krajem ovog projekta. Principi ko-kreacije, zajednički monitoring, kontinuirani kontakt i nastavak saradnje sa korisničkom zajednicom ključni su faktori za opstanak i dostizanje punog potencijala primenjenih prirodom-inspirisanih rešenja.

S obzirom da su se tokom realizacije našeg projekta škole suočile sa vanrednim i velikim društvenim, političkim, ekonomskim, ali i klimatskim izazovima, čini se da je kontinuirana podrška kakvu predviđa koncept živih urbanih laboratorija potrebna nego ikad.

The NBS EduWORLD project officially concluded on August 31, 2025. It provided us a valuable experience that enabled us to launch fresh initiatives, connect with colleagues from the country and abroad, exchange experiences and ideas, and plant and nurture new seedlings - both literally and figuratively. We believe that hands - on work with schools was an invaluable experience for all participants in the process.

However, our activities in schools do not end with the conclusion of this project. The principles of co-creation, joint monitoring, continuous contact, and the continuation of cooperation with the user community are key factors for the survival and full realization of the potential of implemented nature-based solutions.

Given that, during the implementation of our project, schools faced extraordinary social, political, economic, and even climate challenges, the kind of continuous support envisaged by the Urban Living Labs concept is more needed than ever.



CEUS veruje da primena prirodom-inspirisanih rešenja ne treba da bude ograničena na projekte i konkurse. Svako već realizovano prirodom-inspirisano rešenje može da se replicira dalje i da inspiriše na akciju dajući ideju, dobar primer i strukturu. Male i (samo)organizovane zajednice, u kojima postoji dobra komunikacija, saradnja i poštovanje između različitih članova, mogu učiniti mnogo za razvoj sopstvenog školskog ili životnog prostora, u skladu sa prirodom i stvarnim potrebama učenika i građana. Umrežavanjem ovakvih malih zajednica stvorila bi se društvena platforma za razmenu iskustava, znanja, a potencijalno i raznih oblika konkretne pomoći i saradnje, koja bi naše „žive laboratorije“ učinile još brojnijim, snažnijim i bogatijim.

Želimo da se zahvalimo školskim kolektivima i njihovim članovima koji su prepoznali značaj prirodom-inspirisanih rešenja u školama: Mileni Radović, Svetlani Jakšić, Ivani Marković, Dželili Đerlek, Darku Ristivojeviću, Sanji Vučić, Slavoljubu Markoviću, Milki Boškov, Danijeli Jukić, saradnicima, prijateljima i članovima porodica koji su nesebično podržali naše aktivnosti: Jovani Bili Dubaić, Rastku Samuroviću, Vladimiru Bogavcu, Danilu Durkoviću, kao i malim pomoćnicima Vuku R, Svetlani R, Uni R, Borku B, Iliji S, Jovani S, Gavrilu S. i malenom Nikši koji nam se pridružio u jeku sprovođenja aktivnosti.

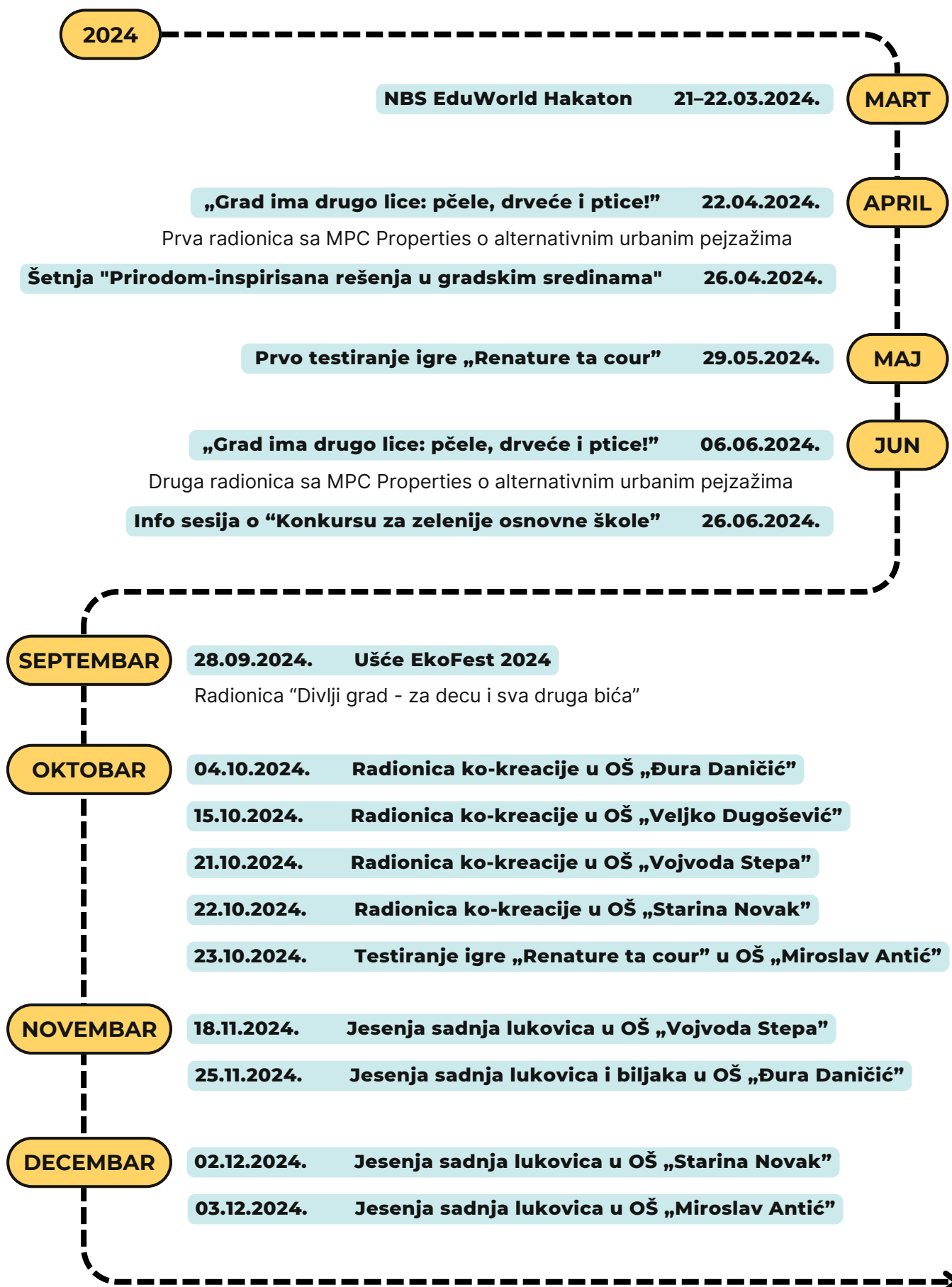
CEUS believes that the application of nature-based solutions should not be limited to projects and open calls. Every already implemented nature-based solution can be further replicated and can inspire action by offering an idea, a good example, and a clear structure. Small and (self-)organized communities, featuring good communication, cooperation, and mutual respect among different members, can do a great deal to improve their own school or living environment, in harmony with nature and the real needs of pupils or citizens. Networking of such small communities could lead to emergence of a social platform for the exchange of experiences and knowledge, and potentially for various forms of practical support and collaboration, which would make our Living Labs more numerous, stronger, and richer.

We would like to **express our gratitude** to school collectives and their members who recognized the importance of nature-based solutions in schools: Milena Radović, Svetlana Jakšić, Ivana Marković, Dželila Đerlek, Darko Ristivojević, Sanja Vučić, Slavoljub Marković, Milka Boškov, and Danijela Jukić, as well as to collaborators, friends, and family members who selflessly supported our activities: Jovana Bila Dubaić, Rastko Samurović, Vladimir Bogavac, Danilo Durković, and our young helpers Vuk R., Svetlana R., Una R., Borko B., Ilija S., Jovana S., Gavrilu S., and little Nikša, who joined us at the height of project implementation.



HRONOLOŠKA LISTA

radionica i događaja održanih u Beogradu u okviru NBS EduWORLD projekta



2025

FEBRUAR

19.02.2025. Sadnja autohtonih stabala u OŠ „Vojvoda Степа”

MART

03.03.2025. Postavljanje i izrada hotela za insekte u OŠ „Vojvoda Степа”

06.03.2025. Postavljanje plastenika i prva radionica sadnje u OŠ „Veljko Dugošević”

14.03.2025. Radionica prirodnog baštovanstva u OŠ „Veljko Dugošević”

20.03.2025. Prva radionica kompostiranja u OŠ „Veljko Dugošević”

APRIL

10–11.04.2025. Sadnja mini-botaničke bašte u OŠ „Miroslav Antić”

25.04.2025. Školski BioBlic u OŠ „Đura Daničić”

MAJ

Radionica „Zagrlj Divlji grad” 10.05.2025.

na humanitarnom bazaru za studente, Šumice

Radionica građanske nauke 11.05.2025.

monitoring leptira, Botanička bašta “Jevremovac”

Radionica „Divlji grad” 15.05.2025.

u vrtiću „Biseri”, Voždovac

Vebinar „Leptiri Beograda” 18.05.2025.

Druga radionica kompostiranja u OŠ „Veljko Dugošević” 20.05.2025.

Poseta pejzažnog arhitekta „Mini botaničkoj bašti”
u OŠ „Miroslav Antić” 22.05.2025.

Info-štanđ o urbanoj ekologiji na skupu „Sačuvajmo park Ušće” 25.05.2025.

Radionica oslikavanja „Stepinog bubičnjaka”
u OŠ „Vojvoda Степа” 28.05.2025

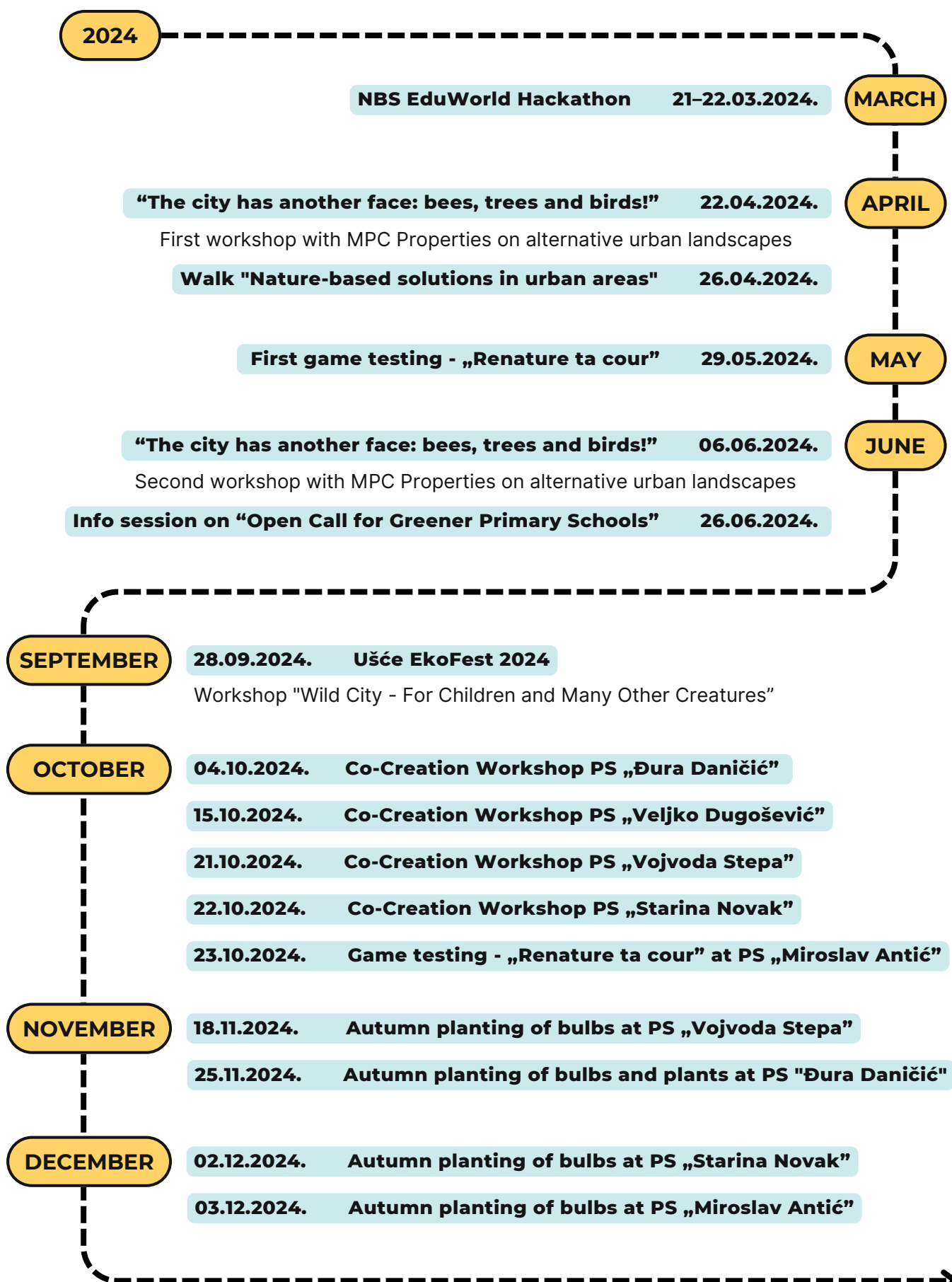
Terensko istraživanje i radionica identifikacije i brojanja
leptira, Višnjčka brda 09.06.2025.

Učešće publikacije “Principi ozelenjavanja školskih dvorišta”
na izložbi XI Međunarodnog salona pejzažne arhitekture 12-27.06.2025.

JUN

CHRONOLOGICAL LIST

of Workshops and Events in Belgrade within the
NBS EduWORLD Project



2025

FEBRUARY

19.02.2025. Planting of native trees at PS "Vojvoda Stepa"

MARCH

03.03.2025. Installation and construction of an insect hotel at PS "Vojvoda Stepa"

06.03.2025. Installation of the greenhouse and the first planting workshop at PS "Veljko Dugošević"

14.03.2025. Workshop on natural gardening at PS "Veljko Dugošević"

20.03.2025. First composting workshop at PS "Veljko Dugošević"

APRIL

10-11.04.2025. Planting of the mini-botanical garden at PS "Miroslav Antić"

25.04.2025. School BioBlitz at PS "Đura Daničić"

MAY

Workshop "Hug the Wild City" 10.05.2025.

at the humanitarian student bazaar, Šumice

Citizen Science Workshop 11.05.2025.

Butterfly Monitoring, "Jevremovac" Botanical Garden

Workshop „Wild City” 15.05.2025.

at the "Biseri" Kindergarten, Voždovac

Webinar "Butterflies of Belgrade" 18.05.2025.

Second Composting Workshop at PS "Veljko Dugošević" 20.05.2025.

Visit of a Landscape Architect to the "Mini Botanical Garden" at PS „Miroslav Antić" 22.05.2025.

Urban Ecology Info Stand at "Let's Save the Ušće Park" Gathering 25.05.2025.

Workshop on Painting "Stepa's Bug Hotel" at PS „Vojvoda Stepa" 28.05.2025

Field Research and Workshop on Butterfly Identification and Counting, Višnjička Brda 09.06.2025.

JUNE

Participation of the publication "Principles of Greening Schoolyards" at the exhibition of the 11th International Landscape Architecture Salon 12-27.06.2025.

REFERENCE / REFERENCES

[1] UNEA. (2022). United Nations Environment Assembly of the United Nations Environment Programme. Nature-based solutions for supporting sustainable development (English Version)- Resolution adopted by the United Nations Environment Assembly on 2 March 2022 [UNEP/EA.5/Res.5]
Preuzeto sa: <https://www.unep.org/topics/nature-action/nature-based-solutions/overview-nature-based-solutions>

[2] Informing the global standard for Nature-based Solutions, IUCN, 2019
<https://iucn.org/news/ecosystem-management/201901/informing-global-standard-nature-based-solutions>
Towards an EU research and innovation policy agenda for nature-based solutions & re-naturing cities

[3] Learning from NBS EduSystems inspiring initiatives - Nature-based Solutions Education Flipbook - NBS EduWORLD https://nbseduworld.eu/fileadmin/user_upload/Resources/NBS-EduWORLD-flipbook-final-pages.pdf

[4] RHMZ, SEZONSKI BILTEN ZA SRBIJU, Leto 2025. godine.
<https://www.hidmet.gov.rs/data/klimatologija/latin/leto.pdf>

[5] Metamorfoza - zajednica za zaštitu leptira Srbije
<https://metamorfoza.substack.com/>

[6] Filipović, L. (2025) Iza nas je veoma sušno i toplo leto 2025. godine: Evo šta govore podaci, Klima 101 <https://klima101.rs/leto-2025-srbija-izvestaj/>

[7] Vuković Vimić A, (2023) Srbija 2023, zemlja promenjene klime, Klima 101
<https://klima101.rs/srbija-klimatske-promene/>

Izjava o korišćenju AI alata:

Za pomoć oko prevoda izvornog teksta publikacije na engleski jezik korišćeni su AI alati OpenAI LLM GPT-5.2, GPT-4.2 i Microsoft Copilot. Mašinski prevod je pažljivo kontrolisan i doradivan od strane autorki.

Statement on the Use of AI Tools:

AI tools were used to assist with translating the original text of the publication into English, including OpenAI LLM GPT-5.2, GPT-4.2, and Microsoft Copilot. The machine translation was carefully reviewed and refined by the authors.

PRILOZI / ANNEXES

Kroz rad na NBS EduWORLD projektu, CEUS je kreirao i značajne edukativne materijale i idejna rešenja, koji imaju potencijal da se koriste u budućnosti i da ostvare dugoročne uticaje: za tri škole urađena su idejna rešenja za uređenje delova dvorišta koja su ustupljena školskim upravama i po kojima se može dalje planirati sadnja; za četvrtu školu urađena su varijantna rešenja projekta hotela za insekte, koji se mogu multiplicirati; razvijen je i testiran školski BioBlic protokol, a pripremljeni su i identifikacioni listovi za građanski monitoring leptira Beograda... svi ovi materijali obezbeđuju održivost projekta, i nastavak aktivnosti na terenu i nakon edukativnih i eksperimentalnih faza saradnje sa školama.

Through its work within the NBS EduWORLD project, CEUS has created important educational materials and conceptual designs that have the potential to be used in the future and to generate long-term impact. For three schools, conceptual designs for improving parts of the schoolyards were developed and handed over to school administrations, providing a basis for further planting plans. For the fourth school, several design variants for an insect-hotel project were prepared, which can be replicated. The School BioBlitz Protocol was developed and tested, and Identification Sheets for Belgrade Citizen Butterfly Monitoring were also prepared. All of these materials ensure the project's sustainability and enable continued field activities even after the educational and experimental phases of cooperation with the schools.



Prilog I: idejno rešenje za uređenje delova dvorišta - OŠ „Đura Daničić“

Annex I: Landscaping Conceptual Design for Segments of Schoolyard “Đura Daničić”



Predlozi vrsta drveća



piramidalni grab jarebika ruj varijetet gloga



sitnolna lipa

Ulaz za učenike

Predlaže se ozelenjavanje poteza uz ogradu visokim i srednje visokom žbunastim vrstama (crvena udika, forzicija, hibiskus, jorgovan, Physocarpus opulifolius 'Diablo', sibirski dren, Physocarpus opulifolius 'Darts gold', jorgovan, lovor višnja ili sl.), tako što se sade u grupacijama od 2-3 biljke iste vrste, ili niskim drvećem i drvećem stubaste forme, koje bi imale funkciju žive ograde i sadilo bi se takođe u grupacijama od po nekoliko biljaka iste vrste linearno uz ogradu (stubasti grab, jarebika, ruj, glog - Crataegus laevigata 'Paul's scarlet', ili sl.).

Predlozi vrsta žbunova



Otvorena površina između igrališta i ulice

Predlaže se sadnja visokog autohtonog listopadnog drveća (kao npr. lipa) 1-3 sadnice na centralnoj površini, ili grupacije srednje visokog drveća (breza, crvenolisne šljive, jarebika, koprivića), tako što se grupiše po nekoliko sadnica da vremenom naprave masiv (npr. 3-4 breze sa crvenolisnom šljivom, ili 2-3 koprivića sa crvenolisnom šljivom, nekoliko stabala jarebika i koprivića, i sl.).



breza, crvenolisna šljiva, koprivić, jarebika



Ozelenjavanje ograda i zidova

Posaditi kombinaciju puzavica u zemlju uz betonski zid, a biljke usmeriti tako da deo biljaka raste na dole, preko betonskog zida, a deo naviše, uz metalnu ogradu. Kombinovati zimzelene i listopadne vrste, različitog kolorita (običan bršljan *Hedera helix* i šarenolisni *Hedera h. 'Aureovariegata'*, *Parthenocissus tricuspidata*) i/ili vrsta koje obilnije cvetaju preko leta (orlovi nokti). Izabrati dve vrste ili dva varijeteta za kombinovanje (npr. običan bršljan i šarenolisni bršljan, ili bršljan i *Parthenocissus* t.).

Predlaže se sličan princip ozelenjavanja postojećih metalnih nosača za saksije u prednjem delu dvorišta: puzavice posaditi direktno u zemlju na 30 cm od konstrukcije i usmeriti biljke ka nosaču (obmotati vrhove grana oko elemenata nosača).



bršljan

Parthenocissus tricuspidata

orlovi nokti



Ulaz u školu

Mala zelena površina mogla bi da se zaštiti i ogradi niskom drvenom ogradom, a u okviru nje zasadi 1-2 sadnice niskog žbunja (*Prunus laurocerasus* 'Otto Luyken' do 1,2 m visine) ili srednje visokog žbunja (*Aucuba japonica* do 2 m visine) - vrste koje su tolerantne na senku.

Pokrivači tla

U osnovi visokih žbunova, predlaže se sadnja pokrivača tla, sa fokusom na vrste koje cvetaju. Vodi se računa o koloritu, pa se savetuje sadnja lovor višnje sa vrstom *Acorus gramineus* 'Ogon' ili *Hypericum calycinum* žutih listova/cvetova, a aukube sa vrstama *Liriope muscari*, *Vinca minor* ili zdravac (*Geranium macrorrhizum*) zelenih listova i ljubičastih cvetova.



Acorus g. 'Ogon', *Hypericum calycinum*, zdravac, *Liriope muscari* i *Vinca minor*



Loror višnja (gore), *Aucuba japonica* (dole)

Prilog II: idejno rešenje hotela za insekte - „Stepin bubičnjak“

Annex II: Conceptual Design for Insect Hotel - “Stepa’s bughouse”

Varijante hotela za insekte su:

Tip 1 – Dvospratni, dimenzija 100x30cm, visine 115cm

Tip 2 – Totem niži, dimenzija 36x30cm, visine 150cm

Tip 3 – Totem viši, dimenzija 36x30cm, visine 180cm

Tip 4 – Planina, dimenzija 100x30cm, visine 185cm

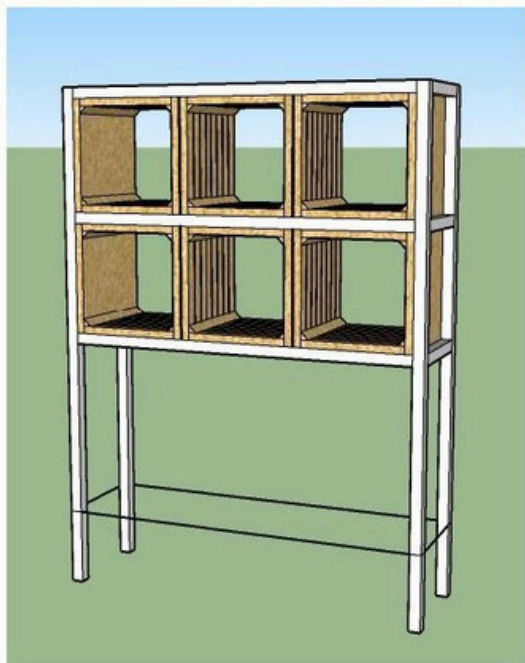
Dizajn i izrada bubičnjaka:

Senka Bogavac - Pejzaž studio

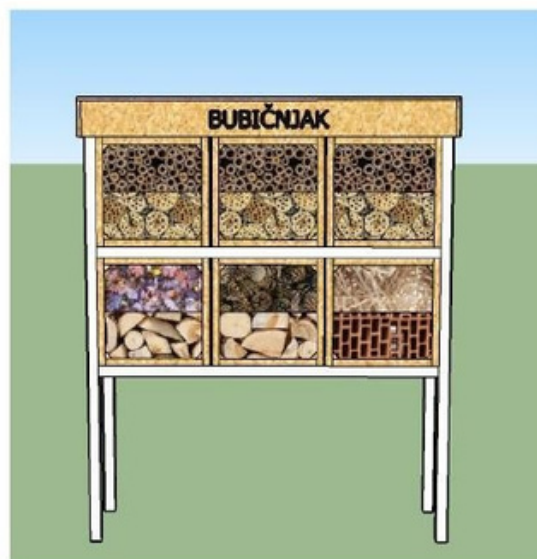
Osmišljavanje i realizacija ispuna:

Jovana Bila-Dubaić, Katarina Samurović, Milja Vuković

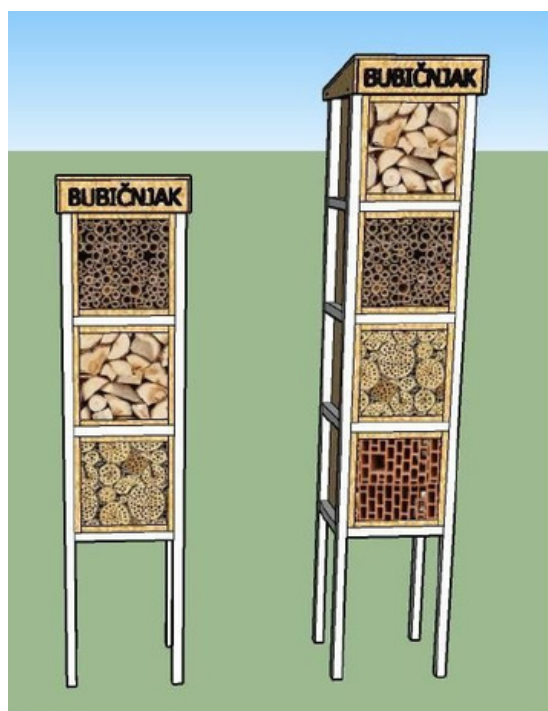
Donacija oblica: **Višnja Kisić i Goran Tomka**



Konstrukcija



Dvospratni, 100x30cm, visine 115cm



Totem niži i viši, 36x30cm, visine 150cm ili 180cm



Planina “Bubičnjak”, 100x30cm, visine 185cm

Prilog III : CEUS školski BIOBLIC protokol

Annex III : CEUS School BIOBLITZ Protocol (in Serbian)

BioBlic spaja duh igre „Potraga za blagom” sa proučavanjem lokalnog biodiverziteta. Ovaj vremenski ograničeni izazov treba da bude zabavan i poletan, ali istovremeno dovoljno sistematičan da omogući pravilno evidentiranje otkrića, pa i korišćenje rezultata u naučne svrhe.

Nastavnik i asistenti instaliraju aplikaciju **iNaturalist** i kreiraju naloge na sajtu. iNaturalist je jedna od najpoznatijih baza podataka za „građansku biologiju” i vrlo je elegantna i interesantna za korišćenje, besplatna je i bezbedna. Osim što olakšava unos podataka, omogućava da se identifikaciju većine organizama na licu mesta.

Pri pravljenju naloga izaberite opciju da vam prikaže lokalne nazive kad god je to moguće, da bi komunikacija sa decom bila olakšana i kvalitetnija

Odrasli korisnici treba da instaliraju aplikaciju pre radionice, da bi se sa njom upoznali par dana pre samog početka Bioblitza.

Tok radionice

Dan pre radionice:

Poželjno je da se u okviru nekog časa samo učenici podsete podele organizama (kako delimo životinje) i organa biljaka, u meri u kojoj je do tada obrađeno u okviru odgovarajućih predmeta.

Radionica - Uvod (do 10 minuta):

- Šta je biološka raznovrsnost, odnosno biodiverzitet?
- Interakcija - šta su deca zanimljivo videla u svom dvorištu - primeri.
- Zašto je važno da beležimo živi svet oko nas (i da to ne rade samo naučnici, već i građani).
- Šta ćemo raditi na radionici - objašnjenje protokola i iNaturalist baze, demonstracija kako radi

Praktični deo (20-30 minuta):

Podeliti decu na grupe slikovitih naziva (primer iz OŠ „Đura Daničić”):

- grupa 1 - „Breze” traže i identifikuju drveće i gljive (jer se one često viđaju na stablima)
- grupa 2 - „Maslačci” traže i identifikuju zeljaste biljke i „cveće”
- grupa 3 - „Leptirići” - traže sitne životinje - beskičmenjake
- grupa 4 - „Vrapčići” - traže kičmenjake - gmizavce, ptice i sisare (npr. veverice)

Cilj deljenja na grupe je da sam tok potrage bude organizovaniji i fokusiraniji u situaciji kada imamo više desetina malih istraživača. Na kraju se nalazi diskutuju zajednički, pa će svakako doći do razmene informacija između grupa.

Svaka grupa dobija i medaljone sa crtežom maskote svog tima i različito obojenim ogrlicama (trakama), radi lakšeg međusobnog prepoznavanja i dodatne motivacije.

Potruga

- Navijamo sat - imaćemo tačno 20 minuta da istražimo organizme u delu dvorišta koje ima malo više divljine.
- Svaka grupa ide sa stručnim asistentom grupe. Oni će pomagati i fotografisati nalaze putem iNaturalist aplikacije. Kada se fotografiše preko aplikacije, ona odmah izbacuje predloge o kojoj se vrsti radi, pa ujedno i identifikujemo organizme. Ovo je jednostavnija opcija nego da se od dece traži da instaliraju aplikaciju i samostalno je koriste tokom kratkog trajanja radionice, mada je sasvim prihvatljiva opcija ukoliko se radi o starijim učenicima. U tom slučaju, biće im potrebno par dana da se upoznaju sa aplikacijom pre početka događaja.
- Svaka grupa ima i po jednog zapisničara - dete koje će kod sebe imati papir i olovku da ubeleži nalaze koji se nisu dali fotografisati (npr. ptica koja brzo odleti). Usput svi mogu da papirnim *washi* lepljivim trakama obeležavaju biljke koje su im posebno interesantne. Svako dete ima pravo da obeleži po jednu biljku. Grupe koje traže životinje mogu da obeleže deo staništa gde su videli neku životinju.
- Takođe, deca sa telefonima mogu da fotografišu organizme i bez aplikacije (nije obavezno, to je više radi njihove animacije i osećaja da doprinose - ali ako to budu radili, fotografije svakako mogu da se posle dodaju u galeriju projekta).
- Naravno, deca mogu postavljati i pitanja oko organizama koje nisu cilj njihove grupe i grupe mogu da komuniciraju međusobno.

Završni deo (15+ minuta)

Na kraju ćemo se zajedno prošetati da vidimo šta je obeleženo i dok skidamo obeleživače, pričaćemo o izabranim najinteresantnijim biljkama i staništima. Nastavnik/ca se dogovara sa decom da mu pošalju fotografije koje će on/a zajedno sa asistentima učitati u iNaturalist projekat

Kada se radionica završi, škola će na platformi imati „iNaturalist Project” pod nazivom radionice - galeriju organizama iz dvorišta na iNaturalist platformi, koja predstavlja validan istraživački nalaz građana-naučnika. Kada se taj posao obavi, skrinšotovi mogu da prosledite roditeljima i da ga okačite na sajt škole radi promocije događaja i proslavljanja interesantnih nalaza.

Prilog IV :

Identifikacioni listovi za građanski monitoring leptira Beograda Annex IV: ID Sheets for Belgrade Citizen Butterfly Monitoring



Како да препознате најчешће врсте лептира?



Придружите се мониторингу лептира у Београду или другим деловима Србије помоћу апликације Butterfly Count!



Пошаљите посматрања лептира у Биологер, а наши сарадници ће вам помоћи да сазнате коју сте врсту сликали.



Легенда:

Лептири су подељени у три групе по величини:

- Мали ● Средњи
- Велики

Месеци у години (Ј, Ф, М, А, ... Д) када можемо уочити одрасле јединке лептира, означени су испод сваке слике:

- ☞ не јавља се
- ☞ можете га очекивати
- ☞ главни период појављивања

Врсте код којих можемо разликовати женски и мушки пол, поред слике поседују и обележје за пол:

- ♂ мужјак ♀ женка

Карактери који вам могу помоћи у распознавању сличних врста уоквирене су или истакнуте стрелицама:



За било које питање, пишите нам на адресу leptiri.ebms.srb@gmail.com



@divljibeorad
@ceus.rs



@Лептири Србије
(група)

Пројекат реализују:

Финансијска подршка:



Најчешће врсте лептира



Скелари – породица Hesperidae



Шаренци – породица Nymphalidae



Пројекат реализују:

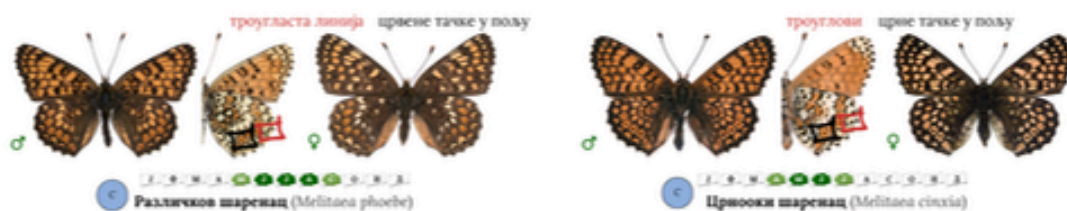
Финансијска подршка:



Најчешће врсте лептира



Шаренци - породица Nymphalidae



Окаши - потпородица Satyrinae



Пројекат реализују:

Финансијска подршка:



Најчешће врсте лептира



Окаши - подпородица Satyrinae



Пегавци - породица Riodinidae



Плавци - породица Lycaenidae



Пројекат реализују:

Финансијска подршка:



Најчешће врсте лептира



Плавци - породица Lycaenidae

Краткорепи плавац (*Cupido argiades*)

Дугорепи плавац (*Cupido alcetas*)

Краткорепи селак (*Leptotes pirithous*)

Обрубљени плавац (*Celastrina argiolus*)

Тамни дукат (*Lycaena tityrus*)

Пегави дукат (*Lycaena thersamon*)

Бахренац (*Lycaena alciphron*)

Мали дукат (*Lycaena phlaeas*)

Велики дукат (*Lycaena dispar*)

Хрстов реткар (*Fatonijs quercus*)

Смарагдни реткар (*Callophrys rubi*)

Трљанкар (*Satyrjum pruni*)

Мали реткар (*Satyrjum acaciae*)

Безе реткар (*Satyrjum ul-album*)

Плавооки реткар (*Satyrjum spini*)

Велики број плавца је **мирмекофили** - њихове гусенице се удружују са мравима! Гусенице обезбеђују мравима храну, а они њима заштиту. Неки лептири чак и паразитирају на мравима домаћинима и потпуно су зависни од њих.

Пројекат реализују:

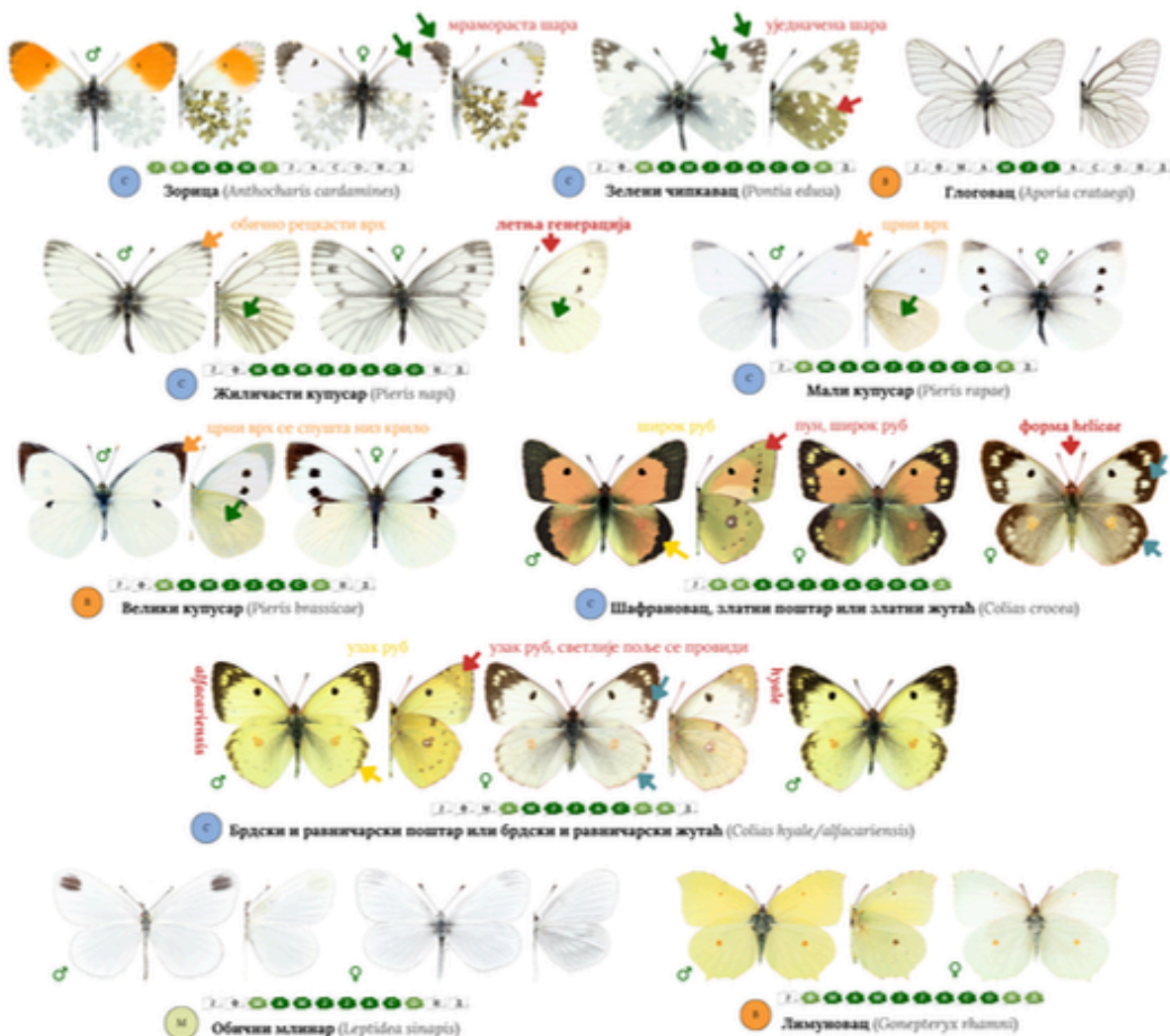
Финансијска подршка:



Најчешће врсте лептира



Белци – породица Pieridae



Једрилци, ластини репци – породица Papilionidae



Пројекат реализују:



Финансијска подршка:

Аутори идентификационих листова: **Милош Поповић, Милица Златић**
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