

Odkrivajmo moč narave



Zbornik izvlečkov s konference
**Odkrivajmo moč narave. Participativno okoljsko
izobraževanje za trajnostnost: priložnosti, izzivi in
prakse**

Ljubljana, 27.–28. 11. 2025

Uredila: dr. Nevenka Bogataj

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Predgovor

Konferenco **Odkrivajmo moč narave. Participativno okoljsko izobraževanje** organizira Andragoški center Slovenije s sredstvi projekta Krepitev vseživljenjskega učenja (2023-2029). Razvoj okoljskega izobraževanja ter VITR se tako nadaljuje, vzpostavljamo komunikacijo med strokovnimi profili, pogledi in ravni ter spodbujamo raziskovanje in razvoj. Nov fond znanja in zahtevnosti naj bo odskočna deska za izobraževanje, zlasti za izobraževanje odraslih, predvsem pa želimo postaviti (tiho) naravo na prvo mesto. Prispevki izpostavljajo, da vmesna raven organiziranja – skupnost – to dela bolje od nas. Ne bomo pa med njimi našli tem kot so digitalna orodja, globalna pravičnost in kritično razumevanje političnih ovir.

Potreba po spoštljivi rabi narave, institucionalizirana in medijsko zastopana, se še ne odraža v rastoči biodiverziteti in vitalnosti ekosistemov. Še več, podnebnim spremembam navkljub se nadaljuje model rasti, odločamo pa se le po finančnih kriterijih. Verjamemo in upamo, da bodo praksa in nastajajoči strateški dokumenti na področju izobraževanja in še posebej izobraževanja odraslih (npr. ReNPIO 2030-2040) glede tega ne le odprtega duha, ampak razgledani in zreli.

Na povabilo k aktivni udeležbi na konferenci se je odzvalo 67 domačih in tujih avtorjev, iz javnih in zasebnih ustanov, v podobni meri moških in žensk, kar je za izobraževanje odraslih prava redkost. Ponosni smo, da so se na povabilo odzvali mnogi slovenski in tuji profesorji, slednji zlasti iz zahodnih držav (Italija, Francija, Španija idr). Nismo pričakovali zastopanosti vsaj 14 strokovnih področij, ki jih avtorji predstavljajo, smo pa si interdisciplinarnost želeli.

Štirideset prispevkov smo uredili v naslednja štiri vsebinska poglavja: Sistemski koraki v trajnost(nost), Posameznikove priložnosti in izzivi, Spoj skupnosti in okolja izraža participativnost in trajanje, Prakse in pristopi. Vabljeni k branju in aktiviranju svojega prispevka k odkrivanju in spoštovanju moči narave.

Nevenka Bogataj in Anton Gradišek

Preface

Discovering the Power of Nature. Participatory Environmental Education is a conference organized by the Slovenian Adult Education Center with funding from the Strengthening Lifelong Learning project (2023-2029). The development of environmental education and Education for Sustainable Development (ESD) therefore continues, facilitating communication between professional profiles, perspectives, and levels, as well as encouraging research and development. The establishment of a new fund of knowledge and complexity should be a springboard for education, particularly for adult education, but above all, we want the preservation of (silent) nature to be a priority. The contributions emphasize that the intermediate level of organisation – the community – is more effective in this regard than we are, but we will not find topics such as digital tools, global justice and critical understanding of political barriers among them. The necessity for the respectful use of nature, institutionalized and represented in the media, is not yet reflected in the growth of biodiversity and ecosystem vitality. Moreover, despite the evidence of climate change, the growth model continues, with decision-making processes being driven exclusively by financial considerations. We believe and hope that practice and emerging strategic documents in the field of education, and especially adult education (e.g., ReNPIO 2030-2040), will not only be open-minded in this regard, but also discerning and mature. A total of 67 authors from both public and private institutions, with a balanced participation of male and female contributors, accepted the invitation to actively participate in the conference, a noteworthy occurrence in the field of adult education. We are proud that many Slovenian and foreign academics responded to the invitation, with a notable proportion originating from Western countries (Italy, France, Spain, etc.). We had not anticipated representation from at least 14 professional fields, which the authors represent, but we did aspire interdisciplinarity. The forty contributions have been organised into the following four chapters: Systemic Steps toward Sustainability, Individual Opportunities and Challenges of Participatory Environmental Education, The Merging of Community and Environment Expresses Participation and Sustainability, Practices and Approaches of Participatory Environmental Education. We invite you to read the contributions and actively engage in the discovery and appreciation of the power of nature.

Nevenka Bogataj and Anton Gradišek

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SISTEMSKI KORAKI V TRAJNOST(NOST)



OKOLJSKA ZGODOVINA MED PRETEKLOSTJO IN SEDANJOSTJO

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Ključne besede: ekonomski razvoj, narava, okoljska zgodovina, dolgoročna nestabilnost

IZVLEČEK

Družbene spremembe in večja občutljivost za človeško okolje v 20. stoletju so močno vplivale na družboslovje in humanistiko. Ena najpomembnejših posledic teh sprememb je bila preusmeritev pozornosti od prevladujočega antropocentrizma, ki je zaznamoval humanistiko 19. stoletja na interakcijo med družbo in naravo. Oblikovalo se je novo razumevanje narave in podnebja kot subjektov, njune dolgoročne spremenljivosti in globalne razsežnosti. Spremenila se je tudi perspektiva opazovanja: lokalno je postalo neločljiv del globalnih procesov. Ključna podlaga okoljske zgodovine je, da so se pogledi na vlogo narave kot vira in okolja bivanja ter na njeno varovanje ali rehabilitacijo v preteklosti globalno in lokalno spreminjali. Govorimo torej o variabilnostih, kontinuitetah in diskontinuitetah v procesih dolgega trajanja.

Okoljska zgodovina se z raziskovalno agendo odziva na aktualne razprave o okoljski problematiki sodobnih družb ter tako povezuje preteklost in sedanjost

v koherentno interpretacijo historičnih razmerij med družbeno modernizacijo in naravo. Narava je temeljni vir ekonomskega življenja in spremljajoče družbene strukture. V vsakdanjih ekonomskih praksah je bilo tako zavedanje samoumevno, a ne družbeno ponotranjeno. »Kmetovalec je prirodi gospod in hlapec« so zapisali v reviji Kmetijske in rokodelske novice (1890). Prebivalstvo je bilo življenjsko odvisno od zajemanja in pretvorbe naravnih virov. Pred drugo svetovno vojno sta bili v Sloveniji od izkoriščanja naravnih virov odvisni dve tretjini prebivalstva, v predhodnih obdobjih še več. V literaturi je jasno izpostavljena teza, da obstaja tesna korelacija med sposobnostjo ekstrakcije in konverzije naravnih virov za vsakdanjo rabo ter stopnjo družbenega in gospodarskega razvoja. V tem procesu nastopajo zahtevni gospodarski, družbeni in okoljski preobrati, ki so posledica znanstveno-tehnične revolucije, rezultat temeljnih inovativnih in aplikativnih procesov v razvoju tehnologije 19. in 20. stoletja. Prenos teh dosežkov v realno življenje je imel v krajini, gospodarstvu, življenju ljudi in družb daljnosežne posledice. Šlo je za dolgoročen in postopen prehod.

Znotraj tega konteksta želim predstaviti nestabilnost kot značilnost dolgoročnega razmerja med človekom in naravo. To razmerje bom ponazoril na primeru predstav o naravi, soočanja z vremenskimi nihanji na primeru poplav, onesnaženja okolja in krhkega prehranskega ravnotežja.

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Predstavitev avtorja

Prof. dr. **Žarko Lazarević** je znanstveni svetnik na Inštitutu za novejšo zgodovino in redni profesor za ekonomsko zgodovino na Univerzi na Primorskem. Tematika raziskovalnega dela je gospodarska zgodovina; raziskuje različna področja gospodarskega razvoja Slovenije. Tematika raziskovalnega dela sega od proučevanja razvoja kmetijstva, procesa industrializacije, združništva ter razvoja denarnih zavodov v Sloveniji. Temu se pridružuje tudi raziskovanje vpliva gospodarskih procesov na družbeno strukturo in v tem okviru zlasti dolgoročno strukturno spreminjanje gospodarsko–socialne podobe Slovenije. Je vodja raziskovalnega programa Ekonomska, socialna in okoljska zgodovina Slovenije, ki ga izvaja Inštitut za novejšo zgodovino.

IZOBRAŽEVANJE ODRASLIH ZA TRAJNOSTNI RAZVOJ MED INSTRUMENTALIZACIJO IN EMANCIPACIJO

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Ključne besede: izobraževanje odraslih za trajnostni razvoj, instrumentalizacija izobraževanja, emancipatorno izobraževanje odraslih, pristopi poučevanja odraslih

IZVLEČEK

Izobraževanje odraslih za trajnostni razvoj (IOTR) opredeljujemo kot izobraževanje odraslih, osredinjeno na spodbujanje sprememb pri posameznikih in v družbi skozi kritično refleksijo za razvoj pravičnejše družbe in zmanjševanje negativnih človeških vplivov na okolje. V politiki in praksi izobraževanja odraslih je mogoče ločiti dva prevladujoča pristopa IOTR, ki ju v tem prispevku obravnavamo na primeru neformalnega izobraževanja odraslih v Sloveniji.

Prvi je instrumentalni pristop, ki je usmerjen predvsem v spreminjanje delovanja in vedênja posameznikov, drugi pa emancipatorni pristop, ki je usmerjen predvsem v spremembe njihovih načinov mišljenja in védenja. Instrumentalni pristop ima pomembno vlogo pri doseganju konkretnih sprememb v delovanju posameznikov in razvoju specifičnih spretnosti, medtem ko emancipatorni pristop spodbuja širše transformacije tako na ravni

posameznika kot družbe preko razvijanja kritičnega in systemskega mišljenja.

Na podlagi kvantitativnih in kvalitativnih podatkov, pridobljenih marca 2023 s strani izobraževalcev odraslih iz 59 organizacij, ugotavljamo, da se v slovenski praksi neformalnega IOTR prepletata emancipatorni in instrumentalni pristop, pri čemer slednji zmerno prevladuje. Prakse instrumentalnega pristopa IOTR vključujejo predvsem izdelovanje preprostih ekoloških izdelkov, promocijo zmanjševanja količine odpadkov, spodbujanje trajnostnega prehranjevanja in oblačenja, razvijanje vrtnarskih in samooskrbnih spretnosti, ozaveščanje o požarni varnosti ter spodbujanje zaposlovanja pripadnikov ranljivih družbenih skupin. Emancipatorne prakse se medtem v največji meri ukvarjajo z globalnimi problemi in njihovimi lokalnimi posledicami, družbenimi vzroki okoljske in podnebne krize, povezavami med individualnimi in družbenimi transformacijami, kritično refleksijo ciljev trajnostnega razvoja ter spodbujanjem dejavnega državljanstva in kolektivnega delovanja. Posamezen pristop IOTR se v izobraževalnih programih običajno odraža tudi v uporabljenem didaktičnem pristopu. Prakse instrumentalnega pristopa so pogosto zelo konkretne in usmerjene v doseganje določenih vedenskih sprememb pri udeležencih, prakse emancipatornega pristopa pa so pogostejše participativno zasnovane ter prilagojene določeni skupini udeležencev in njihovemu lokalnemu okolju. Posamezni skupini udeležencev se pogosto prilagajajo tudi obravnavane teme, med katerimi so najpogostejše zastopani naravno okolje in človekov odnos do njega, trajnostni življenjski slog, cilji trajnostnega razvoja ter podnebne spremembe.

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Predstavitev avtorja

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ODPRTO ŠOLSTVO V LUČI VZGOJE IN IZOBRAŽEVANJA ZA TRAJNOSTNI RAZVOJ

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Ključne besede: multipliers, odprto šolstvo, prostor-sko-odziven pouk, vzgoja in izobraževanje za trajnostni razvoj

IZVLEČEK

Učenje in poučevanje za trajnostni razvoj mora potekati v resničnem svetu: doma, v skupnosti, v muzeju, v laboratoriju, v naravi itd. Ne more biti omejeno zgolj na formalno izobraževanje, saj gre za vseživljenjski proces učenja, ki vključuje tudi priložnostno in neformalno izobraževanje. Vse bolj postaja jasno, da prihodnost leži tudi v odprtem šolanju, ki vključuje popolnoma drugačen pristop do tega, kaj, kje in kdaj se ljudje učijo. Odprto šolanje vabi odločevalce, učitelje, šole, starše, lokalne skupnosti, univerze, raziskovalce, podjetja idr., da sodelujejo pri preoblikovanju vzgojno izobraževalne izkušnje in preoblikovanju načina učenja, hkrati pa krepijo povezavo med učno izkušnjo in družbo. Odprto šolanje opisuje učenje, ki je "odprto" v smislu časa, kraja, vlog učiteljev, učnih metod, načinov dostopa in vseh drugih dejavnikov, povezanih s procesi poučevanja in učenja. Težko je podati jasno opredelitev, saj se prakse odprtega šolanja po svetu razlikujejo in izhajajo

iz različnih potreb in kontekstov. Evropska komisija je leta 2010 objavila poročilo z naslovom "A strategy for smart, sustainable and inclusive growth", v katerem so opredeljeni trije ključni dejavniki: vključujoča, trajnostna in pametna rast. V prispevku jih uporabim za primerjavo pobud in razvoja odprtega šolanja po svetu. Teoretični del prispevka je podkrepjen s pregledom rezultatov evropskega projekta MULTIPLIERS (2021-2024, Obzorje 2020), katerega cilj je bil razširiti naravoslovno učenje skozi odprto šolanje in spodbujati sodelovanje med šolami in družbo. Cilj projekta je bil implementirati idejo odprtega šolanja znotraj različnih geografskih, kulturnih in gospodarskih kontekstov (v državah Ciper, Nemčija, Italija, Švedska, Slovenija, Španija), da bi zagotovili naravoslovno izobraževanje na visoki ravni za vse. Upoštevane razlike med državami oziroma družbenimi konteksti povečujejo verjetnost nadaljnje mednarodne uporabe in razvoja predlaganih rešitev. Projekt je vzpostavil učna partnerstva (odprte znanstvene skupnosti), v katerih sodelujejo šole, družine, raziskovalne ustanove, industrija, ponudniki neformalnega učenja, oblikovalci politik in mediji, da bi učencem in dijakom omogočili prostorsko-orientiran pouk oziroma prostorsko-odziven pouk v lokalnem okolju in z lokalno pomembnimi družbeno naravoslovnimi temami. Odprto šolanje ustvarja nove priložnosti za vseživljenjsko učenje in medgeneracijsko sodelovanje pri razvijanju kompetenc za trajnostnost (Bianchi idr., 2023).

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Predstavitev avtorja

Prof. dr. **Gregor Torkar** je redni profesor didaktike biologije na Pedagoški fakulteti Univerze v Ljubljani. Pred tem je deloval kot raziskovalec in predavatelj na Fakulteti za znanosti o okolju Univerze v Novi Gorici, kot učitelj naravoslovja v srednješolskem izobraževanju, kot avtor in urednik znanstvenih knjig in učbenikov ter kot naravovarstvenik. Diplomiral je leta 2001 na Pedagoški fakulteti Univerze v Ljubljani kot profesor biologije in gospodinjstva, doktoriral pa leta 2006 na Biotehniški fakulteti Univerze v Ljubljani iz biotehniških ved, smer varstvo naravne dediščine. Večkrat se je strokovno izpopolnjeval v tujini, med drugim na Trinity College v Dublinu (Irska), na Hedmark University College (danes Inland Norway University) in (Norveška) ter na University of California, Berkeley (ZDA). Kot gostujoči predavatelj sodeluje na več evropskih univerzah. Njegovo raziskovalno delo se osredotoča na področje biološke in okoljske vzgoje in izobraževanja na primarni, sekundarni in visokošolski ravni. Trenutno raziskuje predvsem ekologijo, evolucijo, naravovarstveno vzgojo in izobraževanje, terensko poučevanje ter vzgojo in izobraževanje za trajnostni razvoj. Sodeluje v več nacionalnih in mednarodnih raziskovalnih projektih s področja naravoslovnega izobraževanja in varstva narave. Je nosilec UNESCO katedre o izobraževanju učiteljev za trajnostni razvoj na Univerzi v Ljubljani, član akademskega odbora mreže European Researchers in Didactics of Biology (ERIDOB) in programski koordinator centrov za šolskih in obšolskih dejavnosti (CŠOD) v Sloveniji.

ZAKLADNICA ZNANJA EVROPSKE AGENCIJE ZA OKOLJE: KAKO JO UPORABITI PRI RAZVOJU KOMPETENC ZA TRAJNOSTNOST GREENCOMP

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Ključne besede: Evropska agencija za okolje (EEA),
SOER 2025, kompetence za trajnostnost GreenComp,
konkurenčen zeleni prehod, sistemske inovacije

IZVLEČEK

Evropska agencija za okolje (EEA) je za jesen 2025 napovedala objavo novega petletnega poročila Evropsko okolje: stanje in napovedi 2025 (SOER, 2025). To poročilo bo predstavljalo pomembno znanstveno in strokovno podlago za konkurenčen zeleni prehod (v skladu s Kompasom za konkurenčnost) tako v EU kot v Sloveniji, torej tudi za odločno naslavljanje trojne planetarne krize izgube biotske raznovrstnosti, podnebnih sprememb in onesnaževanja. Hkrati je zakladnico znanja EEA (koncepte, spoznanja, izsledke) (npr. v: European Environment Agency, 2019) možno uporabiti kot učno gradivo pri razvoju kompetenc za okoljsko trajnostnost, predlaganih v Evropskem okviru kompetenc za trajnostnost GreenComp ter širše v vzgoji in izobraževanju za trajnostni razvoj (VITR).

Namen referata je pokazati, kako več ključnih koncep-

tov in spoznanj iz zakladnice znanja EEA, s poudarkom na novem poročilu SOER 2025 in aktualnem okviru EU za konkurenčen zeleni prehod, spodbuja k razvoju kompetenc za trajnostnost iz okvira GreenComp. Izpostavljene bodo kompetence drugega in tretjega področja GreenComp: Sprejemanje kompleksnosti v trajnostnosti (zlasti sistemsko in kritično mišljenje) in Zamišljanje trajnostnih prihodnosti (pismenost za prihodnost, prilagodljivost in raziskovalno mišljenje). S konkretnimi primeri bo prikazano, kako je mogoče integrirati tri za trajnostno prihodnost izjemno pomembna področja: razumevanje in spremljanje okoljskih izzivov, razvoj kompetenc v izobraževanju (odraslih) in delovanje za trajnostnost z upoštevanjem orodij in virov v evropski skupnosti. Na primer: ekosistemski model razvoja (umestitev temeljnih družbenih sistemov v okvir ekosistemov), ki ga razvija EEA, spodbuja k razvoju kompetence systemskega mišljenja, hkrati pa je nujen za učinkovito trajnostno in participativno delovanje od posameznika do skupnosti. Analiza različnih scenarijev podnebnih sprememb lahko pomembno prispeva h kompetenci pismenosti za prihodnost in je nujna podlaga za oblikovanje odgovornih podnebnih politik. Prispevek se navezuje na spoznanja o sistemskem trajnostnem razmišljanju in delovanju, predstavljena v dokumentu Konceptualizacija VITR z umestitvijo tematike podnebnih sprememb (Piciga idr., 2023) (s priloogo: Piciga, 2023), in jih nadgrajuje.

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Predstavitev avtorice

Dr. **Darja Piciga**, doktorica psiholoških znanosti, že več desetletij raziskovalno, strokovno, in pedagoško deluje na področju družbe znanja (vzgoja in izobraževanje, raziskave in inovacije). Opravlja pionirsko delo pri prenosu in razvoju sodobnih evropskih usmeritev za okolje, zeleni prehod in trajnostni razvoj. Je ključna osebnost pobude za Integralno zeleno Slovenijo (mdr. knjiga Integral Green Slovenia, Routledge, 2016), konceptualno razvija tudi evropski pristop integralnih svetov.

PODNEBNE SPREMEMBE IN KOMPETENCE ZA DELOVANJE: VRZEL V PONUDBI IZOBRAŽEVANJA ODRASLIH

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Ključne besede: izobraževanje, podnebne spremembe, kompetence za trajnostnost

IZVLEČEK

V Sloveniji je na voljo več programov za izobraževanje odraslih s področja trajnostnosti, ki jih večinoma izvajajo zasebni ponudniki. Ti programi so namenjeni predvsem predstavnikom podjetij, ki so zavezana k poročanju po Direktivi EU 2022/2464 glede poročanja podjetij o trajnostnosti (t. i. ESG poročanje). Tržna raziskava iz marca 2025 je pokazala, da je bilo aktivnih šest ponudnikov: Zeleno omrežje, Forum Media, Slovenski inštitut za revizijo, IRDO, SIQ ter Center poslovne odličnosti Ekonomske fakultete UL. Programi trajajo od ene ure do 65,5 ur (za pooblaščen revizorje). Dva programa sta certificirana – eden nacionalno, drugi mednarodno (IQNET), vendar je pomen certificiranja na nereguliranem trgu vprašljiv.

Izobraževanja na področju trajnostnosti izvajajo tudi nevladne organizacije (npr. Inštitut za zdravje in okolje je razvil lastne vsebine v okviru evropskega projekta), a jih ne tržijo; izvajajo jih na povabilo šol, knjižnic in dru-

gih javnih institucij, če jim čas to dopušča (vir: intervju s predstavnikoma Focus, 27. 3. 2025).

Analiza je tako pokazala, da je večina izobraževanj na trgu usmerjena v ESG poročanje za podjetja, medtem ko so vsebine s področja podnebnih sprememb obravnavane v manjši meri. Predavatelji na teh izobraževanjih razen ene tudi nimajo izkazanih izkušenj s področja podnebnih sprememb.

Univerza v Ljubljani je v okviru Načrta za okrepanje in odpornost (NOO) razvila spletno izobraževanje s poudarkom na fizikalnih osnovah podnebnih sprememb (<https://podnebnespremembe.fmf.uni-lj.si/domov>). Razvijajo se tudi novi programi v okviru mikrodokazil. Kljub temu pa primanjkuje izobraževanj, ki bi obravnavala podnebne spremembe tako z vidika podnebne nevtralnosti kot z vidika podnebne odpornosti in razvijala tudi kompetence za ukrepanje, skladno z Evropskim okvirom kompetenc za trajnostnost GreenComp.

Potrebno bi bilo razviti kakovostna izobraževanja za krepitev zelenih kompetenc odraslih s področja podnebnih sprememb v Sloveniji, pri čemer bi bilo treba vključiti vsa štiri področja kompetenc GreenComp.

Vodilno vlogo pri tem bi morala prevzeti država, podobno kot v Avstriji, kjer ministrstvo certificira podnebne partnerje. Poleg tega bi morala zagotoviti pogoje za razvoj takšnih programov ter nuditi izobraževanja tudi za različne kategorije javnih uslužbencev. Posebej pomembno bi bilo pristopiti k merjenju kompetenc ter nasloviti ovire za odzivnost, ob tem pa razviti pristope za participativno okoljsko izobraževanje v okviru skupnosti.

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Predstavitev avtorice

Barbara Simonič ima več kot 15 leti izkušenj na nacionalni in mednarodni ravni s področja podnebnih politik in sistemskih inovacij. V okviru državne uprave je oblikovala ključne državne podnebne politike in ukrepe, ter zastopala državo na mednarodni ravni, kasneje pa sodelovala z EIT Climate-KIC. Ima magisterij s College of Europe in končuje doktorat iz diskurzov o podnebnih spremembah. Trenutno deluje kot direktorica podjetja Klimalaba in ustanoviteljica Inštituta za podnebne rešitve (IPRES).

PODNEBNO IZOBRAŽEVANJE V ČASU UPADA POLITIČNE IN JAVNE POZORNOSTI

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Ključne besede: podnebno izobraževanje, ozaveščanje
javnosti, podnebna politika, medsektorsko sodelovanje

IZVLEČEK

Prispevek podaja usmeritve za učinkovito podnebno (in okoljsko) izobraževanje ter osveščanje. Pri tem prispevek izhaja tudi iz dejavnikov obrata v prioritetah javnih politik in javnega mnenja stran od podnebne krize ter okoljskih tem na splošno. Dva od dejavnikov obrata sta bila tudi pomanjkljiva okoljska izobrazba javnosti in pogosto neprimerno okoljsko javno komuniciranje. Dejstvo je, da sta izobrazba in z okoljskimi izzivi povezano znanje eden od bistvenih pogojev za uspešno izvajanje podnebne ter okoljske politike in s tem tudi za reševanje tega civilizacijskega problema (McCowan, 2021). Ambiciozni ukrepi podnebne in okoljske politike bi namreč bistveno vplivali na življenjski slog vsakega posameznika v razvitih družbah. Še pomembnejša pa je ugotovitev, da je za oblikovanje in izvajanje okoljske politike nujno potrebno razumevanje ukrepov in poznavanje njihovih ozadij s strani široke javnosti oz.

državljanov – ki so hkrati tudi potrošniki in volivci. Brez ustreznega predznanja navedenega ni možno doseči. Kljub visoki ozaveščenosti – 83 % prebivalstva prepozna podnebne spremembe kot resen problem (Evropska komisija, 2021) – je pripravljenost na spremembe življenjskega sloga nizka: le 27 % anketirancev je pripravljenih sprejeti višje cene za varstvo okolja, le 18 % pa višje davke (Toš, 2021). To kaže na razkorak med ozaveščenostjo in dejanji (t.i. value-action gap), ki ga je mogoče premagati le s sistematičnim izobraževanjem in osveščanjem.

Če povzamemo usmeritve svetovne znanstvene in strokovne literature s področja podnebnega in okoljskega izobraževanja, krepitev kompetenc za varstvo okolja zahteva interdisciplinarnost (povezovanje naravoslovja in družboslovja) ter celostne pristope (npr. whole-school approach), kjer izobraževalne ustanove ne le vključujejo podnebne vsebine v učne načrte, ampak tudi zmanjšujejo lastni podnebni odtis z uporabo zelenih gradbenih materialov, učinkovitim ogrevanjem, trajnostno mobilnostjo zaposlenih ipd. (npr. Gibb, 2016). Ključne priložnosti so integracija podnebnih vsebin v širši kurikulum (npr. lokalizirane študije primerov o poplavah ali energetski prehod), razvoj poklicno specifičnih kompetenc (npr. krožno gospodarstvo v poklicnem izobraževanju) ter vključevanje izkušenjskega učenja, npr. s skupnimi projekti z lokalno skupnostjo (Mochizuki in Bryan, 2015).

V zadnjem delu prispevka se osredotočamo na izzive medsektorskega sodelovanja na področju okoljskega izobraževanja in osveščanja s posebnim ozirom na praktične izkušnje sodelovanja med okoljskim in izobraževalnim resorjem slovenske javne uprave v letih 2020–2023. Ključne ovire medsektorskega sodelovan-

ja so različne prioritete sektorjev (npr. izobraževalni sistemi nagrajujejo teoretično znanje, gospodarstvo pa praktične spretnosti), pomanjkanje koordinacije med ministrstvi (okolje, izobraževanje, energetika) ter finančna neskladja (npr. različni viri financiranja in njihovi pogoji).

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Predstavitev avtorja

Dr. Janez Berdavs je strokovnjak za okoljsko politiko in mednarodno sodelovanje v javni upravi z več kot 20-letnimi izkušnjami. Trenutno deluje na področju podnebne politike, prilagajanja podnebnim spremembam in podnebnega izobraževanja.

IRDO CERTIFIKACIJSKA SHEMA ZA PRIDOBIVANJE KOMPETENC NA PODROČJU TRAJNOSTNOSTI IN DRUŽBENE ODGOVORNOSTI

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Ključne besede: izobraževanje, certifikat, trajnostnost, družbena odgovornost

IZVLEČEK

Evropska komisija si je v obdobju 2019–2024 zadala več strateških ciljev, med katerimi je bil tudi zeleni prehod. Z njim je želela spodbuditi družbo, zlasti gospodarstvo, k prenovi poslovnih modelov v bolj zelene in trajnostne smeri. V obdobju 2025–2029 želi ta prizadevanja še okrepiti, hkrati pa poenostaviti že vzpostavljene zakonodajne in izvedbene (standardi ESRS) zahteve.

V ta namen je v letu 2025 pripravila sveženj sprememb Omnibus, katerega cilj je zmanjšati administrativno breme podjetjem in drugim organizacijam pri zelenem prehodu. Da bi podjetja in druge organizacije bila čim bolj pripravljena na te spremembe, potrebujejo ustrezna znanja in programe usposabljanja, ki zagotavljajo posredovanje zelenih kompetenc različnim skupinam deležnikov.

V tem avtorskem prispevku predstavljamo prizadevanja inštituta IRDO od leta 2016 do 2025 na tem področju. Poseben poudarek bo namenjen certifikacijski shemi na

treh stopnjah usposabljanja pri inštitutu IRDO, v katero je vključenih več kot 350 strokovnjakov, podjetnikov in drugih. Zanje smo v letu 2024 dodatno razvili IRDO trajnostno supervizijo, ki jim olajša težave pri ustvarjanju prehoda v bolj zelene poslovne modele. Predstavili bomo izkušnje z usposabljanji, sestavo programov in kompetence, ki jih posamezniki pri tem pridobijo.

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Predstavitev avtorice

Mag. **Anita Hrast** je soustanoviteljica in direktorica inštituta IRDO – Inštituta za razvoj družbene odgovornosti (od 2004 dalje, www.irdo.si). Je ekonomistka, univ. dipl. komunikologinja in magistrica znanosti. Od leta 2006 je raziskovalka, vpisana v evidenco raziskovalcev pora ARIS. Bibliografija raziskovalke je dostopna na povezavi: <https://cris.cobiss.net/ecris/si/sl/researcher/21557>. Od leta 2011 je višja predavateljica na DOBA - Fakulteti za uporabne poslovne in družbene študije Maribor (dodiplomski in podiplomski študij), kjer je nosilka več predmetov. Od leta 2023 je delno zaposlena tudi kot asistentka v projektu Družbena odgovornost podjetij, kot odgovornost direktorjev na Pravnem inštitutu Znanstveno-raziskovalnega središča Koper. Od leta 2016 pri inštitutu IRDO usposablja managerje in strokovne delavce za upravljanje trajnostnosti in družbene odgovornosti v podjetjih in organizacijah. Aktivno sodeluje

s CSR Europe, kjer je IRDO nacionalna partnerska organizacija za Slovenijo od leta 2011, pa tudi z drugimi mednarodnimi (OECD, SIA idr.) in slovenskimi organizacijami (GZS, Združenje Manager, Združenje delodajalcev Slovenije, Društvo za odnose z javnostmi, Društvo za marketing, CN-VOS idr.).

»LEKCIJA NIČ ZA TRAJNOSTNI RAZVOJ« UNIVERZE V FIRENCAH

Veščine trajnostnega razvoja za poklicni razvoj v visokem šolstvu

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Ključne besede: izobraževanje odraslih za trajnost, akterji trajnostnih sprememb, željeni učni izidi

IZVLEČEK

Ta prispevek predstavlja teoretični okvir in prve rezultate pilotne izvedbe »Lekcije nič za trajnostni razvoj: veščine trajnostnega razvoja za poklicni razvoj v visokem šolstvu«, pobude Univerze v Firencah v okviru italijanske univerzitetne mreže za trajnostni razvoj, ki jo spodbuja Konferenca rektorjev italijanskih univerz. Na podlagi opredelitve trajnosti kot sposobnosti »dajanja prednosti potrebam vseh oblik življenja in planeta, pri čemer se zagotovi, da človeška dejavnost ostane znotraj planetarnih meja « (Bianchi s sod., 2022, 12), je njen glavni cilj spodbujati trajnostno pismenost – znanje, spretnosti in miselnost, potrebne za gradnjo trajnostne prihodnosti ter sprejemanje informiranih in učinkovitih odločitev (UNESCO, 2017).

V današnjem globalnem kontekstu so visokošolske ustanove (HEI) pozvane, da študente opolnomočijo kot

nosilce trajnostnih sprememb (UNESCO, 2022; Holdsworth in Thomas, 2021), vendar pogosto ne zagotovijo potrebnih orodij (OECD, 2021). Da bi zapolnili to vrzel, mora izobraževanje upoštevati potrebe, strasti in potencial učencev (Schleicher, 2019).

Naša »Lekcija nič« ne le ozavešča študente magistrskega študija o nujnih izzivih našega časa, ampak spodbuja tudi razvoj strokovnjakov, ki so sposobni sprejemati konkretne ukrepe skozi prizmo trajnostnosti.

Tečaj, ki je trenutno v fazi testiranja, ponuja spletni program v obsegu 3 ECTS, sestavljen iz šestih medsektorskih modulov in enega predmetno specifičnega modula. Razvit je v skladu z naslednjimi načeli:

- Oblika tečaja je usklajena z zelenimi učnimi izidi, navdihnjenimi z evropskim okvirom kompetenc Green-Comp.
- Pri razvoju modulov in učnih enot, ki vključujejo vaje, ocene in končno projektno delo, je bil uporabljen interdisciplinarni pristop.
- Vključevanje raziskovalnih ugotovitev iz različnih akademskih disciplin v proces poučevanja.
- Ustvarjanje akademske skupnosti s strokovnim znanjem na področju trajnostnosti.
- Podelitev mikro-potrdila vsem udeležencem, ki uspešno zaključijo tečaj.

Tečaj spodbuja kritično ukvarjanje s temeljnimi vzroki netrajnostnosti in povezavami med sedanjimi družbeno-ekonomskimi modeli ter okoljsko nepravilnostjo (Mochizuki, 2016). Spodbuja kontekstualizirano znanje, realne probleme in aktivno sodelovanje udeležencev, da se podpre kritično mišljenje, smiselno učenje in osebni razvoj (Sterling, 2013). Nazadnje, pobuda poudarja proaktivno vlogo visokošolskih institucij pri spodbujanju vključujočega in inovativnega poučevanja,

napredku kulture trajnostnosti in prispevanju k socialnemu, kulturnemu in gospodarskemu napredku prek raziskav in njihove uporabe v vseh disciplinah.

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Predstavitev avtorice

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TRAVNIŠKA BIODIVERZITETA V SEDANJIH SLOVENSKIH UČNIH NAČRTIH BIOLOGIJE IN GEOGRAFIJE ZA OSNOVNO ŠOLO IN GIMNAZIJO V KONTEKSTU DOLGOROČNE ZGODOVINE TRAVNIKOV

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Ključne besede: izobraževanje, biodiverzitet, biologija, geografija, okoljska zgodovina

IZVLEČEK

Vrstno bogati travniki so najbolj biotsko raznovrstni habitatni tipi v Srednji Evropi, vendar iz pokrajine hitro izginjajo. Predvsem zaradi intenzifikacije gospodarjenja in opuščanja rabe travnikov v Sloveniji so populacije travniških ptic v državi v obdobju 2008–2018 upadle za okoli 40 % (Šumrada in sod., 2021).

Prispevek predstavlja temeljne vsebine dolgoročne okoljske zgodovine travnikov na Slovenskem od leta 1500 dalje (Zwitter in Rasran, 2025), sodobno množično izumiranje pa postavi v kontekst procesa civiliziranja. Slednjega je Norbert Elias (1993, 1994) – nemški sociolog, filozof in kulturni zgodovinar, ki je interdisciplinarno upošteval spoznanja psihologije – opredelil kot spreminjanje praga nelagodja in spreminjanje praga moralno nesprejemljivega v času.

Izobraževanje je eden ključnih mehanizmov, ki proces civiliziranja človeške družbe lahko obrnejo v trajnostno smer ter na podlagi boljšega znanja o vseh treh stebrih trajnostnosti prispevajo k rešitvam, ki bodo hkrati omogočale ustrezen življenjski standard ljudi in ohranjanje biodiverzitete tudi s strani tistih akterjev, ki so (še) brez okoljevarstvene tradicije. Na področju biotske raznovrstnosti travnikov bi to pomenilo, da bi potrošniki občutili nelagodje ob nakupu več hrane, kot je potrebujejo; da bi potrošniki pazili na razmerje med intenzivno in ekstenzivno pridelano hrano in nakup višjega deleža intenzivno pridelane hrane od tistega, ki je potreben, da prehranimo prebivalstvo, bi prav tako vodil v nelagodje; da bi neohranjanje zadostnega deleža vrstno bogatih travnikov in njihove povezanosti v pokrajini postalo nesprejemljivo; tržna zakonodaja bi prepovedala (ne)posredno zavajajoče označevanje artiklov in embalaže, kar zadeva status ekosistemov, na katerih živinorejski proizvodi temeljijo; kmet, ki prispeva k ohranjanju vrstno bogatih travnikov pa bi bil za svoje delo pravično plačan (Zwitter in Rasran, 2025). Le družba znanja v kompleksni stvarnosti lahko ustvari in ohranja kulturno pokrajino, za katero bo značilen (1) kompleksen preplet površin intenzivnega in ekstenzivnega kmetijstva na lokalni ravni ter (2) dovoljšna povezanost primerno obsežnih vrstno bogatih habitatov, da preprečimo nadaljevanje množičnega izumiranja. Zato prispevek po predstavitvi okoljske zgodovine travnikov, umeščene v kontekst procesa civiliziranja, z vidika travniške biodiverzitete analizira učne načrte za biologijo in geografijo v slovenskih osnovnih šolah in gimnazijah.

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Predstavitev avtorja

Doc. dr. **Žiga Zwitter**, okoljski zgodovinar, je diplomiral iz zgodovine in geografije, doktoriral pa iz zgodovine. Je docent in raziskovalec na Oddelku za zgodovino Filozofske fakultete Univerze v Ljubljani. Podoktorski projekt je opravil na dunajskem Inštitutu za socialno ekologijo. Bil je gostujoči profesor Univerze v Innsbrucku ter Münchenske Univerze Ludvika in Maksimilijana. Vodi Dinarsko regijo Evropskega okoljskozgodovinskega združenja. Je podpredsednik Zveze zgodovinskih društev Slovenije.

O ZELENIH KOMPETENCAH IN KOMPETENČNO ZASNOVANEM IZOBRAŽEVANJU

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Ključne besede: poklicno in strokovno izobraževanje, zelene kompetence, zelena delovna mesta

IZVLEČEK

Na Centru Republike Slovenije za poklicno izobraževanje (CPI) nadaljujemo z razvojnimi aktivnostmi na področju sistematičnega umeščanja trajnostnih kompetenc v poklicno in strokovno izobraževanje. Zavedamo se, da je celostna integracija znanj, spretnosti in vrednot s področja trajnostnosti in blaženja podnebnih sprememb ključna za opolnomočenje prihodnjih generacij strokovnjakov. Ti bodo morali biti sposobni odgovarjati na kompleksne izzive sodobnega sveta: podnebne spremembe, izčrpavanje naravnih virov, izgubo biotske raznovrstnosti, hkrati pa bodo morali razumeti pomen prehoda v krožno, brezogljico in pravično gospodarstvo.

Aktualne aktivnosti potekajo v okviru projekta »Modernizacija poklicnega in strokovnega izobraževanja«, katerega cilj je posodobitev poklicnih standardov in izobraževalnih programov na način, da bodo dosledno odražali načela trajnostnega razvoja in zahteve sodobnega trga dela. Podlage za ta proces smo razvili

že v projektu »Podnebni cilji in vsebine v vzgoji in izobraževanju«, kjer so bile med drugim razviti kompetenčni okvirji za vse sektorje na podlagi ugotovljenih 10 ključnih področij trajnostnosti, ki se umeščajo v poklicne standarde in izobraževalne programe. Dodatno strokovno podlago zagotavljata:

- priročnik za učitelje »Na poti k trajnostnim izdelkom oz. storitvam«, v katerem je predstavljen model za načrtovanje ali analizo izdelka oz. storitve z vidika trajnostnosti. Tak pristop omogoča razumevanje trajnostnosti ne le kot okoljski vidik, temveč tudi v povezavi z družbeno pravičnostjo, zdravjem uporabnikov, etično proizvodnjo in lokalnimi vplivi.
- priročnik za vodstva šol in učitelje »Vodnik na poti do trajnostne šole – zakaj, kaj in kako?«, ki šolam nudi dobro popotnico na poti k trajnostnosti na način celostnega institucionalnega pristopa.

V okviru prispevka bomo razmišljali tudi o pomenu zelenih poklicev in zelenih delovnih mest – kako jih razumemo, katera znanja, veščine in vrednote jih opredeljujejo ter kako se ta preoblikujejo v različnih gospodarskih sektorjih. Vse večja potreba po trajnostnih storitvah in izdelkih ter zakonodajne spremembe na ravni EU pomenijo, da se bodo oblikovala nova delovna mesta, ki zahtevajo nove kompetence za sistemsko razmišljanje, analizo okoljskih vplivov, uporabo trajnostnih materialov in načrtovanje po načelih krožnega gospodarstva.

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Predstavitev avtorice

Ivana Belasić je svetovalka za razvoj kurikula na področjih kmetijstva, hortikulture, varstva okolja ter vzgoje in izobraževanja za trajnostni razvoj v poklicnem in strokovnem izobraževanju.

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Ključne besede: ekocentričnost, zelene kompetence, načrtovanje izobraževanja

IZVLEČEK

Sodobna izobraževalna stroka si pogosto prizadeva za personalizacijo oziroma individualizacijo izobraževanja, ki prilagaja vsebine, metode in tempo učenja posamezniku. Kljub plemenitemu namenu podpore raznolikim ciljnim skupinam ostaja personalizacija zasidrana v egocentričnem razumevanju izobraževanja kot sredstva za osebni napredek. V času okoljskih kriz pa postajajo meje takšne paradigme vedno bolj očitne. Ekocentrična perspektiva ne izključuje individualizacije, temveč jo nadgrajuje. V ospredje postavlja gradnjo skupnosti, ki ne goji le individualnih dosežkov, temveč ustvarja pogoje za vzajemni razvoj in trajnostno delovanje.

Prispevek na primeru andragoškega cikla predstavi ekocentrični vidik izobraževanja. Temelji na teoriji sistemov ter evropski opredelitvi zelenih kompetenc, zlasti kompetenc za promoviranje narave, systemskega mišljenja in pismenosti za prihodnost.

V kontekstu izobraževanja odraslih, ki tradicionalno

poudarja avtonomijo in uporabnost znanja, takšna usmeritev zahteva temeljit premislek o načrtovanju in izvedbi izobraževanja. V nadaljevanju po štirih uveljavljenih fazah andragoškega cikla dodajamo ekocentrična vprašanja in relevantne primere:

1. faza – Analiza potreb: Vprašanja o željah posameznikov, potrebah trga dela in prioritetah financerjev je treba dopolniti z vprašanjem o tem, kakšno znanje in ravnanje od nas zahteva okolje. Izobraževalci naj upoštevajo naravne značilnosti okolja – takšen primer je model Alpske šole, ki so ga za udejanjanje Alpske konvencije razvili mednarodni partnerji iz držav podpisnic. Alpska šola je model izobraževanja, ki naravno okolje Alp postavlja v središče učnega procesa in ga povezuje z lokalnimi skupnostmi ter konkretnimi globalnimi izzivi, kot so podnebne spremembe.

2. in 3. faza – Načrtovanje in izvedba: Ekocentrična paradigma odpira vrata ohlapnejšemu načrtovanju, ki omogoča kreativnost in odpira prostor negotovosti namesto predvidljivih formatov in vsebin. Teži k soodločanju in soustvarjanju učečih, ki so hkrati udeleženci in načrtovalci procesa. Premišljen sistem načrtovanja takšnega učenja srečamo pri študijskih krožkih, kjer ohlapnejšemu začetnemu načrtovanju s strani andragogov sledi proces sooblikovanja učnih ciljev s strani udeležencev. Takšen potek izobraževanja omogoča emergenco, spodbuja prilagajanje in prepoznavanje moči posameznikov v skupini, a zahteva podporo tistim, ki niso vajeni aktivne udeležbe ter terja prilagoditev ustaljenih obrazcev za zapis učnih programov, ki pogosto zahtevajo podroben načrt pred izvedbo.

4. faza – Vrednotenje: Vrednotenje naj preseže preverjanje znanja in pridobivanje informacij o zadovoljstvu udeležencev. Ekocentrični vidik ne sprašuje le, kaj smo

se naučili ali kako smo se počutili, temveč kako naše učenje vpliva na skupnost in okolje – kratko in dolgoročno.

Takšen pogled na izobraževalni proces nas vabi k poglobljenemu razmisleku o tem, kaj pomeni učiti se za okolje in ne zgolj v okolju. Nakazuje na prihodnost participativnega okoljskega izobraževanja, ki je prožno in odzivno v vseh fazah načrtovanja in izvedbe.

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Predstavitev avtorice

Ema Meden je andragoginja, zaposlena na Andragoškem centru Slovenije ter na Filozofski fakulteti Univerze v Ljubljani. Pri svojem delu raziskuje digitalne in zelene kompetence ter vlogo telesnih praks v učenju. Priložnosti za

raziskovanje, razvoj novih programov in delo s skupinami ji nudijo nacionalni projekti povezani z zelenimi kompetencami in uporabo umetne inteligence, pa tudi mednarodne pobude, osredotočene na kombinirano učenje in metode utelešenega učenja.

PREDSTAVITEV UNESCO KATEDRE O IZOBRAŽEVANJU UČITELJEV ZA TRAJNOSTNI RAZVOJ

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Ključne besede: vseživljenjsko učenje, vzgoja in izobraževanje za trajnostni razvoj, UNESCO katedra

IZVLEČEK

Namen prispevka je predstaviti UNESCO katedro o izobraževanju za trajnostni razvoj na Univerzi v Ljubljani, njeno delovanje in priložnosti za sodelovanje v procesih vseživljenjskega učenja. UNESCO katedra želi spodbujati integriran sistem raziskovanja, poučevanja in usposabljanja ter vključevanje v družbeno dogajanje in komuniciranje. Svet, ki ga zaznamujeta tehnološki napredek in globalna povezanost, zahteva, da se tradicionalno akademsko izobraževanje nadgradi z veščinami, kot so kritično mišljenje, ustvarjalnost, komunikacija, sodelovanje in digitalne kompetence. Te sposobnosti omogočajo posameznikom, da ne le sledijo spremembam, temveč jih aktivno sooblikujejo in vodijo v vedno bolj kompleksnem in informacijsko bogatem svetu. UNESCO katedra spodbuja sodelovanje med vrhunskimi, mednarodno priznanimi raziskovalci in pedagoškimi delavci Univerze v Ljubljani in drugih institucij v državi, pa tudi drugod v regiji in v drugih območjih po svetu.

Specifični cilji katedre so: a) spodbujati sistemski, celovit institucionalni pristop k vzgoji in izobraževanju za trajnostni razvoj, z okrepljenim povezovanjem s predstavniki različnih zainteresiranih skupin iz univerz, fakultet, raziskovalnih ustanov, izobraževalnih organov, UNESCO pridruženih šol, UNESCO območij svetovne dediščine, izobraževalnih centrov na prostem, muzejev, itd.; b) razviti izobraževalne strategije za učitelje, vzgojitelje in študente, da bi olajšali prehod v trajnostno prihodnost za vse; c) ustvarjati raziskovalne aktivnosti, usmerjene v izobraževanje in ozaveščanje o vprašanih trajnostnosti pri vseh pomembnih skupinah deležnikov v vzgoji in izobraževanju; č) spodbujanje trajnostnih pobud in projektov z mednarodnimi konferencami, delavnicami, novimi študijskimi programi in tečaji, kot tudi ustvarjanje visokokakovostnih publikacij itd.; in d) tesno sodelovati z UNESCO-m, drugimi UNESCO katedrami in mrežami UNITWIN pri ustreznih programih in dejavnostih. Katedra v svojih ciljih namenja veliko pozornosti povezovanju formalnega, neformalnega in priložnostnega učenja ter oblikam participatornosti pri naslavljanju vprašanj trajnostnega razvoja v lokalnem okolju. Katedra namenja posebno pozornost povezovanju formalnega, neformalnega in priložnostnega učenja ter participativnim pristopom pri reševanju vprašanj trajnostnega razvoja v lokalnem okolju. Cilj je krepitev trajnostnega načina mišljenja od otroštva do odraslosti. S spodbujanjem različnih oblik medgeneracijskega sodelovanja – projektov, akcij, natečajev – želi spodbuditi aktivno državljanstvo in opolnomočiti posameznike kot nosilce pozitivnih sprememb, ki prispevajo k soustvarjanju trajnostne prihodnosti znotraj omejenih planetarnih zmogljivosti.

Predstavitev avtorja

Prof. dr. **Gregor Torkar** je redni profesor didaktike biologije na Pedagoški fakulteti Univerze v Ljubljani. Pred tem je deloval kot raziskovalec in predavatelj na Fakulteti za znanosti o okolju Univerze v Novi Gorici, kot učitelj naravoslovja v srednješolskem izobraževanju, kot avtor in urednik znanstvenih knjig in učbenikov ter kot naravovarstvenik. Diplomiral je leta 2001 na Pedagoški fakulteti Univerze v Ljubljani kot profesor biologije in gospodinjstva, doktoriral pa leta 2006 na Biotehniški fakulteti Univerze v Ljubljani iz biotehniških ved, smer varstvo naravne dediščine. Večkrat se je strokovno izpopolnjeval v tujini, med drugim na Trinity College v Dublinu (Irska), na Hedmark University College (danes Inland Norway University, Norveška) in ter na University of California, Berkeley (ZDA). Kot gostujoči predavatelj sodeluje na več evropskih univerzah. Njegovo raziskovalno delo se osredotoča na področje biološke in okoljske vzgoje in izobraževanja na primarni, sekundarni in visokošolski ravni. Trenutno raziskuje predvsem ekologijo, evolucijo, naravovarstveno vzgojo in izobraževanje, terensko poučevanje ter vzgojo in izobraževanje za trajnostni razvoj. Sodeluje v več nacionalnih in mednarodnih raziskovalnih projektih s področja naravoslovnega izobraževanja in varstva narave. Je nosilec UNESCO katedre o izobraževanju učiteljev za trajnostni razvoj na Univerzi v Ljubljani, član akademskega odbora mreže European Researchers in Didactics of Biology (ERIDOB) in programski koordinator centrov za šolskih in obšolskih dejavnosti (CŠOD) v Sloveniji.

POSAMEZNIKOVE PRILOŽNOSTI IN IZZIVI PARTICIPATIVNEGA OKOLJSKEGA IZOBRAŽEVANJA



PREPRIČANJA KOT TEMELJ RAVNANJA: PREOBLIKOVANJE OKOLJSKIH MITOV ZA TRAJNOSTNO PRIHODNOST

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Ključne besede: okoljska prepričanja, spreminjanje vedenja, izobraževanje odraslih

IZVLEČEK

Prepričanja so pomemben koncept različnih psiholoških disciplin. Opredeljujemo jih kot mentalne reprezentacije realnosti oz. miselne modele, ki obsegajo razumevanje sebe, drugih in sveta na sploh ter ideje o tem, kako v tem svetu ravnati in v njem preživeti. Pomembna so zato, ker vplivajo na interpretacije dogodkov v svetu, njihovo doživljanje ter ravnanje. Kadar so prepričanja racionalna in ustrezajo realnosti, so adekvatne tudi emocije oz. ravnanje. Če pa prepričanja realnost izkrivljajo oz. so napačna (mit), se to kaže v nefunkcionalnem doživljanju ter neustreznem, realnosti neprilagojenem ravnanju. Miti oz. realnosti neustrezna prepričanja so razširjena na vseh področjih življenja, tudi okoljskem, kar povzroča neustrezno, neodgovorno, okolje ogrožajoče ravnanje posameznika.

V prispevku smo raziskali različne teorije spreminjanja prepričanj in trajnega spreminjanja vedenjskih vzorcev

ter jih umestili v trajnostni kontekst. Navedli smo raznovrstne principe, strategije in metode, usmerjene na spreminjanje prepričanj in ravnanja v odnosu do okoljskih vprašanj. Raziskovanje je nesistematično in obsega pregled aktualne literature s področja psihologije spreminjanja vedenja. Raziskali smo nekatere novejšje monografije ter dostopne znanstvene in strokovne članke s ključnikom »spreminjanje vedenja« in »spreminjanje klimatskih stališč« v bazah Research Gate, Google Scholar idr. Davis idr. (2015) so v preglednem prispevku identificirali dvainosemdeset teorij z različnih področij družboslovja, ki pojasnjujejo posamezne dejavnike in pogoje trajnejšega spreminjanja ravnanja v odnosu do različnih fenomenov stvarnosti (okolje, zdravje). V prispevku smo se osredotočili na nekaj novejših psiholoških socialno-kognitivnih teorij vedenja in motivacije, ki pojasnjujejo dejavnike in procese spreminjanja vedenja oz. ravnanja na različnih področjih življenja in dela: Teorija načrtovanega vedenja, Teorija motivacije za samozaščito, Socialno-kognitivna teorija in Teorija samodeterminacije.

Izbrane teorije so eksperimentalno podprte oz. imajo zadostno empirično validacijo konceptov in njihovih medsebojnih relacij. Prispevajo utemeljen vpogled v posamezne vidike kognitivno-emotivne dinamike posameznika in spreminjanja le-te; na tej osnovi podamo nekaj pravil za načrtovanje intervencij, usmerjenih na trajno spreminjanje stališč in neželenih ravnanj v odnosu do okolja udeležencev izobraževanj o okoljskih temah.

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Predstavitev avtorice

Dr. **Tanja Rupnik Vec** je doktorica psiholoških znanosti, specialistka supervizije in docentka za psihologijo na Fakulteti za zdravstvene vede Celje. Zaposlena je na Andragoškem centru Slovenije, kjer vodi središče za raziskave in razvoj. Je avtorica številnih strokovnih in znanstvenih del z različnih področij psihologije: kritično mišljenje, socialno-čustveno učenje, skupinska dinamika idr. V tem okviru deluje tudi raziskovalno in razvojno ter izvaja raznovrstne delavnice. Je aktivna supervizorka.

PERSONALIZACIJA TRAJNOSTNIH VREDNOT V PARTICIPATIVNEM OKOLJSKEM IZOBRAŽEVANJU

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Ključne besede: vrednote, personalizacija, trajnost, izobraževanje

IZVLEČEK

Trajnostne vrednote so osrednjega pomena za prehod v trajnostno družbo, saj posameznike in skupnosti usmerjajo k odgovornemu ravnanju z okoljem, naravnimi viri in družbenimi strukturami. V skladu z Evropskim zelenim dogovorom (2019) in okvirjem kompetenc za trajnostnost (GreenComp, 2022) se trajnostne vrednote nanašajo na zavedanje posameznikov in družbe o posledicah današnjih dejanj za prihodnost. Eden ključnih izzivov je razvijanje trajnostnih vrednot, ki ne obsegajo zgolj zavedanja o okolju, temveč vključujejo osebne, družbene in kulturne dimenzije. Te vrednote so tesno povezane z izobraževanjem in vsakdanjim življenjem (Bianchi, Pisiotis Cabrera Giraldez, 2022).

Poosebljanje teh vrednot v vsakdanjem življenju in učnem procesu je bistvenega pomena. Poudariti je treba vrednote, kot sta osebna odgovornost in angažiranost. Posamezniki, ki ponotranjijo trajnostne vrednote, so

bolj pripravljeni prispevati k trajnostnim rešitvam. Povzemanje teh vrednot z zelenimi kompetencami pomeni razvoj posameznikove sposobnosti za sprejemanje odločitev, ki temeljijo na okoljski, družbeni in ekonomski trajnostnosti (Evropska komisija, 2019). Nadalje vključevanje solidarnosti in socialne pravičnosti v izobraževalne programe pomaga pri razumevanju, da so okoljske spremembe pogosto povezane s socialnimi in ekonomskimi neenakostmi, kar zahteva vključevanje širših družbenih vrednot (Bianchi et al., 2022). Ob tem pa je pomembna tudi medgeneracijska odgovornost, pri kateri si s poudarkom na dolgoročnih posledicah naših dejanj prizadevamo za svet, ki bo enako dober za prihodnje generacije kot za današnje ter ozaveščanje o naših vplivih današnjih odločitev na prihodnost. To pa vključuje tudi sodelovanje in participacijo različnih skupin v trajnostnem odločanju, kar prispeva k večji učinkovitosti in krepitvi odgovornosti za okoljske spremembe.

Pri razvoju trajnostnih vrednot je ključno poudariti njihovo personalizacijo, saj posamezniki trajnostne prakse bolj učinkovito sprejemajo, kadar jih doživljajo kot lastne. To vključuje povezanost z lastnimi prepričanji, vrednotami in življenjskim slogom (Schmidt Schlegelmilch, 2020). Vrednote, kot so odgovornost, medsebojna povezanost in dolžnost do prihodnjih generacij, so osnovne komponente trajnostnega razvoja, vendar je pomembno, da vsak posameznik prepozna tisto vrednoto, ki je zanj osebno najpomembnejša. Le tako se lahko trajnostnost dejansko implementira v vsakdanji ritem in odločanje posameznika.

Raziskave so pokazale, da so pozitivni učinki trajnostnih vrednot vidni le, če so te vrednote sprejete kot osebno poslanstvo, saj le to omogoča njihov trajnostni

vpliv na vedenje ljudi (Schwartz, 2012). Programi, ki spodbujajo refleksijo o osebnih vrednotah in njihovem vplivu na trajnostni razvoj, dokazano povečujejo zaveznanost posameznikov k trajnostnemu ravnanju. Za uspešno spodbujanje trajnostnih vrednot je pomembno, da pri posameznikih spodbujamo občutek lastne odgovornosti in lastništva nad trajnostnimi odločitvami, saj je to pogoj za trajne spremembe. Pri tem je ključno, da trajnostne vrednote ne predstavljajo dodatne obremenitve, temveč so naravno vtkane v vsakdanje izbire posameznikov. To vključuje ne le ekološko odgovornost, temveč tudi socialno in gospodarsko dimenzijo trajnostnega razvoja (Holladay Lofthouse, 2021). Trajnostne vrednote niso zgolj teoretični koncepti, temveč gonilna sila, ki nas lahko usmerja k trajnostnemu delovanju. Ključno pa je, da vsak posameznik najde svojo vrednoto znotraj tega širšega okvira in jo sprejme kot osebno poslanstvo. Ko posameznik prepozna vrednoto, ki odraža njegova lastna prepričanja, jo bo lažje vključil v svoje vsakdanje odločitve in dejanja. Personalizacija trajnostnih vrednot je bistvenega pomena – če želimo, da ljudje dejansko sprejmejo trajnostne prakse, jih moramo spodbuditi, da jih doživijo kot nekaj lastnega, ne kot zunanjo zahtevo. Če ljudem sporočimo, da morajo narediti preveč stvari, je zelo verjetno, da ne bodo naredili ničesar. Zato je pristop personalizacije izjemno pomemben – omogoča posameznikom, da prevzamejo odgovornost za svoja dejanja in se angažirajo na način, ki jim najbolj ustreza. Samo tako lahko oblikujemo trajnostni svet, ki ga bomo vsi aktivno soustvarjali.

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Predstavitev avtorice

Dr. **Zinka Kosec**, spec. org. – manag., je ustanoviteljica in direktorica Akademije Akcija, ki se posveča aktivnemu razvoju posameznikov. Že dvajset let vodi različna usposabljanja, seminarje in delavnice za razvoj kadrov. Njena doktorska disertacija je bila osredotočena na napovedovanje uspešnosti zaposlenih z uporabo različnih prediktorjev. Je avtorica Kartic vrednot, več strokovnih in znanstvenih člankov ter knjig, poleg tega pa je tudi predavateljica na več višjih in visokih šolah, kjer uspešno mentorira študente pri zaključnih nalogah.

iNATURALIST IN LJUBITELJSKA ZNANOST: KDO PRISPEVA PODATKE IN ZAKAJ?

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Ključne besede: iNaturalist, ljubiteljska znanost, občanska znanost, biodiverziteta

IZVLEČEK

iNaturalist (<https://www.inaturalist.org>) je priljubljena aplikacija, ki temelji na konceptu občanske znanosti in omogoča beleženje ter določanje organizmov, hkrati pa spodbuja komunikacijo med uporabniki – tako ljubiteljskimi kot profesionalnimi naravoslovci (About · iNaturalist, 2024; Boone in Basille, 2019). Zaradi enostavne uporabe ima velik potencial tudi v izobraževalnem kontekstu (Rode in Torkar, 2023).

Cilj raziskave je bil pridobiti vpogled v tip uporabnikov aplikacije, saj je poznavanje ozadja pomembno pri pripravi nadaljnjih izobraževanj in pri uporabi tovrstnih orodij v izobraževalnih kontekstih. Naš vzorec so sestavljali slovenski uporabniki te aplikacije, ki so zabeležili opažanja vrst iz reda bogomolk (Mantodea). Analizirali smo uporabnike, ki so v obdobju med letoma 2008 in 2021 v Sloveniji zabeležili vsaj eno opažanje bogomolk (N = 52) ter tri uporabnike, ki so na platformi zabeležili največ opažanj. Kontaktirali smo jih preko

platforme iNaturalist in jih povabili k sodelovanju v pol-strukturiranih intervjujih. Vprašanja so se osredotočala na razloge za uporabo aplikacije, ozadje uporabnikov (poklic, izobrazba, hobiji), načine uporabe aplikacije ter njihovo naravoslovno znanje. Intervjuje smo analizirali kvalitativno, z iskanjem skupnih tem. Odzvalo se je 19 uporabnikov.

Rezultati kažejo, da so uporabniki aplikacije zelo raznoliki. Približno polovica jih ima naravoslovno-biološko izobrazbo, druga polovica pa prihaja iz drugih področij in jih narava zanima zgolj kot hobi. Med pogostimi hobiji so navajali fotografijo, pohodništvo in opazovanje narave. Nekateri uporabniki uporabljajo aplikacijo predvsem za dokumentiranje opažanj, drugi za pridobivanje znanja. Večina jih pri določanju vrst uporablja določevalne ključe ali se zanese na pomoč skupnosti znotraj aplikacije. Uporabniki pogosto poročajo, da so se s pomočjo aplikacije naučili več o vrstah bogomolk in o biodiverziteti nasploh. Iz rezultatov lahko sklepamo, da ima iNaturalist pomembno vlogo pri spodbujanju zanimanja za naravoslovje tudi med tistimi, ki nimajo formalnega izobraževanja s tega področja. Aplikacija se zato kaže kot primerna tudi za vključevanje v širše izobraževalne in ozaveščevalne programe, zlasti v kontekstu spodbujanja naravoslovne pismenosti in aktivnega opazovanja narave.

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Rode, Ž., in Torkar, G. (2023). The iNaturalist Application in Biology Education: A Systematic Review. *International Journal of Educational Methodology*, 9(4), 725–744. <https://doi.org/10.12973/ijem.9.4.725>

Predstavitev avtorjev

Žan Rode je asistent na področju didaktike biologije na Pedagoški fakulteti Univerze v Ljubljani. Njegov glavni raziskovalni interes je uporaba informacijsko-komunikacijskih tehnologij v naravoslovnem izobraževanju in ozaveščenost o rastlinah. Leta 2020 je zaključil magistrski študij predmetnega poučevanja kemije in biologije, trenutno pa je doktorski študent na Univerzi v Ljubljani. Je tudi ilustrator, sodeloval je pri prilagoditvi slovenske ustave v projektu Lahko berljiva ustava RS, kjer je ustvaril številne ilustracije kot dodatke za razumevanje besedila. Ilustriral je tudi prirejene pesmi Franceta Prešerna.

Prof. dr. **Gregor Torkar** je redni profesor didaktike biologije na Pedagoški fakulteti Univerze v Ljubljani. Pred tem je deloval kot raziskovalec in predavatelj na Fakulteti za znanosti o okolju Univerze v Novi Gorici, kot učitelj naravoslovja v srednješolskem izobraževanju, kot avtor in urednik znanstvenih knjig in učbenikov ter kot naravovarstvenik. Diplomiral je leta 2001 na Pedagoški fakulteti Univerze v Ljubljani kot profesor biologije in gospodinjstva, doktoriral pa leta 2006 na Biotehniški fakulteti Univerze v Ljubljani iz biotehniških ved, smer varstvo naravne dediščine. Večkrat se je strokovno izpopolnjeval v tujini, med drugim na Trinity College v Dublinu (Irska), na Hedmark University College (danes Inland Norway University, Norveška) in na University of California, Berkeley (ZDA). Kot gostujoči predavatelj sodeluje na več evropskih univerzah. Njegovo raziskovalno delo se osredotoča na področje biološke in okoljske vzgoje in izobraževanja na primarni, sekundarni in visokošolski

ravni. Trenutno raziskuje predvsem ekologijo, evolucijo, naravovarstveno vzgojo in izobraževanje, terensko poučevanje ter vzgojo in izobraževanje za trajnostni razvoj. Sodeluje v več nacionalnih in mednarodnih raziskovalnih projektih s področja naravoslovnega izobraževanja in varstva narave. Je nosilec UNESCO Katedre o izobraževanju učiteljev za trajnostni razvoj na Univerzi v Ljubljani, član akademskega odbora mreže European Researchers in Didactics of Biology (ERIDOB) in programski koordinator centrov za šolskih in obšolskih dejavnosti (CŠOD) v Sloveniji.

VKLJUČUJOČA TEMATSKA POT KOT STRATEGIJA ZA UČENJE V JAVNEM ODPRTEM PROSTORU

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Ključne besede: tematska pot, priložnostno učenje, javni prostor, kulturna dediščina

IZVLEČEK

Prispevek prikazuje razvojno-raziskovalni projekt, v okviru katerega je bila načrtovana in realizirana tematska pot kot vključujoča strategija za učenje, medgeneracijsko povezovanje in turistično izkušnjo. Projektno delo je bilo interdisciplinarno – sodelovali so strokovnjaki in študenti s področij izobraževanja, turizma, etnologije, glasbene umetnosti in kmetijstva.

Teoretski okvir razvojno-raziskovalnega projekta so tvorili koncepti: trajnostni in dostopni turizem, učenje v javnem odprtem prostoru (Furlan, 2024), kulturna dediščina (Fakin Bajec, 2024; Caloggero, 2025), medgeneracijsko sodelovanje in učenje ter ekološko izobraževanje in etika skrbnosti (Mortari, 2020). Izhajali smo iz

potreb lokalnega okolja (Zgornja Vipavska dolina) po večjem medgeneracijskem povezovanju in vključevanju kulturne dediščine v medgeneracijski prenos ter razvoj trajnostnega ravnanja.

Raziskovalno vprašanje se je glasilo: kaj je značilno za proces interdisciplinarnega razvoja nove strategije za priložnostno učenje? Cilj projektnega dela je bil razvoj možnosti za srečevanje, priložnostno in naključno učenje ter povezovanje, brez poseganja v naravno okolje. Za razvoj tematske poti je bila uporabljena metoda oblikovalskega razmišljanja (ang. design thinking method), ki je bila uporabljena kot participativna metoda v okviru postantropocentrične paradigme (Quinn, 2024). V celotnem procesu nastajanja in preverjanja so sodelovali lokalni prebivalci.

Zbiranje podatkov je potekalo z uporabo intervjujev in opazovanja na terenu. Izvedli smo trideset intervjujev v različnih fazah razvoja »turističnega produkta« oziroma strategije za priložnostno učenje. Rezultat projekta je tematska pot, ki je namenjena (tudi) ljudem z oviranostmi. Poteka v Vipavi, dolga je 1,4 km in ima šest »postaj« z nalogami o lokalni kulturni dediščini, ki obiskovalce in domačine ozaveščajo o naravni in kulturni dediščini. Da bi se izognili fizičnemu posegu v okolje in da bi lahko naloge enostavno zamenjali z novimi, smo uporabili aplikacijo Actionbound.

Po prvih testiranjih poti ugotavljamo, da so tematske poti primerna strategija za ozaveščanje o trajnostnem razvoju in kulturni dediščini ter lahko vodijo v transformativno učenje in transformativni turizem.

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Predstavitev avtoric

Asist. dr. **Meta Furlan** se raziskovalno ukvarja z učenjem v javnem odprtem prostoru in medgeneracijskim učenjem.

Prof. dr. **Nives Ličen** raziskuje področje skupnostnega učenja in izobraževanja ter izobraževanja starejših.

Urška Gruden, dipl. ped. in spec., je doktorska študentka programa Humanistika in družboslovje. Raziskuje izobraževanje učiteljev s poudarkom na izobraževanju učiteljev za starejše.

Doc. dr. **Mojca Leskovec** vodi Center za izobraževanje na Filozofski fakulteti v Ljubljani ter se raziskovalno ukvarja s specialno didaktiko tujih jezikov.

KREPITEV ZELENIH KOMPETENC IN VEŠČIN V PROCESU PRAVIČNEGA PREHODA: PRILOŽNOSTI IN IZZIVI V ZASAVJU

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Ključne besede: zelene kompetence in veščine, pravični prehod, Zasavje, participativno učenje, regionalni razvoj

IZVLEČEK

Zasavska regija je od leta 2019 ena od dveh pre-mogovnih regij v Sloveniji, ki sta vključeni v Sklad za pravični prehod. Kazalniki kakovosti življenja regijo uvrščajo na 6. mesto med 12 slovenskimi regijami, medtem ko je BDP na prebivalca najnižji v Sloveniji (Poročilo o regionalnem razvoju Slovenije 2018–2022, 2023). Avtorici sva v prvem delu prispevka na primeru Zasavja osvetlili specifičnost regionalnega razvoja regije v tranziciji, v drugem delu predstavili teorijo participativnega učenja in najpogosteje uporabljene kompetenčne okvirje ter v zaključku obravnavali dva primera participativnega okoljskega izobraževanja. Namen prispevka je kritično ovrednotiti vpliv participativnega izobraževanja na razvojni potencial ter prepoznati dejavnike, ki vplivajo na njihovo uspešno uresničevanje.

Vključevanje krožnih vsebin v vzgojno-izobraževalne procese ter krepitev kompetenc brezposelnih in

iskalcev zaposlitve z znanji za zelena delovna mesta predstavljajo temelj za dolgoročno preoblikovanje kompetenčnega profila regije. Razvoj in nadgradnja zelenih kompetenc je kot razvojna priložnost opredeljena tudi v dokumentu Zasavje – Beyond 2027 (START tehnična pomoč, 2025) ter Območnem načrtu za pravični prehod (2021). Za uspešno trajnostno transformacijo je ključno, da izobraževalni proces ne ostane le v domeni formalnega sistema, ampak se s participativnim pristopom razširi v širšo skupnost, kar spodbuja »aktivno državljanstvo in omogoča posameznikom ter skupnostim, da postanejo soustvarjalci trajnostne prihodnosti« (UNESCO, 2017). Za premostitev potencialnih izzivov kot so konflikti interesov, pomanjkanje angažiranosti in dolgotrajni procesi odločanja, so za uspešno izvajanje participativnih izobraževalnih procesov ključni jasni mehanizmi sodelovanja, dostop do virov ter zaupanje v institucije.

Eden ključnih ukrepov pravičnega prehoda je tako tudi izboljšanje lokalnega izobraževalnega sistema. V okviru JR Obogateno izvajanje kakovostnega in dostopnega učenja ter uvajanja krožnih vsebin bo izbrani konzorcij nadgrajeval didaktične pristope z vključevanjem dobrih praks za razvoj digitalnih, podjetnostnih in zelenih kompetenc, ob poudarku na karierni orientaciji, krožnih vsebinah in vsešolskem pristopu. V prispevku predstavlja projektno idejo Preplet in jo osvetliva s primerjalno analizo švedskega projekta The School of the Future. S primerjavo sva avtorici analizirali možnosti nadgradenj projekta in prepoznavanja tveganj z namenom prispevanja k trajnosti rezultatov projekta.

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Predstavitev avtoric

mag. **Anja Šerc** je direktorica Regionalne razvojne agencije Zasavje. Na svoji profesionalni poti se ukvarja z razvojem skupnosti, ljudi in projektov, ki podpirajo trajnostni razvoj. Tako na teoretični kakor tudi na praktični ravni podpira razvoj inovativnih pristopov, ki podpirajo spremembe v skupnostih, organizacijskih kulturah, kompetencah in načinih povezovanja znotraj in izven organizacij.

Barbara Avsenak je strokovna sodelavka Regionalne razvojne agencije Zasavje. Zaposlena na Oddelku za pravični prehod in projekte pri Regionalni razvojni agenciji Zasavje, kjer se ukvarja s pripravo in izvajanjem razvojnih projektov, povezanih s prestrukturiranjem regije ter preходом v trajnostno in vključujočo prihodnost. Njeno delo vključuje sodelovanje z lokalnimi skupnostmi, občinami, podjetji in drugimi deležniki, s ciljem oblikovati celovite rešitve, ki podpirajo gospodarsko prenovo in družbeno odpornost regije. Poseben fokus posveča področju izobraževanja in razvoju kompetenc kot ključnih dejavnikov za krepitev zmogljivosti skupnosti in spodbujanje trajnostnega razvoja.

ZELENE VEŠČINE IN PLEMENITE KOVINE

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Ključne besede: človek, zeleno delo, veščine, plemenite kovine

IZVLEČEK

Veščine so v evropskem kvalifikacijskem okviru (EQF) – za razliko od znanja, ki zaobjema dejstva, načela in teorije – opredeljene predvsem z vidika praktičnih in kognitivnih elementov, kot so način razmišljanja ali reševanje problemov.

Kompetence predstavljajo izkazan sklop znanja, veščin, sposobnosti in tudi osebnostnih lastnosti, vrednot, motivacije, samopodobe, čustev, vzorcev razmišljanja ipd. Pomenijo, da imamo ne le znanje in razumevanje ter zmožnosti za izvedbo, temveč smo tudi motivirani, da nekaj dejansko storimo. Kompetence se kažejo v uspešno opravljenem delu glede na postavljene zahteve oziroma celo omogočajo nadpovprečno delovanje. Opaziti jih je mogoče šele pri našem ravnanju v različnih delovnih in življenjskih situacijah (ZRSZ, 2025).

Okolje in medsebojni odnosi so v času obilja pod pritiskom. Izobilje za vse ni mogoče v neskončnost. Zato ne presenečajo občutki ne-varnosti spričo vremenskih ekstremov, mednarodnih konfliktov in trga, ki določenim skupinam ljudi – na primer nezaposlenim – omejuje

prehransko in druge oblike varnosti.

Srebro, kot podcenjena plemenita kovina je na dan, ko pišem, vredno 1 € na gram, medtem ko gram zlata stane 90 €. Torej je razmerje med zlatom in srebrom 1 : 90. Cena in razmerja plemenitih kovin se s časom spreminja, zato se velja vprašati, ali so danes zelene kompetence, zelene veščine primerno (o)cenjene. Ali so oziroma bodo ob nadaljevanju varnostnih izzivov postale vredne srebra in zlata?

A pri tem ne gre zgolj za tržno vrednost – gre za človeka in naravo. Tu moramo iskati pravo pot. Morda prav preko rok, veščin, kompetenc ter osebnostnih vrlin. Vsaka, še tako drobna veščina šteje in ni samoumevna, nepomembna. Morda korenini v zgodnjem otroštvu ali v rosní mladosti ter se je razvila ob hkratnem v stiku z naravo in preteklimi generacijami. Čeprav formalno morda ni priznana (ali celo hoté ni priznana), čutimo njeno vrednost in jo delimo, ji iščemo pot. V tem je vgrajena participativnost in tudi okoljska dimenzija našega iskanja. Trud bo nekoč poplačan. Morda tudi v srebru in zlatu.

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Predstavitev avtorja

Mag. **Marko Gabrovšek** je po izobrazbi gozdarski tehnik, univerzitetni diplomirani teolog in magister varstva naravne dediščine. Srčno rad dela z ljudmi. Je odkritelj zelenega dela in promotor zelenih delovnih mest. Ob priložnosti je prejel prvo nagrado za poezijo na literarnem natečaju Skala – Srce preživi menjavo časov. Spomladi 2025 je v okviru mednarodnega projekta Ambasadorji znanj prejel priznanje REFERENCA za ozaveščanje na področju razvoja zelenih delovnih mest.

ETIKA ZA SONARAVNI RAZVOJ KOT PODSTAT IN REŠITEV ZA SOBIVANJE ČLOVEKA Z OKOLJEM IN NARAVO

Kritična infrastruktura in mikroplastika v našem življenju

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Ključne besede: mikroplastika, kritična infrastruktura, hidrofobna površina, endokrini motilci, rakotvorne spremembe

IZVLEČEK

Povezava mikroplastike s kritično infrastrukturo zajema več področij, ki so ključna za varnost vsake države. Še posebej pomembni so: oskrba z vodo, zdravstvo, ravnanje z odpadki, energetika in transport. Mikroplastika je prisotna v našem okolju zaradi industrijske proizvodnje, potrošnje in neustreznega ravnanja z odpadki, pri čemer kritična infrastruktura igra ključno vlogo pri njenem nadzoru in omejevanju. Napredne tehnologije (npr. filtracija z membranami, aktivno oglje) v okviru kritične infrastrukture pomagajo zmanjšati prisotnost mikroplastike v pitni vodi. Mikroplastični delci delujejo kot spužve za različne okoljske onesnaževalce. Njihova hidrofobna površina privlači in adsorbira toksine iz vode, zraka ali hrane. Ko zaužijemo mikroplastiko, lahko ti toksini prehajajo v telo in povzročajo različne bolezni. Nekatere sestavine plastike (npr. bisfenol A – BPA) delujejo kot

endokrini motilci, kar pomeni, da vplivajo na hormonsko ravnovesje in lahko povzročijo neplodnost, debelost ter različne rakotvorne spremembe.

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Prepoved za mikroplastiko (sprejeta) <http://www.sigov.si/mop/>

Predstavitev avtorice:

Dr. **Nada Pavšer** je slovenska okoljska znanstvenica, pedagoginja, strokovnjakinja in politična aktivistka. Njena posebna področja so ekologija, trajnostni razvoj, okoljski kriminal in ekološka vzgoja. Sodeluje pri lokalni samoupravi. Nagrajena je z najvišjim državnim priznanjem ter odločno nastopa v okoljski politiki. Pomembno je prispevala k razvoju in izvajanju inovativnih izobraževalnih praks predvsem s projektom Ekošol, ki ga je pred 30 leti začela umeščati v slovenski prostor. Dr. Pavšer je znana po svojem delu na področju izobraževalnih reform, usposabljanja učiteljev in izboljšanja metod poučevanja.

SPOJ SKUPNOSTI IN OKOLJA IZRAŽA PARTICIPATIVNOST IN TRAJANJE



IZOBRAŽEVANJE PREK MREŽENJA: OBLIKOVANJE SKUPNOSTI PRAKSE NA PODROČJU OKOLJA

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Ključne besede: skupnost, okolje, mreženje

IZVLEČEK

Ta predstavitev osvetljuje izkušnje ob vzpostavitvi Rete Italiana dei Territori di Vita (RITeVi), neformalne mreže, ki se nahaja na stičišču italijanskega gibanja za skupno rabo podeželja in konzorcija ICCA, globalnega združenja avtohtonih ljudstev in lokalnih skupnosti, ki se ukvarjajo z ohranjanjem okolja. Kroženje vrednot in informacij med različnimi področji izkušenj je ustvarilo učinek medsebojnega oplajanja, ki spodbuja splošni izobraževalni vpliv na posameznike, vključene v vsakodnevno upravljanje okolja. Teoretično koncept skupnosti prakse (CoP) ponuja pedagoški okvir, ki je najbolj usklajen z izkušnjo RITeVi. Vendar mreža še ni razvila posebnih instrumentov, ki so običajno povezani s CoP. Kljub temu njene hibridne kompetence uvajajo inovacije, ki jih je smiselno upoštevati za nadaljnji razvoj teorije CoP.

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Predstavitev avtorja:

Izr. prof. dr. **Marco Bassi** je izredni profesor za antropologijo na Univerzi Palermo (Italija). Ima status na univerzi Addis Ababa, Alma Mater Studiorum Univerze v Bolonji, na Univerzah Johns Hopkins (ZDA), Oxford (Velika Britanija) in Trento (Italija). Prejel je nagrado za ugledno štipendijo Združenja za Oromo študije (2011). Med letoma 2021 in 2023 je predsedoval italijanskemu združenju za aplikativno antropologijo (SIAA) in še vedno so-predseduje njeni reviji Antropologia Pubblica. Je svetnik za Evropo pri konzorciju ICCA.

PARTICIPATIVNO ODLOČANJE IN SKUPNOSTNI MODELI KOT TEMELJ RAZVOJA ZELENIH KOMPETENC V IZOBRAŽEVANJU ODRASLIH

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Ključne besede: participacija, zelene kompetence, izobraževanje, okolje

IZVLEČEK

V tem prispevku trdimo, da participativno odločanje in skupnostno upravljanje naravnih virov predstavlja ključna mehanizma za razvoj teh kompetenc v izobraževanju odraslih.

Participativno odločanje presega zgolj vključevanje deležnikov. Gre za transformativni proces, ki podpira kolektivno refleksijo, skupinsko analizo kompleksnih vprašanj ter iskanje legitimnih in izvedljivih rešitev. Družbeni kapital – zaupanje, norme sodelovanja in povezanost med akterji – se izkaže za ključen dejavnik, ki omogoča uspešno skupinsko delovanje (Bourdieu, 1986). Ostrom (1990) pa pokaže, da lahko skupnosti s participativnim upravljanjem naravnih virov presežejo "tragedijo skupnega" in dolgoročno vzdržujejo trajnostne prakse.

Empirične ugotovitve iz študij kolektivnih kmetijs-

ko-okoljskih shem v Evropi kažejo, da udeležba v teh shemah omogoča deljenje znanja med različnimi akterji, medgeneracijski prenos izkušenj ter skupno iskanje rešitev (Westerink in sod., 2020), kar sovпада z zelenimi kompetencami, kot jih opredeljuje GreenComp. V okviru raziskave smo razvili metodološki model, ki združuje večkriterijsko odločanje (MCDM), analizo prednosti, slabosti, priložnosti in nevarnosti (SWOT) ter metodo DEXi za kvalitativno modeliranje odločitev. Ta kombinacija omogoča kompleksno presojo okoljskih, družbenih, ekonomskih in institucionalnih dejavnikov z aktivnim vključevanjem deležnikov (Rudolf in Udovč, 2022). Ključno je, da tovrsten pristop ne deluje le kot analitično orodje, temveč kot pedagoški proces, kjer udeleženci postopoma razvijajo razumevanje medsebojnih povezav, razmišljajo o dolgoročnih posledicah svojih odločitev in se učijo skupinskega reševanja problemov – vse to pa so temeljne veščine trajnostnega državljanstva. Takšna metodologija, implementirana v okviru študij kolektivnih kmetijsko-okoljskih praks, se je izkazala kot izredno učinkovita ne le za boljše upravljanje (Viaggi in sod., 2011), temveč tudi za razvoj kompetenc, kot so sistemsko razmišljanje, sodelovanje, komunikacija in presoja posledic – torej ravno tistih, ki jih GreenComp prepozna kot osrednje za zeleno preobrazbo. V andragskem kontekstu bi podobne metode lahko uporabljali pri razvoju skupnostno zasnovanih učnih modulov, participativnih delavnic in projektov, ki se odzivajo na konkretne okoljske izzive. Zato v zaključku predlagamo, da se participativno odločanje ne obravnava le kot vsebina izobraževanja odraslih, temveč tudi kot metoda učenja – orodje, ki omogoča preplet formalnega znanja, izkušenj in vrednot učečih se odraslih.

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Predstavitev avtorjev

Dr. **Janja Rudolf** je raziskovalka, ki se prednostno ukvarja z razvojem novih metodologij povezovanja podatkov na področju agrarne ekonomike in kolektivnih povezovanj med kmeti. Je tudi zaprisežena sodna cenilka in izvedenka za kmetijska zemljišča ter mama treh otrok.

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PRILOŽNOSTI ZA IZOBRAŽEVANJE ZA TRAJNOSTNI RAZVOJ (ITR) ZA VKLJUČEVANJE EVROPSKIH TRADICIONALNIH SKUPNOSTI

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IZVLEČEK

Prispevek želi podati kratek povzetek Evropske konference o skupnih dobrinah 2024, da bi podprl morebitno izmenjavo idej o tem, kako se lahko izobraževanje za trajnostni razvoj (ESD), teorija in praksa, uporabi za obveščanje odločevalcev in strokovnjakov, da priznajo prispevek, ki ga evropske skupne dobrine prinašajo različnim mednarodnim, evropskim in nacionalnim politikam. Na tak način so evropske skupne dobrine vključene in aktivno sodelujejo v razpravah.

Eurostat podcenjuje, da je 7 % evropskih zemljišč v skupni lasti. To dejstvo postavlja pod vprašaj splošno prepričanje, da v Evropi obstajata le dve vrsti lastništva – zasebno in javno. Medtem ko se lastništvo zasebnih in javnih zemljišč pogosto spreminja, so nekatera skupna zemljišča v lasti istih skupnosti že od srednjega veka. Danes je ta tretja oblika lastništva prisotna v številnih evropskih državah. Skupna zemljišča so pogosto bogata tako s kulturno dediščino kot z biotsko raznovrstnostjo – dejavniki, ki so med seboj tesno povezani. Nепrepoznavnost skupnih zemljišč se še dodatno pogloblja z dejstvom, da je tudi njihovo upravljanje in vodenje nevidno,

čep rav so njihove dejavnosti oblikovale pokrajino, biotsko raznovrstnost in kulturo, ki obdaja skupna zemljišča. Mnoge od teh skupnih dobrin že stoletja prispevajo k uresničevanju ciljev trajnostnega razvoja (SDG), ohranjanju biotske raznovrstnosti, zagotavljanju ekosistemskih storitev ter uresničevanju številnih drugih ciljev in politik. Za skupnostne člane to ni nova politika. Vendar pa njihov prispevek ni le neviden, ampak lahko izvajanje teh politik ovira prispevek skupnostnih članov ali, še huje, privede do prisvajanja skupnih dobrin. Konec leta 2024 so se evropske podružnice Mednarodnega združenja za preučevanje skupnega (IASC) ter konzorcija za avtohtona in skupnostno upravljana območja (ICCA) sestale, da bi razpravljale o skupnih dobrinah v Evropi. Med njihovimi zaključki je bila potreba po izobraževanju splošne javnosti, še pomembnejše pa je izobraževanje politikov, javnih uslužbencev in drugih, ki zagovarjajo in izvajajo različne mednarodne, evropske in lokalne cilje, kot so cilji trajnostnega razvoja, podnebni cilji in cilji zaščite biotske raznovrstnosti.

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Predstavitev avtorja

Aktivistični raziskovalec, ki presega meje disciplin. V znanstvenemu raziskovanju daje prednost skupnosti, in trdi, da je treba pomembne raziskave o lokalni skupnosti in okoljskih vprašanjih najprej raziskati skupaj s skupnostmi, preden se določi, katere akademske discipline s svojimi ločenimi teorijami in metodami so najbolj relevantne. Čeprav je bil prvotno izobražen kot ekolog, se je kasneje preusmeril v antropologijo, danes pa se veliko posveča preučevanju zgodovinskih arhivov, analizi zbledelih zemljevidov, računovodskih preglednic za analizo stroškov in koristi ter preteklih pandemij. Že več kot dve desetletji si prizadeva za integracijo z lokalnimi skupnostmi v Afriki in Evropi, da bi razumel njihovo interakcijo z okoljem in kako zunanji posegi vplivajo na njihovo dinamiko. Trenutno se osredotoča na evropske lokalne skupnosti, zlasti na teritorialne skupnosti, kjer evropske ideologije ohranjanja narave vidi kot zastarele, in vse bolj zaostajajoče za priznanimi globalnimi dobrimi praksami. Zagovarja vključevanje praks evropskih teritorialnih skupnosti, pogosto prostovoljnih, v različne agende za leti 2030 in 2050. Predvideva vrnitev k razsvetljskemu znanstvenemu pristopu, podobnemu Sokratovi filozofiji, kjer lahko vsakdo, ne glede na formalno izobrazbo, pomembno prispeva razvoju, ki nastaja sodelovalno. Ta vizija je skladna z vse večjim mednarodnim priznanjem znanosti avtohtonih ljudstev kot veljavne.

SKUPNOSTNO UPRAVLJANJE, SEZONSKA SELITEV ŽIVINE IN EKOLOGIJA PAŠNIKOV

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Ključne besede: Pastoralizem, sezonska selitev živine, skupna lastnina, ohranjanje okolja, trajnostnost

POVZETEK

Upravljanje naravnih virov na ravni skupnosti je vse bolj cenjeno, zlasti zaradi njegovega potenciala za boj proti izgubi biotske raznovrstnosti in podnebnim spremembam, pa tudi zaradi številnih drugih ekosistemskih storitev ter družbeno-kulturnih vrednot in koristi (Zanjani s sod., 2023). Osredotočili smo se na tri sosednje gorske skupne pašnike, ki se nahajajo v severovzhodnih andaluzijskih gorah v Španiji, Castril, Santiago in Pontones, ki imajo podobne fizikalno-kemijske razmere, a se razlikujejo po oblikah skupnostne organiziranosti in dveh glavnih vrstah mobilnosti: transhumanci na dolge razdalje in transhumanci na kratke razdalje (v nadaljevanju LDT in SDT) (Godoy s sod., 2024; Parra et al., 2025). Pravila uporabe teh pašnikov so skupno dogovorjena

med vsemi uporabniki, vendar se v Pontonesu izvajajo strožje kot v Castrilu, medtem ko Santiago predstavlja vmesno obliko.

Transdisciplinarno antropološko in ekološko študijo smo želeli v teh treh skupnih zemljiščih primerjati, kako različne vrste skupnostnega upravljanja in načini sezone selitve (LDT proti SDT) vplivajo na rastlinske skupnosti in fizikalno-kemijske lastnosti tal na visokogorskih pašnikih CSP. Izvedli smo dolgoročno etnografsko raziskavo (2017–2023), da bi se povezali z lokalnimi deležniki in razumeli oblike skupnostnega upravljanja, pastirsko ravnanje in druge povezane dejavnike, kot so vplivi javnih politik in globalnih trgov na te skupne površine. Hkrati smo izvedli ekološko vzorčenje in analize, da bi preverili vpliv teh treh vrst skupnostnega upravljanja in dveh vrst mobilnosti (LDT proti SDT) na ekologijo pašnikov (vzorčili smo 72 vegetacijskih transektov, 18 v Castrilu, 42 v Santiagu in 20 v Pontonesu, ki so bili podvrženi dvema glavnima načinoma sezone selitve živine (SDT in LDT).

Na splošno smo ugotovili, da lokalno pastirstvo pozitivno vpliva na okolje. Med posameznimi pašniki in oblikami mobilnosti so se pokazale razlike, pri čemer je bil pozitiven vpliv povezan predvsem z bolj tesnimi oblikami sodelovanja med pastirji in vsakodnevnim vodenjem čred, skupaj s sezonsko transhumanco na dolge razdalje, zlasti kadar je slednja kombinirana s strožjimi formalnimi pravili skupnosti.

Da bi razširili znanje in trajnostne prakse, je bistveno spodbujati sodelovanje med razoskovalci, pastirji, lokalnimi deležniki in predstavniki javnosti, da bi tako pridobili bolj zanesljive podatke in omogočili lažjo uporabo rezultatov s strani drugih prek usposabljanja in okoljskega izobraževanja z vključitvijo vseh teh akterjev. To pred-

stavlja prvi korak k boljši povezanosti antropološkega, ekološkega in lokalnega znanja deležnikov za bolj celovito razumevanje in oživitev skupnih pašnikov.

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Predstavitev glavnega avtorja

Dr. Pablo Dominguez je diplomiral iz okoljske biologije (UAM – Madrid in AMU – Marseille) ter doktoriral iz socialne antropologije (EHESS – Pariz in UAB – Barcelona). Specializiran je za agro-silvo-pastoralne sisteme v sredozemskem prostoru – v Maroku, Španiji, Franciji in na Balkanu – ter ima več kot 20 let izkušenj na tem področju. Njegovo raziskovalno delo se osredotoča na trajnostno skupnostno upravljanje naravnih virov in življenjskih prostorov kot ključni element globalne trajnosti ter kot vir kulturne dediščine, ki predstavlja temelj za ohranjanje teh sistemov.

OPRAVILA V SISTEMIH SKUPNIH ZEMLJIŠČ: ORODJE ZA IZOBRAŽEVANJE O ZELENIH KOMPETENCAH

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Ključne besede: izkušnje, prenos, podeželje, GreenComp, družbe

IZVLEČEK

V podeželskih skupnostih, kjer sistemi skupne zemlje še vedno obstajajo, so skupna opravila že dolgo običajen način upravljanja lokalnih virov. Gre za kolektivno delo, organizirano v skladu s posebnimi pravili za vzdrževanje SKUPNE lastnine. Te prakse niso le strogo funkcionalna nujnost, temveč temeljijo na skupnih moralnih obveznostih in medsebojni odgovornosti, kar zagotavlja trajnost kolektivnega premoženja in prenos strokovnega znanja, ki je za njegovo upravljanje bistveno. S sodelovanjem pri vzdrževanju skupnih zemljišč člani skupnosti pridobivajo in uporabljajo tehnične spretnosti, hkrati pa razvijajo podrobno razumevanje ekoloških ciklov in družbeno-okoljskih interakcij. Lahko upravljajo gozdove, nadzorujejo namakalne kanale ali čistijo pašnike. Na ta način tim. "opravila" temeljijo na medgeneracijskem učenju, povezanem s prakso, kjer se znanje o prostoru in njegovi dinamiki prenaša skozi kolektivno delovanje.

V nekaterih gorskih regijah Francije kolektivno vzdrževanje gorskih pašnikov ostaja praksa za ohranjanje pašnih ekosistemov, preprečevanje zapiranja pokrajine in ohranjanje biotske raznovrstnosti. To pomaga spodbujati naravo in pomen njenega ohranjanja med mlajšimi in novimi člani skupnosti. Nekatera skupnostna zemljišča so tudi del regionalnih parkov, območij Natura 2000 ali narodnih naravnih rezervatov, kar dodatno krepi interes za ohranjanje opravil kot sreds-tva za trajnostno upravljanje teh območij. Tako je bilo to znanje že dolgo pred institucionalizacijo t. i. »zelenih veščin« v evropskih kontekstih, kot je GreenComp, uporabljeno s strani imetnikov pravic kolektivnih lastniških sistemov. Danes je prenos tega znanja bolj ali manj živ in ritualiziran, odvisno od območja. Postopno izginjanje te dinamike, povezano zlasti z odhodom mlajših s podeželja, sproža vprašanje erozije lokalnega ekološkega znanja in upada neposredne interakcije z okoljem. Hkrati smo priča ponovnemu oživljanju participativnih oblik kolektivnega ukrepanja v okoljskem upravljanju, kot so participativni delovni tabori, ekološko prostovoljstvo in državljanske pobude za obnovo krajine. Analiza opravil v kolektivnih lastninskih razmerjih poudarja pomen prenosa spomina in izkustvenega učenja pri oblikovanju sodobnih ekoloških veščin. Ta ponavljajoča se praksa je lahko pomembno orodje za kolektivno delovanje v korist okolja ter za varstvo in obnovo narave z namenom trajnostne rabe naravnih prostorov in virov.

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Predstavitev glavne avtorice

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TRADICIONALNO EKOLOŠKO ZNANJE IN UPRAVLJANJE Z NARAVNIMI VIRI NA OBMOČJIH ALPSKIH SKUPNIH POSESTI

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Ključne besede: skupne posesti, tradicionalno ekološko znanje, pašniki, Benečija, Regole

IZVLEČEK

Gorska območja so še posebej ranljiva zaradi globalnih izzivov, kot so podnebne spremembe in družbeno-gospodarske spremembe. Ta ranljivost se pogosto kaže v opuščanju zemljišč, kar povzroča izgubo ekosistemskih storitev, ki lahko negativno vplivajo na mestne skupnosti v dolini. Gorske skupnosti so ključnega pomena za trajnostno upravljanje zemljišč zaradi svojega tradicionalnega ekološkega znanja (TEK v Evropi je opredeljeno kot »znanje, ki temelji na desetletjih osebnih izkušenj na ozemlju prebivališča, pridobljenih z neposrednim upravljanjem zemljišč, in vsebuje stoletja skupnih izkušenj skupnosti« (Molnàr s sod., 2008). TEK obsega poznavanje lokalnih rastlin za medicinske ali kulinarčne namene, zgodovinske meje ter prakse upravljanja pašnikov in gozdov. Na nek način lahko TEK razumemo za osnovo zelenih kompetenc lokalnih skupnosti. Naša raziskava preučuje stanje in prenos TEK v dveh gozdnih skupnostih v italijanskih

Alpah. To so starodavne oblike kolektivnega lastništva, katerih člani skupaj lastijo sredstva za kmetijsko, gozdarsko in pašniško rabo. Naši cilji so bili: i) identificirati znanje in prakse, ki jih je mogoče opredeliti kot tradicionalne v provinci Belluno, ii) razumeti njihovo raven uporabe v obeh skupnostih in iii) identificirati glavne metode prenosa TEK. Uporabili smo mešani kvalitativno-kvantitativni pristop, kot so poglobljeni intervjuji s 6 ključnimi strokovnjaki, pregled literature, vprašalniki in fokusna skupina z lokalnimi ključnimi informatorji. Identificirali smo 10 tradicionalnih praks, povezanih z uporabo naravnih virov, in 16 elementov tradicionalnega ekološkega znanja. Ti vključujejo znanje o lokalnih drevesnih vrstah, posebnih gozdnih območjih z okoljskim pomenom, območjih z visokokakovostnim lesom in posebnih uporabah različnih drevesnih vrst. Tradicionalne prakse vključujejo zbiranje zdravilnih in kulinaričnih zelišč ter tehnike sekanja lesa. Naši rezultati so namenjeni podpori skupnostim pri ohranjanju njihovega tradicionalnega ekološkega znanja. Možni pristopi vključujejo razvoj programov trajnostnega turizma, kot so delavnice izkušenj, ki temeljijo na tradicionalnem znanju, organizacija kulturnih dogodkov in izvajanje programov spremljanja okolja, ki vključujejo elemente tradicionalnega ekološkega znanja za spremljanje vplivov podnebnih sprememb. Te pobude bi lahko obravnavali tudi kot participativne dejavnosti okoljskega izobraževanja, saj idealno vključujejo veliko število obiskovalcev in se osredotočajo na trajnostno rabo naravnih virov.

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Predstavitev glavnega avtorja

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PREVAJANJE TRADICIONALNIH SKUPNIH ZEMLJIŠČ: POKRAJINE, KI PRISPEVAJO K TRAJNOSTNEMU RAZVOJU V FRANCJI

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Ključne besede: skupna zemljišča, trajnostni razvoj, Francija, pokrajina, prevajanje politik

IZVLEČEK

Evropska skupna zemljišča prednikov so ozemlja, ki jih upravljajo lokalni prebivalci, pogosto z uporabniškimi pravicami do pašnikov, gozdov, vode in drugih virov. Te tradicionalne oblike upravljanja virov evropske države pogosto ne priznavajo, saj jih enačijo s staromodnimi oblikami rabe zemljišč. V Franciji jih je več kot 40.000, na ravni občine pa lahko predstavljajo do 50 % ali več zemljišč. Ta skupna zemljišča ostajajo nevidna v javnih

politikah, na primer tistih, ki se nanašajo na trajnostnost, deloma zato, ker njihove prakse niso bile prenesene v sodobne politične okvire, kot so trajnostni razvoj, ekosistemske storitve ali zelene kompetence. Predstavljamo interdisciplinarno in participativno metodo, ki uporablja t. i. »dvojno gledanje«, ki prinaša več perspektiv, skupaj s tradicionalnim znanjem, da bi pridobili celostno razumevanje sistema in tako lokalizirali prispevke k ciljem trajnostnega razvoja. V začetku leta 2025 je skupina interdisciplinarnih raziskovalcev in lokalnih prebivalcev združila svoje metode in prakse v območju Margeride v departmaju Haute-Loire, pri čemer je uporabila participativna srečanja in sprehode, upodobitve pokrajine, zemljevide, intervjuje in skupno analizo ciljev trajnostnega razvoja, da bi skupno zemljišče v pokrajini (v tem primeru sections de commune) smiselno "prevajala" v trajnostne sisteme za upravljanje gozdov in vode, ki hkrati prispevajo k preživetju, prehrani, biotski raznovrstnosti, energiji, blaženju podnebnih sprememb in prilagajanju nanje, dostopu do vode in kulturni dediščini. Predlagamo, da se ta metoda prevajanja, ki v politiko trajnosti vnaša perspektivo skupnosti, uporabi za podporo tehničnemu in političnemu priznanju teh sistemov, s čimer se pokaže, kako prispevajo k naslavljanju današnjih družbenih izzivov.

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Predstavitev glavne avtorice

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OHRANJENI STARI MEJNIKI KATASTRSKIH OBČIN IN AGRARNIH SKUPNOSTI KOT VEZ DOMAČINOV Z LOKALNIM PROSTOROM

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Ključne besede: stari mejniki, participativnost, povezava
lokalne skupnosti s prostorom

IZVLEČEK

V okviru aplikativnega raziskovalnega projekta L2-50090 Geodetska znamenja kot materialni pričevalci razvoja geodetskih mrež na Slovenskem, ki ga sofinancirata ARIS in GURS, smo v letih 2024-2025 izvedli več predavanj o lokalni geodetski zgodovini. Predavanja so bila namenjena lokalnim prebivalcem južne Primorske in osrednje Slovenije. Po koncu predavanj smo v debati s slušatelji na večini predavanj pridobili informacije o nam neznanih še ohranjenih starih geodetskih znamenjih iz njihovega lokalnega okolja – tako smo identificirali informatorje. Pridobljene podatke smo kasneje preverili na terenu, kjer smo popisali napise na še ohranjenih mejnikih, izmerili njihove dimenzije in točno lokacijo. Kasneje smo skozi pregled geodetskih in zgodovinskih virov podrobno preučili pomen teh geodetskih znamenj. Izsledke smo individualno predstavili

posameznemu informatorju, nekatere smo predstavili širši strokovni javnosti v obliki strokovnih objav v Geodetskem vestniku ali bolj poljudnih knjižicah Geodetski utrinki (Triglav Čekada s sod., 2022; Triglav Čekada, 2023; Triglav Čekada in Bratož-Ježek, 2024; Geodetski utrinki, 2022). Večina tako identificiranih geodetskih znamenj, ki so lahko stara 200 ali več let, ima še danes uradno veljavno vlogo mejnikov katastrskih občin ali parcelnih mej. Nekatera so v preteklosti predstavljala še mejnike okrajev, okrožij ali še starejših gospodstev. Najbolj zanimive najdbe so bili stari mejniki agrarnih skupnosti, ki danes predstavljajo le mejnike parcelnih mej.

S takim načinom dela smo veliko hitreje odkrili zgodovinsko zanimive stare mejnike ali druge geodetske točke, kot bi jih zgoj z analizo arhivskih virov. Obojestranska korist je bila očitna: predavatelji so pridobili informacije o pomembnih, a pozabljenih geodetskih točkah, domačini pa so prejeli poljudno razlago o vlogi geodetske zgodovine pri upravnem razvoju njihovega okolja. S tem je posamezni ohranjeni star mejnik za domačine postal »govoreči kamen« ali priča o lokalni zgodovini. Izobraževanje pa jim je poleg tega predstavilo še druge zanimivosti o geodetskih znamenjih v bližini njihove lokalne skupnosti. Tako smo s predavanji spodbudili participativnost lokalne skupnosti – deljenje informacij o pozabljenih starih mejnikih iz njihovega lokalnega okolja, ki ima dvostransko korist.

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Predstavitev avtorice

Doc. dr. **Mihaela Triglav Čekada** je vodja področja geodezije na Geodetskem inštitutu Slovenije. Zadnjih nekaj let se intenzivno ukvarja z raziskovanjem zgodovine različnih starih geodetskih znamenj in geodetskih mrež. Delno je zaposlena še na Univerzi v Ljubljani, na Fakulteti za gradbeništvo in geodezijo, kjer izsledke svojih raziskav prenaša na nove generacije geodetov.

PREZRTE, A DRAGOCENE: AGRARNE SKUPNOSTI KOT VARUHI NARAVE, BIODIVERZITETE IN KULTURNE POKRAJINE

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Ključne besede: skupna zemljišča, upravljanje, vseživljenjsko učenje, vzdrževanje biodiverzitete, ekosistemske storitve

IZVLEČEK

Slovenija ima dolgo zgodovino upravljanja skupnih zemljišč prek agrarnih skupnosti, ki danes poleg ekonomske pridobivajo tudi ekološko in družbeno vlogo. Kljub nekaterim študijam in zakonskim spremembam ostajajo ključni podatki o številu, lokaciji in delovanju aktivnih agrarnih skupnosti ter njihovih zemljiščih pomankljivi.

Prispevek s pomočjo empirične analize na območju Zahodne in Osrednje Gorenjske preverja trenutno stanje registracije ter prostorsko razporeditev skupnih zemljišč. Dodatna prostorska (GIS) analiza, osredotočena na območje Triglavskega narodnega parka, razkriva, da več kot polovico teh skupnih zemljišč predstavljajo gozdovi, približno 4 % travniki oziroma planinski pašniki, skoraj 35 % pa visokogorska območja. Čeprav imajo ta zemljišča nizko ekonomsko vrednost, predstavljajo

ključen ekološki in družbeni kapital, saj prispevajo k ohranjanju biotske raznovrstnosti, značilne kulturne pokrajine in ekosistemskih storitev.

Vendar pa smo v neformalnih pogovorih s člani različnih agrarnih skupnosti zaznali, da imajo kljub bogatemu tehničnemu znanju – zlasti na področju gospodarjenja z gozdovi in pašniki – omejeno razumevanje širših koristi, ki jih njihova skupna zemljišča prinašajo družbi. Njihovo poznavanje politik na področju varstva narave in okolja je pogosto (pre)šibko, tudi zaradi pomanjkanja raziskav in informacij o tej temi. Boljše razumevanje tovrstnih politik in večja ozaveščenost o družbeni in ekološki vrednosti skupnih zemljišč sta ključna za opolnomočenje agrarnih skupnosti pri trajnostnem upravljanju z naravnimi viri, obenem pa odločevalcem nudita utemeljene argumente za oblikovanje stabilnejše in dolgoročne podpore skupnostnemu upravljanju.

Agrarne skupnosti s svojim dolgoletnim upravljanjem skupnih zemljišč predstavljajo nosilce lokalnega znanja o naravnih virih, gozdovih in pašnikih. To znanje ima visoko izobraževalno vrednost, ki pa ostaja premalo prepoznana in uporabljena. Vključevanje teh skupnosti v participativno okoljsko izobraževanje, denimo skozi delavnice, študijske krožke ali sodelovanje v razlagalnih aktivnostih, omogoča dvosmerni prenos znanja: skupnosti prispevajo svoje praktične izkušnje, hkrati pa pridobivajo boljše razumevanje okoljskih politik in ekosistemskih koristi svojega delovanja. Tak pristop krepi njihovo vlogo pri varstvu narave, spodbuja večjo zavzetost in povezanost z lokalnim okoljem ter prispeva k oblikovanju trajnostnih in vključujočih modelov upravljanja naravnih virov.

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Predstavitev avtorice

Dr. **Mateja Šmid Hribar** je raziskovalka na ZRC SAZU in docentka na Podiplomski šoli ZRC SAZU. Raziskuje odnose med ljudmi in naravo. Proučuje upravljanje tradicionalnih in novih skupnostnih praks ter vlogo ekosistemskih storitev pri upravljanju naravnih virov. Pri svojem delu uporablja različne metodološke pristope, kot so kvalitativni podatki, pridobljeni z izvajanjem intervjujev, fokusnih skupin, terenskih obiskov, pa tudi analiza kvantitativnih podatkov.

OD ŠTRNINE DO PLANINE: ODNOS ČLANOV AGRARNE SKUPNOSTI DO ZEMLJE IN IZROČILA PREDNIKOV KOT VIR ZELENIH KOMPETENC

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Ključne besede: skupnost, odnos, vrednote, trajnost

IZVLEČEK

Agrarne skupnosti so stara oblika organiziranega delovanja skupine ljudi na določenem ozemlju z namenom ohranitve agrarne namembnosti zemljišč. Kljub številnim družbenim, političnim, gospodarskim in kapitalskim pritiskom so ohranile agrarno namembnost in naravno vrednost svojih zemljišč. To dokazuje, da že stoletja izvajajo trajnostno upravljanje zemljišč in izkazujejo močne zelene kompetence. Prispevek na primeru Agrarne skupnosti Merče in Plešivica raziše elemente zelenih kompetenc, na katerih temelji ta trajnostnost. Agrarna skupnost Merče in Plešivica je obudila delovanje na prelomu stoletja, potem ko je 50-letna razlastitev z nacionalizacijo povzročila vrzel, v kateri se je izgubilo veliko skupnostnega izročila, delovanja, znanja in vrednot. Glavna vez, ki je ostala, je bil teritorij: 140 hektarjev zemljišč med dvema parcelama: Štrnino nad Plešivico, kjer je bil nekoč kal, in Planino nad Merčami. Uporabljeni raziskovalni pristopi vključujejo analizo ar-

hivskih dokumentov, intervjuje z izbranimi člani, popis terenskega stanja in vrednosti zemljišč, opis terenskih značilnosti in ledinskih imen. Z njimi sem preverila štiri ključne hipoteze:

1. Člani agrarne skupnosti so močno povezani s konkretnimi zemljišči, ki jih zaznamujejo imena, reliefne značilnosti, rastlinske skupnosti in druge posebnosti.
 2. Pri odnosu do teritorija so pomembni spomini (osebni in pripovedovanj) o konkretnih delih teritorija (skale, meje, kali, poti ...), navadah (skupna raba), dogodkih (veselih, tragičnih, povezanih z živino, vremenom ...) in izročilih.
 3. Ta dediščina in izročilo prednikov predvsem na čustveni ravni vplivata na sedanja obnašanja članov agrarne skupnosti, da sprejemajo takšne odločitve, s katerimi ohranjajo to dediščino za naslednike.
 4. Spoštovanje teritorija kot takega in spoštovanje skupnostne dediščine vplivata na individualna stališča članov agrarne skupnosti, da je agrarna skupnost vrednota, četudi nima velike ekonomske vrednosti.
- Rezultati kažejo, da je čustveni in vrednotni odnos članov do zemlje in izročila bistven, da pri večini odločitev (o infrastrukturnih posegih, gospodarjenju ipd.) vrednote skupnosti in trajnostnosti prevladajo nad sicer večjimi (individualnimi) ekonomskimi interesi. Na ta način člani sprejemajo trajnostne odločitve, ne da bi se tega racionalno zavedali. Ni pa to prisotno med vsemi člani, zato je pomembno te vrednote ozavestiti kot zelene kompetence in jih širiti na vse člane in tudi zunaj skupnosti.

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Predstavitev avtorice

Marica Uršič Zupan je univ. dipl. novinarka. Kot novinarka in urednica je veliko pozornosti posvečala okoljskim temam, trajnostnemu razvoju in agrarnim skupnostim. Te je od blizu spremljala tudi kot pobudnica ponovne oživitve Agrarne skupnosti Merče in Plešivica in kasneje več let njena predsednica. V obeh vlogah je poudarjala trajnostni pomen agrarnih skupnosti tako z vidika ohranjanja okolja kot tudi demokratičnih in dolgoročnih načinov odločanja.

KREPITEV ZMOŽNOSTI SKUPNOSTI V SINGAPURJU: SOCIALNO UČENJE IN DRUŽBENA INOVATIVNOST ZA ODPORNE LOKALNE SKUPNOSTI

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Ključne besede: družbena inovativnost, krepitev zmožnosti, lokalna skupnost, podnebne spremembe, socialno učenje

IZVLEČEK

Krepitev zmožnosti lokalnih skupnosti je ključnega pomena za izgradnjo odpornih sosesk, ki se lahko učinkovito odzivajo na podnebne in družbene spremembe. Vključuje mobilizacijo virov, razvoj kompetenc, vodstveno usposabljanje, socialno učenje in družbeno inovativnost. Socialno učenje je rezultat vzajemne izmenjave idej in znanja med deležniki in spodbuja družbeno inovativnost, kot so nove ideje, storitve in strategije, ki lahko lokalne skupnosti opolnomočijo, da se skupaj soočajo, prilagajajo in vplivajo na spremembe. S tem se odzivajo na notranje in zunanje trajnostne izzive. Družbena inovativnost je hkrati povezana z medsektorskimi partnerstvi, ki spodbujajo socialno učenje med deležniki.

Namen študije je razumeti vlogo socialnega učenja in družbene inovativnosti pri krepitvi zmožnosti lokalnih skupnosti za odzivanje na podnebne spremembe. Osredotoča se na sosesko Pek Kio v Singapurju kot primer vladnega pilotnega projekta, katerega cilj je bil oblikovati odporno lokalno skupnost z okrepitvijo njenih zmožnosti za prepoznavanje in odzivanje na podnebne spremembe v mestu. Kljub omejenem obsegu in rezultatom pilotni projekt kaže na pomen socialnega učenja in oblikovanja partnerstev med prebivalci, civilno-družbenimi organizacijami in vladnimi agencijami pri oblikovanju lokalnih skupnosti, ki lahko skupaj predvidijo, načrtujejo in izvajajo inovativne skupnostne strategije blaženja in prilagajanja na podnebne spremembe. Slednje so bile osredotočene na obvladovanje ekstremne vročine v soseski in so vključevale skupnostno vrtnarjenje ter ozelenitev soseske, aktiviranje in vzdrževanje skupnih prostorov, okoljsko izobraževanje in socialno učenje o podnebnih ukrepih skupnosti. Soseska Pek Kio v Singapurju predstavlja oddaljen, a dragocen primer, ki kaže na pomen socialnega učenja in družbene inovativnosti pri krepitvi zmožnosti lokalnih skupnosti za odzivanje na podnebne spremembe. Poleg tega študija poudarja potrebo po alternativnih modelih upravljanja podnebnih sprememb, ki lahko preoblikujejo odnos med državo in lokalnimi skupnostmi ter omogočajo učinkovito participativno okoljsko izobraževanje in podnebne ukrepe skupnosti.

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Predstavitev avtorjev

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Jan H. M. Lim je prostovoljna podoktorska raziskovalna sodelavka na Oddelku za arhitekturo na KU Leuven v Belgiji. V svojih raziskavah o vključevanju skupnosti, načrtovalski politiki in upravljanju mest preučuje, kako politično-institucionalni kontekst načrtovanja mest vpliva na sodelovanje javnosti in aktivizem civilne družbe v Singapurju. Trenutno se ukvarja s podnebnim upravljanjem v mestih, kolektivnim delovanjem in podnebno pravičnostjo. Je soustanoviteljica ter direktorica za raziskave in strategije pri neprofitni organizaciji Participate in Design v Singapurju.

KAKO LAHKO SKUPNOSTNO IZOBRAŽEVANJE PRISPEVA K BOLJ VKLJUČUJOČIM JAVNIM IN ZELENIM POVRŠINAM

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Ključne besede: javne in zelene površine, ranljive skupine, skupnostno izobraževanje, dobre prakse, trajnostni razvoj

IZVLEČEK

Namen je bil raziskati, kako lahko izobraževanje in učenje odraslih prispevata k uresničevanju podcilja 11.7 Agende 2030, katerega namen je zagotavljanje dostopa do varnih, odprtih in dostopnih zelenih in javnih površin, zlasti za invalide, starejše, otroke in ženske.

Urbane javne zelene površine nudijo zdravo okolje mestnemu prebivalstvu in so ključne za zviševanje standarda življenja prebivalstva, tudi ranljivih skupin. Poleg fizične in komunikacijske dostopnosti, ki je pomembna zlasti za funkcionalno ovirane skupine, je pomembno, da so javne in zelene površine odprte vsem, neglede na njihovo kulturno ozadje (Atikur in Zhang, 2018, str. 1–2). Pomemben element, ki zagotavlja enakost dostopa do javnih zelenih površin je tudi varnost, saj že sama percepcija nevarnosti omejuje pri

svobodni rabi teh površin (Iqbal, 2021, str. 1–3). Kot ključna dejavnika za doseganje sprememb sta se pokazala oblikovanje skupnosti in skupnostno izobraževanje, to je definirano kot izobraževanje v skupnosti za skupnost. Gre za približevanje izobraževanja potrebam ljudi in skupnosti, kar spodbuja sodelovanje za učinkovito uresničevanje zastavljenih ciljev. Ena ključnih značilnosti skupnostnega izobraževanja je, da je nadzor nad njim v rokah skupnosti, kar spodbuja participacijo sodelujočih, saj ponuja možnost sooblikovanja vsebin (Močnik, 2009, str. 55–57). Raziskave kažejo, da skupnosti, ki združujejo aktivnosti z dialoškim in transformativnim učenjem, pripomorejo k razvoju trajnostne družbe z ustvarjanjem novih praks (Ličen idr., 2017, str. 37).

Podrobneje sta bila obravnavana dva primera dobrih praks, prvi zadeva oblikovanje vključujoče tematske poti v Vipavi. Tematske poti imajo poleg informacijskega, izobraževalnega in rekreacijskega namena, tudi vlogo varovanja in ohranjanja narave ter kulturne dediščine (Prah, 2023, str. 153). V luči trajnostnega razvoja je bila tematska pot v Vipavi zasnovana na način, da ne spreminja prostora, v katerem poteka, poleg tega pa deluje kot izobraževalna in turistična aktivnost. Pri oblikovanju poti je bila vključena tudi lokalna skupnost, ki je imela možnost participacije pri oblikovanju trase. Drugi primer se nanaša na projekt LivadaLAB (LivadaLAB, b. d.), ki predstavlja primer skupnostnih vrtov v Sloveniji. LivadaLAB svoje delovanje opisuje kot participativno upravljanje, samooskrba s hrano in trajnostno urejanje prostora. Predstavlja prostor skupnosti, ki eksperimentira z načini sobivanja, soustvarjanja in sodelovanja mladih in jih spodbuja k aktivaciji za naslavljanje podnebne krize.

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Predstavitev avtorjev

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PRAKSE IN PRISTOPI PARTICIPATIVNEGA OKOLJSKEGA IZOBRAŽEVANJA



POTENCIALI ŠTUDIJSKIH KROŽKOV ZA SPREMINJANJE VREDNOT ODRASLIH O BIODIVERZITETI

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Ključne besede: študijski krožki, vrednote biodiverziteta,
Zeleni dogovor

IZVLEČEK

Izguba biodiverzitete, habitatov in ekosistemskih storitev, ki jih ti zagotavljajo, predstavlja eksistenčno grožnjo za Evropo in svet. Doseganje vizije Evropskega zelenega dogovora – zaščititi 30 % kopnega in morja v Evropi ter obnoviti vsaj 20 % teh območij do leta 2030 (in vse degradirane ekosisteme do leta 2050) – bo zahtevalo korenite družbene spremembe. Ti cilji so usklajeni z EU Biodiverzitetno strategijo 2030, ki jo je

sprejela Evropska komisija. Vendar uresničevanje teh ambicij ni zgolj stvar politik, temveč zahteva tudi temeljit premik v tem, kako ljudje razumejo, vrednotijo in se v vsakdanjem življenju povezujejo z biodiverzitetjo. Da bi raziskali in prispevali k temu obratu, smo v okviru projekta Horizon 2020 SHARED GREEN DEAL (2022–2027; <https://sharedgreendeal.eu/>) z uporabo metode študijskih krožkov (ŠK), ki temelji na neformalnem skupnostnem učenju, izvedli družbene eksperimente v štirih evropskih državah (Irska, Grčija, Slovenija in Švedska). V okviru eksperimenta so se skupine po 10–15 odraslih srečevale mesečno med majem 2023 in aprilom 2024, da bi med udeleženci spodbudili spremembo vrednotenja biodiverzitete. Na podlagi 40 strukturiranih intervjujev smo ugotovili, da je prišlo do premikov v dojemanju, znanju in včasih tudi v vedenju udeležencev glede dojemanja narave in biodiverzitete. V ŠK se je razvilo močno občutje skupnosti in veselje do skupnega učenja, kar poudarja moč družbene interakcije in učenja med vrstniki pri spodbujanju okoljsko odgovornega vedenja. Poleg tega so intervjuji pokazali močno podporo skupnostnim pobudam za ohranjanje biodiverzitete, kot so skupnostni vrtovi, obnova habitatov, fotografske razstave, popisi ptic in izobraževalni izleti. Ti so se izkazali kot učinkoviti načini za ozaveščanje, spodbujanje sprememb vedenja, krepitev družbenih vezi in vključevanje lokalnega znanja ter tradicije.

Metoda ŠK se je izkazala kot učinkovita pri: 1) povečanju znanja in zavedanja odraslih o biodiverziteti, 2) krepitevi državljske participacije pri njenem varovanju ter 3) spodbujanju osebne vključenosti v lokalne pobude, ki spodbujajo izmenjavo znanja in skupnostne prakse. Ti izsledki poudarjajo potencial ŠK kot močnega orod-

ja za podporo družbenim spremembam, potrebnim za doseganje ciljev na področju biodiverzitete. Z ustvarjanjem vključujočih prostorov za dialog, ŠK pomagajo odraslim ponovno premisliti svoj odnos do narave, okrepiti vezi v skupnosti ter spodbujati dolgoročno okoljsko odgovornost in angažiranost na ravni lokalnih skupnosti.

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Predstavitev glavne avtorice

Dr. **Mateja Šmid Hribar** je raziskovalka na ZRC SAZU in docentka na Podiplomski šoli ZRC SAZU. Raziskuje odnose med ljudmi in naravo. Proučuje upravljanje tradicionalnih in novih skupnostnih praks ter vlogo ekosistemskih storitev pri upravljanju naravnih virov. Pri svojem delu uporablja različne metodološke pristope, kot so kvalitativni podatki, pridobljeni z izvajanjem intervjujev, fokusnih skupin, terenskih obiskov, pa tudi analiza kvantitativnih podatkov.

DAN ZA ZELENO ZNANJE V SVETOVALNI DEJAVNOSTI V IZOBRAŽEVANJU ODRASLIH

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Ključne besede: svetovanje, izobraževanje odraslih, terensko delo, promocija

IZVLEČEK

Dan za zeleno znanje je bil tematski dan, ki smo ga leta 2024 izpeljali kot del tradicionalnih Dnevov svetovanja za znanje, vsakoletnega strokovno-promocijskega dogodka, s katerim želimo dejavnost svetovanja v izobraževanju odraslih (IO), ki se izvaja kot javna služba (Andragoški center Slovenije, n.d.), približati najširšemu krogu odraslih. Izpeljavo dogodka koordinira Andragoški center Slovenije, izvajajo pa ga vseh 35 izobraževalnih organizacijah za odrasle po Sloveniji, ki svetovalno dejavnost v IO izvajajo kot javno službo. Z namenom informiranja odraslih o različnih možnostih svetovanja, učenja in izobraževanja, izvajalske organizacije v času dogodka še posebej na široko odprejo svoja vrata, odrasle pa nagovarjajo tudi zunaj svojih prostorov, na mestnih trgih in ulicah, v parkih, prek lokalnih medijev in s pomočjo raznolikih partnerjev v svojem okolju.

Vsako leto je eden od treh dni, kolikor trajajo Dnevi,

tematski. Pod imenom Dan za zeleno znanje smo leta 2024 povezali svetovanje v IO z vsebinami, povezanimi s skrbjo za naravo, varovanjem okolja ter trajnostnim življenjem in delom.

Izvajalci so pripravili najrazličnejše dogodke, delavnice, stojnice, dneve odprtih vrat itd., pri čemer so sledili tematskim poudarkom Dneva za zeleno znanje, izhajali pa iz potreb in značilnosti lokalnega okolja. »Zelene vsebine« so se izkazale za aktualne in privlačne (npr. Izmenjevalnica, Biodinamično vrtnarjenje in zeliščarstvo, Trajnostna kuhinja itd.), Dan za zeleno znanje pa je naletel na dober odziv odraslih in partnerskih organizacij v lokalnih okoljih.

V prihodnje želimo ozaveščanje, informiranje in motiviranje odraslih za vključevanje v učenje in izobraževanje za trajnostno delovanje in razvoj, vključno z različnimi oblikami participativnega okoljskega izobraževanja (Robinson, Gradišek, Bevk, Bogataj, 2024), razvijati kot eno od stalnih vsebin svetovalne dejavnosti v IO. V evropskem prostoru so to vsebino svetovanja že poimenovali kot »green guidance« (Plant, 2021).

Svetovalci v IO so lahko pomembni akterji, ki lahko odrasle informirajo o participativnem okoljskem izobraževanju, jih spodbudijo k vključitvi ali motivirajo, da se organizirajo sami (npr. v Središču za samostojno učenje, študijskih krožkih). Pogoji za to pa je, da svetovalci dobro poznajo te vsebine, so ozaveščeni o njihovem pomenu za sodobno družbo in človekovo (delovno in osebno) življenje ter seznanjeni z možnostmi, ki so na voljo v lokalnem okolju in tudi širše. Ena od vlog svetovalca je, da deluje kot vezni člen med odraslimi in izobraževanjem (Jelenc Krašovec, 2009) ter da odrasle spodbuja k vključevanju (Pavlič, Vilič Klenovšek, 2020).

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Predstavitev avtorice

Urška Pavlič je univerzitetna diplomirana sociologinja in japonologinja (Univerza v Ljubljani). Na področju svetovanja v izobraževanju odraslih ima več kot desetletje izkušenj, ukvarja pa se tako z razvojnimi dejavnostmi kot z neposredno podporo javni mreži izvajalcev svetovanja v izobraževanju odraslih, vključno s pripravo strokovnih gradiv, programov itd. za podporo tej mreži in spodbujanje sodelovanja z deležniki. Je (so)avtorica različnih strokovnih gradiv in predavateljica v programih usposabljanja svetovalcev v izobraževanju odraslih.

SOUSTVARJANJE ZELENIH SKUPNOSTI: VPLIV LJUDSKIH UNIVERZ NA RAZVOJ ZELENIH KOMPETENC

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Ključne besede: zelene kompetence, GreenComp, vseživljenjsko učenje, participativnost, lokalna skupnost

IZVLEČEK

Predlagani panel naslavlja vlogo ljudskih univerz kot soustvarjalk zelenih skupnosti, ki s programi za odrasle razvijajo zelene kompetence, opredeljene v okviru GreenComp (EC, 2022). Predstavljen bo nabor pristopov in praks, ki povezujejo trajnostne vrednote, sistemsko razmišljanje, ukrepanje in prihodnjo usmerjenost s konkretnimi dejavnostmi v lokalnih skupnostih. Poudarek bo na interdisciplinarnosti, participativnosti, medsektorskem sodelovanju, ozaveščanju in trajnostnem ravnanju ter družbenem vplivu programov LU na spreminjanje okoljskih navad in vrednot. S poudarjanjem izkustvenega učenja in vpetosti v lokalno okolje

panel prikazuje konkretne načine, kako vseživljenjsko učenje lahko postane orodje za krepitev zelenih kompetenc odraslih ter njihovo prenašanje na mlajše generacije. Ob tem odpira razpravo o dilemah merjenja teh kompetenc, vlogi izobraževalcev pri odzivanju na okoljske izzive in vključevanju ciljev ReNPIO 22–30 v formalne in neformalne izobraževalne oblike. Namen panela je spodbuditi razmislek o vlogi ljudskih univerz kot ključnih akterjev v prehodu v bolj trajnostno prihodnost.

Eva Mermolja; LU Ajdovščina gradi na dolgotrajni lokalni prisotnosti in z VGC programi v oddaljenih skupnostih zagotavlja dostopnost vsebin s področja trajnostnega razvoja, predvsem skozi medgeneracijsko učenje in sodelovanje z deležniki.

Irena Bohte; ZIK Črnomelj s projektom Dnevi zeliščarstva v Beli krajini že devet let združuje izobraževanje, prenos znanja in krepitev lokalne samooskrbe, s poudarkom na tradicionalnih znanjih, medgeneracijskemu sodelovanju in povezovanju.

Dragica Glažar; Cene Štupar – CILJ nadgrajuje obstoječe prakse vključevanja trajnostnih vsebin v zaporski sistem z uvedbo celostnega izobraževanja za zaposlene in učitelje, s ciljem širjenja zelenih znanj in spodbujanja dolgoročnih vedenjskih sprememb zaprtih oseb tudi po prestani kazni.

Alenka Kučan; LU Murska Sobota z izvirnim študijskim krožkom Lipovci razvija zelene kompetence skozi ohranjanje obrti (pletenje košar), uporabo lokalnih surovin ter praktične učne aktivnosti za skupnost.

Viki Ivanuša; LU Ormož poudarja vlogo narave kot učilnice in vključevanje zelenih tem v neformalne in projektne vsebine – vse od študijskih krožkov do evropskih projektov zanimivih za vse generacije.

Maja Marija Sadar; LU Ravne na Koroškem prek projekta PLANET B NE OBSTAJA ponuja celosten trajnostni izobraževalni okvir, ki temelji na osebni izkušnji udeležencev in skupnostnem delovanju.

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Predstavitev avtoric

Zveza ljudskih univerz Slovenije (ZLUS) združuje 22 ljudskih univerz iz celotne Slovenije. Deluje kot zagovorniška in razvojna organizacija, ki krepi vlogo ljudskih univerz v razvoju lokalnih skupnosti ter podpira kakovostno in dostopno vseživljenjsko učenje. Ključno področje njenega delovanja je razvoj in krepitev vseh temeljnih kompetenc, vključno z razvojem trajnostnih in zelenih kompetenc pri odraslih, skladno z evropskimi in nacionalnimi usmeritvami.

ORODJA OBČANSKE ZNANOSTI ZA VKLUČUJOČE PRILAGAJANJE NA PODNEBNE SPREMEMBE

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Ključne besede: občanska znanost, podnebne spremembe, prilagajanje, izobraževanje

IZVLEČEK

Ohranjanje in obnova obalnih ekosistemov pomembno prispevata k prilagajanju na podnebne spremembe in zmanjševanju tveganj (Spalding idr., 2014). Uspešnost ukrepov je v veliki meri odvisna od participacije skupnosti ter vzpostavljanja globljih ravni sodelovanja pri sooblikovanju in soupravljanju ukrepov, temelječih na ekosistemi (Toxopeus idr., 2020). Občanska znanost lahko k temu pomembno prispeva, saj omogoča učinkovitejše zbiranje podatkov, hitrejši odziv ter okrepljeno sodelovanje med odločevalci, raziskovalci in aktivno civilno družbo, ki so vključeni v iniciative prilagajanja na podnebne spremembe (Neset idr., 2021). Ta vse bolj razširjen pristop znanstvenoraziskovalnega dela, pri katerem so v raziskave na različne načine vključeni neprofesionalni raziskovalci, lahko hkrati prispeva k širjenju ozaveščenosti in znanja o trajnostnosti med

različnimi deležniki, tudi učenci in učitelji (Rodríguez-Loinaz idr., 2022).

Prispevek predstavlja orodje za občansko znanost, razvito v okviru projekta ECO2SMART (www.ita-slo.eu/eco2smart). Projekt, ki je potekal v letih 2023–2025, je sofinancirala Evropska unija v okviru Programa Interreg VI-A Italija–Slovenija. Njegov namen je bil spodbujanje participacije prebivalstva pri snovanju in izvajanju na ekosistemih temelječih ukrepov za prilagajanje na podnebne spremembe in zmanjševanje tveganj naravnih nesreč.

V prvem delu prispevek podaja pregled raziskovalne literature o ključnih konceptih, povezanih z vključevanjem deležnikov in širše javnosti v pobude za prilagajanje na podnebne spremembe z uporabo občanske znanosti – na primer za kartiranje tveganj in ranljivosti ter soustvarjanje rešitev (Freschi idr., 2024). V drugem delu pa bo predstavljen prispevek k tem prizadevanjem, tj. orodje občanske znanosti, razvito v okviru projekta, ki je dostopno na spletnem izobraževalnem portalu projekta (www.eco2smart.si). To orodje spodbuja prebivalce obalnih območij severnega Jadrana k aktivnemu sodelovanju z raziskovalci in k prispevanju podatkov o dobrih praksah na ekosistemih temelječega prilagajanja na podnebne spremembe. Na ta način se pospešujeta prenos znanja in večje povezovanje med različnimi deležniki na obmejnem območju, kar dodatno prispeva h krepitvi vzajemnega razumevanja in navzkrižni izmenjavi izkušenj. Ustvarjanje novih mrež med prebivalci je ključno za skladen trajnostni razvoj in učinkovitejše prilagajanje obmejnega območja na posledice podnebnih sprememb.

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Predstavitev avtorice

Dr. Liliana Vižintin, univ. dipl. biologinja in doktorica znanosti s področja biotehnologije, je raziskovalka in vodja mednarodnih projektov v okviru Mediteranskega inštituta za okoljske študije ZRS Koper. Njeno raziskovalno delo je osredotočeno predvsem na trajnostni razvoj, varstvo narave, prilagajanje na podnebne spremembe ter prenos znanja in tehnologij v prakso. V okviru projektov razvija orodja za vključevanje deležnikov, med drugim spletne izobraževalne igre in orodja za občansko znanost.

KOMPETENCE ZA TRAJNOSTNI RAZVOJ V KNJIŽNICAH NA PRIMERU DOBRE PRAKSE

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Ključne besede: knjižnice, ponovna uporaba, ozaveščanje, aktivno državljanstvo, prostovoljstvo

IZVLEČEK

Knjižnice so po svojem poslanstvu trajnostno nara-
vnane, saj temeljijo na izposoji gradiva in s tem spod-
bujajo ponovno uporabo. Že dolgo ne izposojajo le
knjižnega gradiva, zemljevidov, avdio in video gradiva,
ampak se vedno bolj usmerjajo tudi na druga področ-
ja – v izposajo igrač, iger, bralnikov, prenosnih raču-
nalnikov ter celo uporabnih predmetov, kot so različni
gospodinjski aparati, orodje ipd. V Strategiji razvoja
slovenskih splošnih knjižnic 2022–2027 so cilji trajnos-
tnega razvoja postali del njihove vizije. Knjižnice tako
prevzemajo tudi vlogo ozaveščanja uporabnikov o tra-
jnostnem ravnanju.

Dober primer je projekt Prevetrimo omare, ki ga Kn-
jižnica Logatec izvaja v sodelovanju s Komunalnim
podjetjem Logatec. Prvi dogodek je potekal maja 2019
in je vključeval izmenjevalnico oblačil, predmetov,
igrač in knjig. Dogodek sta spremljali še bukvarna z
odpisanimi knjigami knjižnice ter garažna razprodaja,

na kateri so občani Logatca na brezplačnih stojnicah prodajali rabljene predmete. Kljub prvotni zadržanosti obiskovalcev je bil dogodek uspešen ter tako na željo uporabnikov prerasel v redni projekt z najmanj dvema dogodkoma letno.

Pobudo za projekt je podala aktivna občanka, ki je prek participativnega proračuna pridobila tudi opremo za izvedbo dogodkov (prenosna zložljiva stojala za oblačila, zložljive mize, zabojе za shranjevanje obešalnikov, lestve s policami, ogledalo). Na dogodkih smo izvedli nekaj različnih aktivnosti (zbiranje in popravilo gospodinjskih aparatov) in delavnic (delavnico popraviljanja oblačil, izdelavo svečk iz odpadnega olja, izdelava mahbunk/kokedam). Na dogodkih izpostavljamо tudi izobraževalne infografike o vplivu modne industrije na okolje. Zaradi visoke obiskanosti dogodkov ti ne bi bili izvedljivi brez dragocenih prostovoljcev, ki pomagajo pri postavitvi opreme, razvrščanju donacij in pospravljanju po koncu dogodka. Po vsaki prireditvi komunalno podjetje poskrbi za ustrezno reciklažo preostalega materiala, lepo ohranjena oblačila pa doniramo lokalni izpostavi Rdečega križa.

Z naraščajočo udeležbo dogodkov skozi leta je projekt prispeval k razvoju trajnostnih navad med vsemi generacijami – od otrok do starejših. Gre za zgleden primer uspešnega sodelovanja dveh javnih ustanov, ki sta lokalno skupnost ozavestili o pomenu ponovne uporabe, zmanjšali količino zavrženih oblačil in pripomogli k bolj odgovornemu potrošniškemu vedenju ter varovanju okolja. Kot uspešna praksa bi lahko postal model za podobna sodelovanja tudi v drugih občinah, kjer so podobne akcije izpeljane zgolj na prostovoljni ravni.

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Predstavitev avtorice

Urška Orešnik je bibliotekarka v Knjižnici Logatec, kjer že od samega začetka vodi projekt Prevetrimo omare. Je tudi soavtorica Strategije razvoja slovenskih splošnih knjižnic 2022–2027, pri kateri je še posebej prispevala k oblikovanju ciljev trajnostnega razvoja. Njeno delo združuje strokovno znanje iz področja knjižničarstva z zavezanostjo trajnostnemu razvoju in spodbujanju odgovornega ravnanja v skupnosti.

GOZDARSTVO – PRILOŽNOSTI IN IZZIVI MLADIH V ZELENI KARIERI PRIHODNOSTI

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Ključne besede: podnebne spremembe, zelena delovna mesta, ženske v gozdarstvu, enakost

IZVLEČEK

Gozdarstvo kot eden ključnih zelenih sektorjev sedanjosti in prihodnosti pomembno prispeva k blaženju podnebnih sprememb, ohranjanju biotske raznovrstnosti ter zagotavljanju ekosistemskih storitev. Zato gozdarski poklici postajajo vse pomembnejši del zelenih delovnih mest, ki vključujejo razvoj zelenih kompetenc – od trajnostnega upravljanja naravnih virov do sodelovanja v skupnostih in odgovornega ravnanja na osebni ter institucionalni ravni.

Kljub temu ostaja gozdarstvo v Sloveniji še vedno zaznamovano s tradicionalno predstavo o fizično zahtevnem in predvsem moškem poklicu, kar predstavlja enega večjih izzivov pri vključevanju mladih – še posebej deklet in žensk – v ta sektor. Poklic gozdarja se pogosto enači z delom sekača, pri čemer se spregleda vloga gozdarjev kot izobraževalcev, raziskovalcev in načrtovalcev trajnostne rabe prostora, kar se odraža tudi v nizki zastopanosti žensk, zlasti na vodilnih položajih. Na

drugi strani pa je med lastniki gozdov kar 41 % žensk, kar Slovenijo uvršča v sam evropski vrh. Vendar to še ne pomeni njihove dejanske participacije pri odločanju o upravljanju gozdov, saj to vlogo pogosto prepuščajo moškim družinskim članom.

Rezultati raziskave med dijakinjami in študentkami gozdarstva kažejo, da osebno zanimanje igra ključno vlogo pri izbiri poklica, pomembno pa vplivajo tudi finančni vidiki in ravnotežje med poklicnim in zasebnim življenjem. Gozdarski sektor ostaja zaznamovan s spolnimi stereotipi, napačnimi predstavami o poklicu ter skrbmi glede varnosti in fizičnih naporov, kar ženskam predstavlja dodatno oviro. To kaže na potrebo po bolj participativnem okoljskem izobraževanju, ki mladim omogoča aktivno vlogo, povezano s praktičnimi izkušnjami v naravi in krepitev zelenih kompetenc.

Raziskave so pokazale, da ženske v gozdarstvu prinašajo pomembno dodano vrednost – večjo pozornost posvečajo ekološkim in socialnim funkcijam gozda, vnašajo sveže poglede, ustvarjalnost ter spodbujajo inovacije. Z odpravo stereotipov in spodbujanjem enakih možnosti lahko gozdarski sektor postane bolj vključujoč. Priložnost za to ponujajo ciljno usmerjeni projekti, izobraževanja in promocijske kampanje, kot je prepoznavanje in promocija ženskih vzornic, ki lahko navdihujejo prihodnje generacije. Le tako bodo mladi prepoznali gozdarstvo kot poklic prihodnosti, ki združuje delo v naravi, tehnološki napredek, raziskovanje in družbeno odgovornost.

Zahvala: Prispevek je nastal v okviru projekta Fem2forests, Inovativne poti za učinkovito vključevanje deklet in mladih žensk v gozdarski sektor, sofinanciranega v okviru programa Interreg Programme Danube Region (DRP0200118), ki poteka od 1.

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Predstavitev avtoric

Darja Stare, magistrica inženirka gozdarstva, je raziskovalka na Gozdarskem inštitutu Slovenije. V svojem raziskovalnem delu se osredotoča na socio-demografske značilnosti zasebnih lastnikov gozdov, njihov odziv na ujme in prilagajanje podnebnim spremembam, kar je tudi tema njene doktorske disertacije. Aktivno deluje na področju enakosti in raznolikosti v gozdarstvu, s poudarkom na vlogi žensk in vključevanju mladih v gozdarski sektor.

Dr. **Nike Krajnc** je gozdarka, raziskovalka in od februarja 2023 direktorica Gozdarskega inštituta Slovenije. Njeno raziskovalno delo se osredotoča na lesno biomaso, ekonomičnost proizvodnih verig in sodobne tehnologije rabe lesa. Aktivno sodeluje pri oblikovanju gozdarske politike ter vodi domače in mednarodne projekte. V zadnjih letih posebno pozornost namenja vlogi žensk v gozdarstvu, saj verjame, da lahko ženske pomembno vplivajo na prihodnost gozdov in gozdarstva.

NEGA GOZDA KOT PLATFORMA ZA PARTICIPATIVNO OKOLJSKO IZOBRAŽEVANJE IN TRAJNOSTNO UPRAVLJANJE

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Ključne besede: nega gozda, participativno okoljsko izobraževanje, gozdnogospodarski načrti, trajnostno gospodarjenje, družbena vključenost

IZVLEČEK

Slovenija je ena najbolj gozdnatih držav v Evropi, saj gozdovi pokrivajo skoraj 60 % njenega ozemlja. Članek predstavi, kako lahko nega gozda postane osrednja dejavnost participativnega okoljevarstvenega izobraževanja, kjer lastniki, lokalne skupnosti in strokovnjaki skupaj načrtujejo in izvajajo ukrepe za trajnostno upravljanje. Najprej predstavimo izzive pri izvajanju gozdnogospodarskih načrtov – le okoli 40 % predvidenih ukrepov se dejansko uresniči. Nato pokažemo primere dobrih praks, kjer so vključevanje občanov in biotsko usmerjeni programi izobraževanja pripomogli k večji motivaciji lastnikov za nego gozda. Na koncu predlagamo model sodelovanja, ki ga je mogoče prilagoditi lokalnim razmeram in kapacitetam.

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Predstavitev avtorja

Jože Prah je revirni gozdar na Zavodu za gozdove Slovenije v Ljubljani. Kot planinski in turistični vodič aktivno promovira sonaravno gospodarjenje z gozdovi ter razvoj gozdnih učnih poti. Je predsednik Društva oglarjev Slovenije in Komisije za evropske pešpoti ter gozdne učne poti pri ZGS. Avtor monografij in vodnikov, svoje poslanstvo vidi v trajnostni rabi gozdov in prenosu znanja med strokovnjaki, mladimi in lokalnimi skupnostmi.

KOMPETENCE ZA TRAJNOSTNOST IN KONTEKST IZVEDBE IZOBRAŽEVANJA TRAJNOSTNEGA VEDENJA

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Ključne besede: izobraževanje za trajnostnost, zelene kompetence, primer prakse, turistični produkt, vrednote trajnosti.

IZVLEČEK

Geopolitična in družbeno-ekonomska realnost leta 2025 poziva k resnemu jemanju ekološkega in okoljskega prehoda. Ekološki prehod je proces, katerega cilj je vzpostaviti nov ekonomski, kulturni in družbeni sistem, ki bo naredil družbo bolj trajnostno. Agenda Združenih Narodov od leta 2015 utira pot, da bodo rezultati ciljev trajnostnega razvoja do leta 2030 tudi doseženi: 17 ciljev obsega tri skupine vrednot: ekonomske, družbene in okoljske. Okoljski prehod pomeni po definiciji systemske spremembe v načinu proizvodnje in potrošnje, saj se mora družba premakniti k bolj trajnostni in odporni ekonomiji.

Za premagovanje teh izzivov je evropski zeleni dogovor nova evropska strategija rasti, s katero naj bi Unijo preoblikovali v sodobno, z viri učinkovito in konkurenčno gospodarstvo. Evropska komisija pomaga državam članicam EU pri oblikovanju in izvajanju reform, ki podpirajo zeleni prehod, s potrebnim pravnim okvirom,

priporočili, instrumenti in metodologijami.

V prispevku je prikazan primer participativnega izobraževanja za trajnostnost na področju turizma: v razvoju kompetenc učenja in usposabljanja managementa v turizmu so bile upoštevane zelene kompetence v kontekstu vrednot trajnostnega razvoja. Prvi sklop zelenih kompetenc predstavlja odgovornost za trajnostne vrednote, drugi sklop zelenih kompetenc služi preverjanju in razumevanju okoljskih in socio-družbenih problemov, tretji sklop razmišljanju o posledicah dejanj (kar so rezultati) in četrti sklop opolnomočenju za trajnostno delovanje. Dodana vrednost analiziranja na praktičnem primeru so upoštevane vrednote trajnostnega razvoja pri načrtovanju priložnosti razvoja ponudbe turističnih produktov.

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Predstavitev avtorice

Neva Maher je raziskovalka iz virov strukturnih skladov na področju ekonomije, družbenih inovacij in upravljanja. Razpolaga z obsežno prakso regionalnega načrtovanja na nacionalni in lokalni ravni.

ŠOLSKI UČNI VRTOVI KOT ODPRTI UČNI PROSTORI ZA VSE GENERACIJE

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Ključne besede: šolski vrtovi, izobraževanje, medgeneracijsko učenje, samooskrba

IZVLEČEK

V času globalnih izzivov, kot so podnebne spremembe, degradacija okolja in družbena odtujenost, postajata vzgoja in izobraževanje za trajnostni razvoj ključni orodji za doseganje pozitivnih sprememb. Eden najučinkovitejših pristopov k oblikovanju trajnostno naravnanih vrednot pri otrocih je njihovo zgodnje povezovanje z naravnim okoljem. Prav zato je vključevanje narave v vzgojno-izobraževalni proces vse bolj pomembno. Šolski učni vrtovi predstavljajo enega izmed najučinkovitejših načinov, kako otrokom omogočiti neposreden stik z naravo in hkrati oblikovati prostor, ki spodbuja aktivno učenje, sodelovanje in odgovornost.

Že več desetletij se v različnih okoljih po svetu, tudi v našem prostoru, spodbuja in vzpostavlja učne vrtove v vrtcih in osnovnih šolah. Vključevanje otrok, vzgojiteljev, učiteljev in staršev v te projekte krepi medsebojne vezi, gradi skupnost in spodbuja razumevanje pomena samooskrbe. Vrtovi postajajo prostor izkustvenega

učenja, razvijanja kompetenc za trajnostni razvoj ter medgeneracijskega povezovanja..

Učni vrtovi so mnogo več kot le površine, kjer otroci sadijo, zalivajo in pobirajo pridelke. So kompleksni učni prostori, ki omogočajo razvoj številnih veščin – od načrtovanja in praktičnega dela do razmišljanja, raziskovanja in skupinskega dela. Gre za odprte učne laboratorije, kjer se naravoslovne, družboslovne, matematične in celo umetniške vsebine povezujejo na smiseln, vsakdanji in doživljajski način.

Poleg otrok pa vrtovi k sodelovanju vabijo tudi predstavnike drugih generacij. Starejši – na primer stari starši ali upokojeni vrtnarji – lahko prispevajo s svojim znanjem, izkušnjami in tradicionalnimi tehnikami pridelave. Na ta način vrt postane platforma za prenos znanja, ki presega formalne izobraževalne okvire.

Pedagoški učinki šolskih učnih vrtov so večplastni.

Poleg vsebinskega znanja (npr. rast rastlin, pomen opraševalcev, letni časi, tla, voda, vreme itd.) vrtovi razvijajo tudi socialne in emocionalne kompetence: odgovornost, potrpežljivost, skrb za živa bitja, delo v skupini, spoštovanje narave in drugih ljudi. Učenci pridobivajo dragoceno izkustveno znanje, ki ga v klasični učilnici pogosto ni mogoče razviti v taki meri. Poleg tega učni vrtovi prispevajo k razvoju t. i. mehkih veščin (soft skills), kot so sodelovanje, komunikacija, reševanje problemov in inovativnost. Pomemben vidik učnih vrtov je spodbujanje razumevanja in vrednotenja samooskrbe. Otroci že v zgodnjem obdobju spoznajo pomen pridelave hrane, pomen lokalne sezone pridelave, kompostiranja, zmanjševanja odpadkov in krožnega gospodarstva. Namesto pasivnega sprejemanja dobrin iz trgovin se naučijo, kako nastajajo živila in kaj pomeni skrbeti za zemljo.

Takšno učenje spodbuja spoštovanje do hrane in naravnih virov, kar je še posebej pomembno v času, ko so globalne prehranske verige pogosto netrajnostne in odtujene. Hkrati pa vrt postaja prostor za razvijanje osebne in skupnostne odpornosti – veščina, ki je v času podnebnih in družbenih kriz neprecenljiva.

Eden od ključnih elementov uspešnega razvoja učnih vrtov je bottom-up pristop, ki temelji na motivaciji in angažiranosti lokalnih skupnosti. To pomeni, da vrtovi ne nastajajo kot rezultat direktiv "od zgoraj", ampak iz konkretnih potreb in želja učiteljev, otrok, staršev in skupnosti.

Tak pristop omogoča večjo trajnostnost, saj temelji na občutku lastništva in odgovornosti udeležencev. Ko otroci, učitelji in starši skupaj načrtujejo, oblikujejo in vzdržujejo vrt, se ustvarja močna povezanost, ki daleč presega klasične oblike šolskega dela. Hkrati se v lokalnem okolju krepijo medsebojne vezi, kar prispeva k večji socialni koheziji.

Učni vrtovi imajo izjemno vrednost kot medgeneracijski prostori. V mnogih primerih se v vrtove vključujejo stari starši, lokalni vrtnarji, društva upokojencev in drugi člani skupnosti, ki imajo dragoceno znanje in izkušnje. Otroci se tako učijo iz prve roke, poslušajo zgodbe, pridobivajo praktične nasvete in obenem razvijajo spoštovanje do starejših.

Ta medgeneracijski dialog ni enosmeren – tudi starejši se učijo od mladih, predvsem v smislu novih pogledov, digitalnih veščin in ustvarjalnosti. Učni vrt tako postane prostor za dialog, sodelovanje in skupno iskanje rešitev za izzive, s katerimi se soočajo vse generacije.

Eden od največjih dosežkov šolskih učnih vrtov je njihova sposobnost povezovanja ljudi. Šole, ki vzpostavijo vrtove, pogosto poročajo o večji vključenosti staršev,

boljšem sodelovanju med učitelji in večji odprtosti šole navzven. Vrt postane stičišče idej, srečanj in dogodkov – od skupinskih delovnih akcij do praznikov ob žetvi. Skupnostno učenje, ki se dogaja na učnem vrtu, ima dolgoročne pozitivne učinke: krepi zaupanje, spodbuja medsebojno pomoč ter ustvarja pogoje za gradnjo bolj odpornih in vključujočih skupnosti. V času družbene atomizacije in digitalne odtujenosti je to neprecenljiva vrednost.

Naša organizacija je v zadnjih desetletjih sodelovala pri vzpostavitvi več kot 50 šolskih in vrtčevskih učnih vrtov. Vsak izmed njih ima svojo zgodbo, posebnosti in poudarke, a vsi temeljijo na skupnih vrednotah: sodelovanju, spoštovanju narave, učenju skozi izkušnjo in odprtosti za vse generacije.

Med primeri dobre prakse lahko izpostavimo:

- Vrt pri osnovni šoli na podeželju, kjer otroci skupaj s starši in lokalnimi kmeti obdelujejo vrtno grede, ob tem pa raziskujejo tradicionalne sorte in tehnike.
- Mestni šolski vrt, ki je nastal na opuščnem asfaltiranem dvorišču, danes pa združuje učence, učitelje, upokoјence in lokalno društvo permakulture.
- Vrtec s senzoričnim vrtom, kjer se otroci učijo preko vonja, dotika, zvoka in barv – hkrati pa sodelujejo z ostarelimi stanovalci bližnjega doma za starejše občane.

V vseh primerih vrt ni le prostor za učenje biologije, temveč celostno učno okolje, ki spodbuja trajnostno naravnost, kritično mišljenje in socialno povezanost. Učni vrtovi predstavljajo močan integrativni element v izobraževalnem sistemu. Povezujejo formalno in neformalno učenje, teorijo in prakso, naravoslovne in družboslovne vsebine, otroško ustvarjalnost in odraslo izkušnost. Gre za okolja, kjer se prepletajo lokalni

razvoj, vzgoja za trajnostnost, socialna pravičnost in aktivno državljanstvo.

Poleg tega učni vrtovi omogočajo tudi povezovanje z drugimi šolami in mednarodnimi projekti, kar prispeva k širjenju znanja in izmenjavi dobrih praks. Sodelovanje v projektih Erasmus+, eTwinning, ali lokalnih mrežah učnih vrtov bogati izkušnje vseh vključenih.

Šolski učni vrtovi niso samo orodje za boljše izobraževanje – so seme spremembe. Predstavljajo odgovor na mnoge izzive sodobnega sveta: od podnebnih sprememb do socialne izolacije, od prehranske varnosti do pomanjkanja praktičnih veščin. So simbol vrnitve k bistvenemu: povezanosti z naravo, sodelovanju med ljudmi in odgovornemu ravnanju z viri.

V družbi, ki si prizadeva za pravičnejšo, bolj zeleno in bolj vključujočo prihodnost, imajo šolski učni vrtovi ključno vlogo. In kot vsako seme potrebujejo skrb, prostor in čas – a ko vzklijejo, lahko prerastejo v prave gozdove znanja, solidarnosti in upanja.

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Discovering the Power of Nature



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SYSTEMIC STEPS TOWARDS SUSTAINABILITY



ENVIRONMENTAL HISTORY BETWEEN PAST AND PRESENT

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ABSTRACT

Social changes and increased sensitivity to the human environment in the 20th century had a profound impact on the social sciences and humanities. One of the most important consequences was a shift in focus away from prevailing anthropocentrism that characterized the humanities in the 19th century. By shifting attention to the interaction between society and nature, a new understanding of nature and climate as subjects, their long-term variability, and global dimensions was formed. The perspective of observation also changed: the local became an integral part of global processes. The key foundation of environmental history is the idea that views on the role of nature as a resource and living environment, on its protection or rehabilitation, have changed both globally and locally over time. We speak, therefore, of variability, continuity, and discontinuity in long-term processes. Environmental history, through its research agenda, responds to contemporary debates on environmen-

tal issues in modern societies, thus linking past and present into a coherent interpretation of historical relations between social modernization and nature. Nature is the fundamental source of economic life and accompanying social structures. In everyday economic practices, this awareness was self-evident, though not socially internalized. "The farmer is both master and servant of nature," stated the journal *Agricultural and Handicraft News* (1890). The population was vitally dependent on the extraction and conversion of natural resources. Before World War II, two-thirds of the population in Slovenia relied on the exploitation of natural resources—more so in earlier periods. The literature clearly emphasizes the thesis that there is a strong correlation between the ability to extract and convert natural resources for everyday use and the level of social and economic development. This process involves complex economic, social, and environmental changes, which were the result of the scientific and technical revolution and fundamental innovations and applicative processes in the development of technology in the 19th and 20th centuries. The transfer of these achievements into real life had far-reaching consequences for the landscape, the economy, and the lives of people and societies. It was a long-term and gradual transition.

Within this context, I aim to present instability as a feature of the long-standing relationship between humans and nature. This relationship will be illustrated through various examples: concepts of nature, responses to weather fluctuations, environmental pollution and the fragile nutritional balance.

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ADULT EDUCATION FOR SUSTAINABLE DEVELOPMENT BETWEEN INSTRUMENTALISATION AND EMANCIPATION

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Keywords: adult education for sustainable development, instrumentalisation of education, emancipatory adult education, adult learning approaches

ABSTRACT

Adult education for sustainable development (AESD) is defined as adult education focused on promoting change in individuals and society through critical reflection for the development of a more just society and the reduction of negative human impacts on the environment. In adult education policy and practice, two predominant approaches to AESD can be distinguished, which we discuss in this article using the example of non-formal AESD in Slovenia.

The first is the instrumental approach, which is primarily aimed at changing the actions and behaviour of individuals, and the second is the emancipatory approach, which is primarily aimed at changing their ways of thinking and knowing. The instrumental approach plays an important role in achieving concrete changes in individuals' behaviour and the development of specific skills, while the emancipatory approach promotes

broader transformations at both the individual and societal levels through the development of critical and systemic thinking.

Based on quantitative and qualitative data obtained in March 2023 from adult educators from 59 organisations, we conclude that Slovenian non-formal IOTR combines the emancipatory and instrumental approaches, with the latter moderately prevailing. Practices of the instrumental approach to AESD mainly include the manufacture of simple ecological products, the promotion of waste reduction, the encouragement of sustainable eating and clothing, the development of gardening and self-sufficiency skills, raising awareness of fire safety, and promoting the employment of members of vulnerable social groups. Emancipatory practices, meanwhile, deal primarily with global problems and their local consequences, the social causes of the environmental and climate crisis, the links between individual and social transformations, critical reflection on sustainable development goals, and the promotion of active citizenship and collective action.

The specific AESD approach is usually also reflected in the teaching approach used in educational programmes. The practices of the instrumental approach are often very concrete and aimed at achieving specific behavioural changes in participants, while the practices of the emancipatory approach are more often participatory in nature and adapted to a specific group of participants and their local environment. The topics covered are also often adapted to individual groups of participants, among which prevail the natural environment and human relations to it, sustainable lifestyles, sustainable development goals, and climate change.

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OPEN SCHOOLING IN THE CONTEXT OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

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Keywords: Multipliers, open schooling, place-responsive education, education for sustainable development

ABSTRACT

Education for sustainable development (ESD) must transcend the boundaries of formal schooling and extend into real-life contexts: the home, the community, museums, laboratories, nature, and beyond. Learning for sustainability is inherently a lifelong process that encompasses formal, non-formal, and informal learning modalities. Increasingly, open schooling is emerging as a future-oriented paradigm that redefines the "what," "where," and "when" of learning. Open schooling invites policymakers, educators, schools, parents, local communities, universities, researchers, businesses, and other stakeholders to participate in transforming the educational experiences that are more responsive to societal challenges. It reimagines learning as an "open" process—not only in terms of time and space, but also in relation to roles, pedagogies, access, and the broader function of education in society. The con-

cept lacks a single, universally accepted definition, as its implementation varies across cultural, social, and institutional contexts, adapting to diverse educational needs. In 2010, the European Commission published the strategy entitled "A Strategy for Smart, Sustainable and Inclusive Growth", which introduced three strategic pillars: smart, sustainable, and inclusive growth. These dimensions serve as an analytical lens for comparing open schooling initiatives worldwide. The theoretical exploration presented here is further substantiated by empirical insights from the European Horizon 2020 project MULTIPLIERS (2021-2024), which aimed to expand science education through open schooling and strengthen cooperation between schools and society. The MULTIPLIERS project implemented the principles of open schooling within different geographical, cultural, and economic contexts (in countries Cyprus, Germany, Italy, Sweden, Slovenia, Spain) in order to ensure high-quality science education accessible to all. The differences between countries and social contexts increase the likelihood of further international use and development of the proposed solutions.

A core component of the project was the establishment of learning partnerships, also referred to as open science communities, involving schools, families, research institutions, industry representatives, providers of informal learning, policymakers, and the media. These partnerships facilitated place-responsive science education—teaching and learning embedded in the local environment and attuned to socially relevant, locally grounded socio-scientific issues. Such approaches enabled learners to critically engage with sustainability challenges in their immediate surroundings, thereby linking the learning process to active citizenship and

ecological literacy. In conclusion, open schooling represents both a pedagogical model and a societal strategy for fostering sustainable development. By dissolving traditional boundaries and promoting collaboration across educational, civic, and economic domains, open schooling not only enriches educational practice, but also builds community resilience and systemic competence for navigating complex global issues. Open schooling creates new opportunities for lifelong learning and intergenerational cooperation in developing sustainability competences (Bianchi et al., 2023).

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Short BIO

Prof. dr. **Gregor Torkar** is a Full Professor of Biology Education at the Faculty of Education, University of Ljubljana. He previously worked as a researcher and lecturer at the School of Environmental Sciences at the University of Nova Gorica, as a science teacher in secondary education, as an author and editor of academic books and textbooks, and as a nature conservationist. He earned his bachelor's degree in 2001 at the Faculty of Education, University of Ljubljana, qualifying as a teacher of biology and home economics. He obtained his PhD in 2006 at the Biotechnical Faculty of

the University of Ljubljana in the doctoral programme of biotechnical sciences, specializing in nature conservation. He has completed several extended professional training programmes abroad, including at Trinity College Dublin (Ireland), Hedmark University College (now Inland Norway University) (Norway), and the University of California, Berkeley (USA). He also teaches as a visiting lecturer at various European universities. His research focuses on biology and environmental education across primary, secondary, and undergraduate levels. His current interests include ecology, evolution, conservation education, outdoor education, and education for sustainable development. He is involved in several national and international research projects in science education and nature conservation. He holds the UNESCO Chair in Teacher Education for Sustainable Development at the University of Ljubljana. He is also a member of the academic committee of the European Researchers in Didactics of Biology (ERIDOB) and the programme coordinator for Outdoor Education Centres in Slovenia.

THE KNOWLEDGE BASE OF THE EUROPEAN ENVIRONMENT AGENCY: HOW CAN IT BE USED TO DEVELOP GREENCOMP SUSTAINABILITY COMPETENCES?

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Keywords: European Environment Agency (EEA), SOER 2025, GreenComp sustainability competences, competitive green transition, systems innovation

ABSTRACT

The European Environment Agency (EEA) has announced the publication of a new five-year report, EUROPEAN ENVIRONMENT: STATE AND OUTLOOK 2025 (SOER 2025), for autumn 2025. This report will provide an important scientific and professional basis for a competitive green transition (in line with the Competitiveness Compass) in both the EU and Slovenia, and thus also for decisively addressing the triple planetary crisis of biodiversity loss, climate change and pollution. At the same time, the EEA treasury of knowledge (concepts, insights, findings) (e.g., in: European Environment Agency, 2019) can be used as learning material in the development of the competences for environmental sustainability proposed in the GreenComp: The European sustainability competence

framework (Bianchi et al., 2022) and more broadly in the Education for sustainable development (ESD).

The aim of the article is to show how several key concepts and findings from the EEA knowledge base, with the focus on the new SOER 2025 report and the current EU framework for a competitive green transition, promote the development of the sustainability competences of the GreenComp framework. The competencies of the second and third GreenComp areas will be highlighted: Embracing complexity in sustainability (especially systemic and critical thinking) and Envisioning sustainable futures (future literacy, adaptability, and inquiry-based thinking). Concrete examples are used to show how it is possible to integrate three domains of great importance for a sustainable future for all of us can be integrated: understanding and monitoring environmental challenges, developing competences in (adult) education, and working towards sustainability by taking into account the tools and resources of the European Union. For example, the ecosystem model of development (placing fundamental social systems in the context of ecosystems), developed by the EEA encourages the development of systemic thinking skills and is also necessary for effective sustainable and participatory action from the individual to the community level. The analysis of different climate change scenarios can make an important contribution to the future literacy competence and is a necessary basis for the development of responsible climate policies. The article builds on and extends the insights into systemic sustainable thinking and action presented in Conceptualising ESD with a climate change perspective (Piciga et al. 2023) (with annex: Piciga, 2023).

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Short BIO

Dr. **Darja Piciga**, PhD in Psychology, has been working in the field of knowledge society (education, research and innovation) for several decades as a researcher, expert and educator. She is pioneering the transfer and development of modern European policies for the environment, the green transition and sustainable development, is the key figure in the Integral Green Slovenia initiative (e.g. Integral Green Slovenia, Routledge, 2016) and conceptually develops the European approach of Integral Worlds.

CLIMATE CHANGE AND COMPETENCES TO ACT: A GAP IN ADULT EDUCATION OFFER

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Keywords: education, climate change, sustainability competences

ABSTRACT

In Slovenia, there are several programmes for adult education in the field of sustainability, which are mostly implemented by private providers. These programs are primarily intended for representatives of companies that are required to report under EU Directive 2022/2464 on corporate sustainability reporting (known as ESG reporting). A market survey conducted in March 2025 showed that there were six active providers: Green Network, Forum Media, Slovenian Institute of Audit, IRDO, SIQ and the Center of Business Excellence of the School of Economics of the University of Ljubljana. The programmes last from one hour to 65.5 hours (for certified auditors). Two programs are certified—one nationally and the other internationally (IQNET), but the significance of certification in an unregulated market is questionable.

Training in the field of sustainability is also provided by non-governmental organisations (e.g., the Institute for Health and Environment has developed its own content

as part of a European project), but they do not market it; they are carried out at the invitation of schools, libraries, and other public institutions, if time permits, as it was stated in an interview with representatives from Focus on March 27, 2025.

The analysis thus showed that the most of the training courses on the market focus on ESG reporting for companies, while content related to climate change is covered to a lesser extent. All but one of the lecturers in these trainings have no proven experience in the field of climate change.

As part of the Recovery and Resilience Plan (RRP), the University of Ljubljana has developed an online training course focusing on the physical basis of climate change (<https://podnebnespremembe.fmf.uni-lj.si/domov>).

New micro-credential courses are also being developed. Nevertheless, there is a lack of training that addresses climate change from the perspective of both climate neutrality and climate resilience and also develops competencies for action in line with the GreenComp, the European sustainability competence framework.

It is recommended to develop high-quality education to strengthen the green competencies of adults in the field of climate change in Slovenia, incorporating in all four areas of competencies of GreenComp. The leading role in this should be taken by the state, as in Austria, where the ministry certifies climate partners, while also ensuring the conditions for the development of such programs and providing training for various categories of civil servants. It would be particularly important to approach the measurement of competencies and address barriers to responsiveness, while developing approaches to participatory environmental education within the community.

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Short BIO

Barbara Simonič has more than 15 years of experience at the national and international level in the field of climate policies and system innovations. Within the state administration, she designed key national climate policies and measures, and represented the country at the international level, and later collaborated with EIT Climate-KIC. She holds a master's degree from the College of Europe and is completing a doctorate in climate change discourses. She currently works as the director of Klimalaba and the founder of the Institute for Climate Solutions (IPRES).

CLIMATE EDUCATION IN TIMES OF DECLINING POLITICAL AND PUBLIC ENGAGEMENT

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Keywords: Climate education, public awareness, climate policy, cross-sectoral cooperation

ABSTRACT

The article provides guidance for effective climate (and environmental) education and awareness-raising. In this respect, the paper also draws on the factors involved in the shift in priorities of public policies and public opinion away from the climate crisis and environmental issues in general. Two of the factors behind this shift include the lack of environmental education of the public and the often inadequate environmental public communication. Education and knowledge related to environmental challenges are in fact one of the essential conditions for the successful implementation of climate and environmental policies and, consequently, for addressing this civilizational issue (McCowan, 2021). Ambitious climate and environmental policy measures would have a significant impact on the lifestyle of every individual in developed societies. More importantly, the recognition that the design and implementation of environmental policies require an understanding of the measures and their

background by the general public or citizens – especially because citizens are also consumers and voters. Without adequate prior knowledge, this cannot be achieved. Despite high awareness – 83% of the population recognizes climate change as a serious problem (European Commission, 2021) – willingness to change personal lifestyle is low: only 27% of respondents are willing to accept higher prices for environmental protection, and only 18% would accept higher taxes (Toš, 2021). This illustrates a gap between awareness and action (the so-called value-action gap), which can only be addressed through systematic education and awareness-raising. Drawing on the key directions of the global scientific and professional literature in the field of climate and environmental education, strengthening environmental competencies requires interdisciplinarity (linking natural and social sciences) and holistic approaches (e.g., the whole-school approach), whereby educational institutions not only integrate climate-related content into the curriculum, but also reduce their own climate footprint by using green building materials, efficient heating systems, sustainable staff mobility, etc. (e.g., Gibb, 2016). Key opportunities include integrating climate topics into the broader curriculum (e.g., localized case studies on floods or energy transition), developing job-specific competencies (e.g., circular economy in vocational education), and including experiential learning, such as joint projects with the local community (Mochizuki & Bryan, 2015). The final part of the article focuses on the challenges of cross-sectoral cooperation in the field of environmental education and awareness-raising, with a particular focus on practical experiences of collaboration between the environmental and education sectors of Slovenian public administration from 2020 to 2023. Key barriers to

cross-sectoral cooperation are the different priorities of the sectors (e.g., education systems reward theoretical knowledge, while the economy rewards practical skills), lack of coordination between ministries (environment, education, energy), and financial inconsistencies (e.g., different funding sources and their requirements).

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Short BIO

Dr. **Janez Berdavs** is an expert in environmental policy and international cooperation in public administration, with over 20 years of experience. He currently works in the fields of climate policy, climate change adaptation, and climate education.

IRDO CERTIFICATION SCHEME FOR COMPETENCES IN SUSTAINABILITY AND SOCIAL RESPONSIBILITY

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Keywords: training, education, certificate, sustainability, social responsibility

ABSTRACT

The European Commission has set itself several strategic goals for the period 2019–2024, including the Green Transition, with which it aims to encourage society, and in particular the economy, to transform business models into greener, more sustainable ones. In the period 2025–2029, it wants to strengthen these efforts while simplifying the legislative and implementation requirements already in place (ESRS standards).

To this end, it has prepared an Omnibus package of changes in 2025, which should reduce the administrative burden on companies and other organizations during this transition. In order for companies and other organizations to be as prepared as possible for these changes, they need appropriate knowledge and training programmes that ensure the transfer of green skills to various stakeholder groups.

This article presents the efforts of the IRDO Institute in this area from 2016 to 2025. The focus will be on the

certification scheme at three levels of training at the IRDO Institute, which involves more than 350 professionals, entrepreneurs and others. In 2024, we additionally developed the IRDO Sustainability Supervision for them, which eases their difficulties in creating a transition to greener business models. We will present the training experience, the structure of the programmes and the competences that the individuals acquire.

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www.irdo.si

www.csreurope.org

Short BIO

Anita Hrast, MSc, is a co-founder and director of the IRDO Institute – Institute for the Development of Social Responsibility (since 2004, www.irdo.si). She is an economist, has B.Sc. in Communication Scientology and is Master of Science. Since 2006, she has been a researcher registered in the ARIS Register of Researchers. Researcher Bibliography: <https://cris.cobiss.net/ecris/si/sl/researcher/21557> . Since 2011, she has been a senior lecturer at DOBA - Faculty of Applied Business and Social Studies Maribor (undergraduate and postgraduate studies), where she is a lecturer in several courses. Since 2023, she has also been partially employed as an assistant in the Corporate Social Responsibility project, as the responsibility of directors at the Institute of Law of the Science and Research Centre Koper. Since 2016, she has been training managers and professionals

for sustainability and social responsibility management in companies and organizations at the IRDO Institute. She actively cooperates with CSR Europe, where IRDO has been the national partner organization for Slovenia since 2011, as well as with other international (OECD, SIA, ...) and Slovenian organizations (Chamber of Commerce and Industry, Association of Managers, Association of Employers of Slovenia, Public Relations Association, Marketing Association, CNVOS...).

“LESSON ZERO FOR SUSTAINABLE DEVELOPMENT” BY THE UNIVERSITY OF FLORENCE. SUSTAINABILITY SKILLS FOR PROFESSIONAL DEVELOPMENT IN HIGHER EDUCATION

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Keywords: Adult education for sustainability, Agents of sustainable change, Intended Learning Outcomes

ABSTRACT

This article presents the theoretical framework and initial results of the pilot implementation of “Lesson Zero for Sustainable Development: Sustainability Competences for Professional Development”, an initiative of the University of Florence within the Italian University Network for Sustainable Development, promoted by the Conference of Italian University Rectors.

Based on the definition of sustainability as the capacity to “prioritize the needs of all forms of life and the Planet, ensuring that human activity stays within planetary boundaries” (Bianchi et al., 2022, 12), its main objective is to promote sustainability literacy —the knowledge, skills, and mindsets needed to build a sustainable future and make informed, effective decisions (UNESCO, 2017).

In today's global context, Higher Education Institutions (HEIs) are called upon to empower students as agents of sustainable change (UNESCO, 2022; Holdsworth Thomas, 2021), yet often fail to provide the necessary tools (OECD, 2021). To fill this gap, education must take into account learners' needs, passions, and potential (Schleicher, 2019).

Much more than simply raising awareness among master's students about the urgent challenges of our time, our "Lesson Zero" fosters the development of professionals capable of taking concrete action through a sustainability-oriented lens.

The course, which is currently in the testing phase, offers a 3-ECTS online program, structured around six cross-cutting modules and one subject-specific module. It has been developed in accordance with the following principles:

- the course design is aligned with the intended learning outcomes, inspired by the European Green-Comp Competency Framework,
- an interdisciplinary approach was adopted in the development of modules and learning units, which include exercises, assessments, and a final project,
- integration of research findings from various academic disciplines into the teaching process,
- creation of an academic community with expertise in the field of sustainability,
- awarding of a micro-credential to all participants who successfully complete the course.

The course encourages critical engagement with the root causes of unsustainability and the links between current socio-economic models and environmental injustice (Mochizuki, 2016). It promotes contextualized knowledge, real-world issues, and active learner partic-

ipation to support critical thinking, meaningful learning, and personal development (Sterling, 2013). Finally, the initiative highlights the proactive role of HEIs in fostering inclusive and innovative teaching, advancing a culture of sustainability, and contributing to social, cultural, and economic progress through research and its application across all disciplines.

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Short BIO

Prof. dr. **Glenda Galeotti** is Associate Professor of General and Social Pedagogy at the Department of Education, Languages, Interculture, Literatures and Psychology at the University of Florence.

She is the education representative for the University of Florence within the Italian University Network for Sustainable Development (RUS).

MEADOW BIODIVERSITY IN TODAY'S SLOVENIAN BIOLOGY AND GEOGRAPHY CURRICULA FOR PRIMARY SCHOOL AND GRAMMAR SCHOOL IN THE CONTEXT OF THE LONG-TERM HISTORY OF MEADOWS

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Keywords: Education, Biodiversity, Biology, Geography, Environmental History

ABSTRACT

Species-rich grasslands are the most biodiverse habitat types in Central Europe, but they are rapidly disappearing from landscapes. In Slovenia, grassland bird populations have declined by around 40% in the period 2008-2018, largely due to intensification or abandonment of meadow management (Šumrada et al., 2021). The article presents the main features of the long-term environmental history of hay meadows in Slovenian territory from 1500 onwards (Zwitter and Rasran, 2025), placing contemporary mass extinction in the context of the process of civilisation. Norbert Elias (1993, 1994), a German sociologist, philosopher and cultural historian who took an interdisciplinary approach to psychology defined the process of civilisation as the changing threshold of discomfort, the changing threshold of the

morally unacceptable over time.

Education is one of the key mechanisms that can steer the process of civilising human society in a sustainable direction, contributing, through better knowledge of all three pillars of sustainability, to solutions that will simultaneously enable adequate standard of living for people and the preservation of biodiversity by various actors, many of whom do not have a tradition in environmental thinking. In the field of grassland biodiversity, this would mean that consumers would feel uncomfortable buying more food than necessary based on intensive agriculture; that the failure to preserve a sufficient proportion of species-rich grasslands and their connectivity in the landscape would become unacceptable; market legislation would prohibit (in)directly misleading labelling of products and packaging as to the status of the ecosystems on which livestock products are based; and farmers contributing to the preservation of high-nature-value grasslands would be fairly paid for their work (Zwitter and Rasran, 2025).

In the complex reality, only a knowledge society can create and maintain a cultural landscape characterised by (1) a complex mosaic of areas of intensive and extensive farming at the local level, and (2) by sufficient connectivity of suitably extensive species-rich habitats to prevent the continuation of mass extinction. Therefore, after presenting the environmental history of meadows in the context of the process of civilisation, this article analyses, from the point of view of meadow biodiversity, the curricula of biology and geography in Slovenian primary and secondary schools.

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Short BIO

Dr. **Žiga Zwitter**, an environmental historian (BA in history and geography; PhD in history), is an asst. prof. and a researcher in the Department of History, University of Ljubljana's Faculty of Arts. He was a postdoctoral research fellow at Vienna's Institute of Social Ecology and a visiting professor at the University of Innsbruck. He is the representative for Croatia–Serbia–Slovenia in the European Society for Environmental History; a vice-president of the Historical Association of Slovenia.

ON GREEN COMPETENCES AND COMPETENCE-BASED EDUCATION

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Keywords: vocational education and training, green competences, green jobs

ABSTRACT

At the Institute of the Republic of Slovenia for Vocational Education and Training (CPI), we continue our development activities in the field of systematically incorporating sustainable competences into vocational and professional education. We are aware that the comprehensive integration of knowledge, skills, and values related to sustainability and climate change mitigation is crucial for empowering future generations of professionals. These professionals will need to respond to the complex challenges of the modern world: climate change, depletion of natural resources, loss of biodiversity, while also understanding the importance of the transition to a circular, carbon-neutral, and fair economy.

Current activities are taking place within the framework of the project "Modernisation of Vocational and Professional Education", which aims to update occupational standards and educational programmes in a

way that consistently reflects the principles of sustainable development and the demands of the modern labour market. The foundations for this process were already established in the project "Climate Goals and Content in Education", which developed competence frameworks for all sectors based on ten key areas of sustainability that are incorporated into occupational standards and educational programmes.

Further professional support is provided by:

- the teacher's manual entitled "Towards Sustainable Products and Services", which presents a model for designing or analysing a product or service from a sustainability perspective. This approach enables understanding sustainability not only as an environmental issue, but also in relation to social justice, user health, ethical production, and local impacts.
- the manual for school administrators and teachers entitled "A Guide Towards a Sustainable School – Why, What and How?", which offers schools a strong foundation for progressing towards sustainability through a whole-institution approach.

In our contribution, this article also reflects on the importance of green professions and green jobs – how we understand them, what knowledge, skills, and values define them, and how they are transforming in different economic sectors. The growing demand for sustainable products and services, along with legislative changes at the EU level mean that new jobs will be created requiring new competencies for systemic thinking, environmental impact analysis, the use of sustainable materials, and design based on circular economy principles.

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Short BIO

Ivana Belasić is employed at the Institute of the Republic of Slovenia for Vocational Education and Training, curriculum development advisor in the fields of agriculture, horticulture, environmental protection, and education for sustainable development in vocational and professional education.

BEYOND PERSONALISATION: EDUCATION AS AN ECOCENTRIC PRACTICE

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Keywords: ecocentricity, green competences, educational design

ABSTRACT

Contemporary educational discourse often emphasizes personalization or individualization of learning, adapting content, methods, and pace to the individual learner. Despite the noble intention to support diverse target groups, personalization remains rooted in an egocentric understanding of education as a means of personal advancement. In times of ecological crisis, however, the limitations of such a paradigm are becoming increasingly apparent. The ecocentric perspective does not exclude individualization, but rather builds on it. It focuses on building communities that not only foster individual achievements, but also create conditions for mutual development and sustainable action. This article presents the ecocentric dimension of education using the example of the andragogical cycle. It is based on systems theory and the European framework of green competences, in particular the promotion of nature, systems thinking, and literacy for the future.

In the context of adult education, which traditionally emphasises autonomy and the usefulness of knowledge, such orientation requires thorough consideration of the design and implementation of education. Below, we add ecocentric issues and relevant examples, following the four established phases of the andragogical cycle:

Phase 1 – Needs Analysis: Questions about individual preferences, labour market needs and funders' priorities should be supplemented with questions on what knowledge and behaviour the environment requires of us. Educators should take into account the natural characteristics of the environment. One example is the Alpine School model developed by international partners from the signatory states of the Alpine Convention. The Alpine School is an educational model that places the natural Alpine environment of the Alps at the centre of the learning process and links it to local communities and specific global challenges such as climate change.

Phases 2 and 3 – Planning and Implementation: The ecocentric paradigm opens the door to more flexible planning allows for creativity and opens up a space for uncertainty instead of predictable formats and content. It emphasizes co-decision-making and co-creation by learners, who are simultaneously participants and co-designers of the process. A refined planning system for such learning can be found in study circles, where more flexible initial planning is followed by a process of co-creation of learning objectives by participants. This type of educational process enables emergence, encourages adaptation, and recognition of the strengths of individuals in the group. However, it also requires support for those unaccustomed to active participation, and demands adjustments to the traditional templates

for documenting educational programs, which often require detailed planning in advance.

Phase 4 – Evaluation: evaluation should go beyond testing knowledge and obtaining information on participant satisfaction. An ecocentric perspective asks not only what we have learned or how we felt, but also how our learning impacts the community and the environment in the short and long term.

This view of the educational process invites a deeper reflection on what it means to learn for the environment, and not just in the environment. It points toward the future of participatory environmental education that is flexible and responsive in all phases of planning and implementation.

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Short BIO

Ema Meden is an adult educator, employed at the Slovenian Institute for Adult Education and the Faculty of Arts, University of Ljubljana. She researches digital and green competences and the role of embodied practices in learning. She engages in research, programme development, and group facilitation through national projects focused on green competences and the use of artificial intelligence, as well as international initiatives centred on blended learning and embodied learning methods.

PRESENTATION OF THE UNESCO CHAIR ON TEACHER EDUCATION FOR SUSTAINABLE DEVELOPMENT

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Keywords: Lifelong Learning, Education for Sustainable Development, UNESCO Chair

ABSTRACT

The purpose of this paper is to present the UNESCO Chair on Education for Sustainable Development at the University of Ljubljana, its activities, and opportunities for cooperation in lifelong learning processes. The Chair aims to promote an integrated system of research, teaching, and training, as well as involvement in social action and communication. In a world marked by technological advancement and global interconnectedness, traditional academic education must be enriched with skills such as critical thinking, creativity, communication, collaboration, and digital competences. These abilities enable individuals not only to adapt to change, but also to actively shape and lead it in an increasingly complex and information-rich world. The UNESCO Chair fosters cooperation among leading, internationally recognized researchers and educators at the University of Ljubljana and other institutions in Slovenia, as well as in the wider region and beyond. The specific goals of

the Chair are: a) to promote a systematic, comprehensive institutional approach to education for sustainable development, through strengthened collaboration with stakeholders from universities, faculties, research institutions, educational authorities, UNESCO Associated Schools, UNESCO World Heritage Sites, outdoor education centres, museums, etc.; b) to develop educational strategies for teachers, educators and students in order to facilitate a transition to a sustainable future for all; c) to initiate research activities aimed at education and awareness-raising on sustainability issues among all relevant stakeholder groups in education; d) to promote sustainable initiatives and projects through international conferences, workshops, new study programmes and courses, as well as the creation of high-quality publications; and e) to cooperate closely with UNESCO, other UNESCO Chairs, and UNITWIN networks on relevant programmes and activities. The Chair pays particular attention to integrating formal, non-formal, and informal learning and forms of participation in addressing sustainability issues at the local level. The goal is to strengthen sustainable ways of thinking from early childhood through adulthood. By promoting various forms of intergenerational collaboration—such as projects, campaigns, and competitions—it aims to encourage active citizenship and empower individuals as agents of positive change who contribute both individually and collectively to co-creating a sustainable future within the limits of the capacity of our planet.

Short BIO

Prof. dr. **Gregor Torkar** is a Full Professor of Biology Education at the Faculty of Education, University of Ljubljana.

He previously worked as a researcher and lecturer at the School of Environmental Sciences at the University of Nova Gorica, as a science teacher in secondary education, as an author and editor of academic books and textbooks, and as a nature conservationist. He earned his bachelor's degree in 2001 at the Faculty of Education, University of Ljubljana, qualifying as a teacher of biology and home economics. He obtained his PhD in 2006 at the Biotechnical Faculty of the University of Ljubljana in the doctoral programme of biotechnical sciences, specializing in nature conservation. He has completed several extended professional training programmes abroad, including at Trinity College Dublin (Ireland), Hedmark University College (now Inland Norway University) (Norway), and the University of California, Berkeley (USA). He also teaches as a visiting lecturer at various European universities. His research focuses on biology and environmental education across primary, secondary, and undergraduate levels. His current interests include ecology, evolution, conservation education, outdoor education, and education for sustainable development. He is involved in several national and international research projects in science education and nature conservation. He holds the UNESCO Chair in Teacher Education for Sustainable Development at the University of Ljubljana. He is also a member of the academic committee of the European Researchers in Didactics of Biology (ERIDOB) and the programme coordinator for Outdoor Education Centres in Slovenia.

INDIVIDUAL OPPORTUNITIES AND CHALLENGES OF PARTICIPATORY ENVIRONMENTAL EDUCATION



BELIEFS AS FOUNDATIONS OF BEHAVIOR: HANGING ENVIRONMENTAL MYTHS FOR A MORE SUSTAINABLE FUTURE

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Keywords: environmental beliefs, behavioural change, adult education

ABSTRACT

Beliefs are an important concept in various psychological disciplines. They are defined as mental representations of reality or mental models that encompass our understanding of ourselves, others, and the world in general, as well as ideas about how to act and survive in this world. They are important because they influence how we interpret events in the world, experience them, and behave. When beliefs are rational and aligned with reality, the corresponding emotions and behaviours are also adequate. However, if beliefs distort reality or are false (i.e., myths), this leads to dysfunctional experiences and dysfunctional behaviour that does not correspond to reality. Myths and distorted beliefs are widespread in all areas of life, including the environment, which leads to inappropriate, irresponsible, and environmentally harmful behaviour of individuals. This paper explores various theories of belief change and lasting behavioural modification and places them

in a sustainability context. It presents a range of principles, strategies, and methods aimed at changing beliefs and behaviours in relation to environmental issues.

An unsystematic review of recent literature in the field of behavioural change psychology was conducted. The review encompassed recent monographs as well as peer-reviewed scientific and professional articles, identified using the keywords “behaviour change” and “climate attitudes” across databases such as ResearchGate, Google Scholar etc. In a comprehensive review, Davis et al. (2015) identified 82 theories from various fields of social sciences in a review article that explain individual factors and conditions for more lasting behavioural change in relation to various phenomena of reality (environment, health).

In this article, we focus on some of the more recent psychological social-cognitive theories of behaviour and motivation that explain the factors and processes of behaviour change in various areas of life and work. Notable among these are the Theory of Planned Behaviour, Protection Motivation Theory, Social Cognitive Theory, and Self-Determination Theory.

The selected theories are experimentally supported or have sufficient empirical validation of concepts and their interrelationships. They provide a well-founded insight into individual aspects of an individual's cognitive-emotional dynamics and changes therein; On this basis, we provide some rules for planning interventions aimed at permanently changing attitudes and undesirable behaviours in relation to the environment of participants in environmental education.

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Short BIO

Dr. **Tanja Rupnik Vec** holds a PhD in Psychological Sciences, is a specialist in supervision, and an assistant professor of psychology at the Faculty of Health Sciences in Celje. She is employed at the Slovenian Institute for Adult Education, leading the Center for Research and Development. She is the author of numerous professional and scientific works in various fields of psychology, including critical thinking, so-

cial-emotional learning, group dynamics, and others. In this context, she is also active in research and development and conducts various workshops. She is an active supervisor.

PERSONALIZATION OF SUSTAINABILITY VALUES IN PARTICIPATORY ENVIRONMENTAL EDUCATION

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Keywords: values, personalization, sustainability, education

ABSTRACT

Sustainable values are central to the transition towards a sustainable society, as they guide us toward responsible behaviour toward the environment, natural resources, and social structures. In line with the European Green Deal (2019) and the Green Comp in 2022 framework of sustainability competences, sustainable values refer to the awareness of individuals and society about the consequences of today's actions for the future. One of the key challenges is to develop sustainable values that go beyond mere environmental awareness and include personal, social, and cultural dimensions, and are closely linked to education and everyday life (Bianchi, Pisiotis Cabrera Giraldez, 2022).

Embodying these values in daily life and the learning process is of central importance. Values such as personal responsibility and commitment should be emphasized. Individuals who embrace sustainable values are more prepared to contribute to sustainable solutions.

Linking these values with green competences means developing an individual's ability to make decisions based on environmental, social, and economic sustainability (European Commission, 2019). Furthermore, incorporating solidarity and social justice into educational programs helps to understand that environmental changes are often linked to social and economic inequalities, requiring the inclusion of broader social values (Bianchi et al., 2022). Additionally, intergenerational responsibility is crucial, as we strive for a world that will be as good for future generations as it is for today's, with an emphasis on the long-term consequences of our actions and awareness of the impact of today's decisions on the future. This also implies the cooperation and participation of various groups in sustainable decisions, which enables greater efficiency and acceptance of responsibility for environmental change.

When developing sustainable values, it is crucial to emphasize their personalization, as individuals are more likely to adopt sustainable practices more effectively when they perceive them as their own. This includes connecting them to personal beliefs, values, and lifestyle (Schmidt Schlegelmilch, 2020). Values such as responsibility, interconnectedness, and duty to future generations are fundamental components of sustainable development; however, it is important for each individual to recognize the value that is most important to them personally. Only then can sustainability be implemented into daily routines and decision-making of individuals.

Research has shown that the positive effects of sustainable values manifest only when these values are embraced as a personal mission, enabling their sustainable impact on human behaviour (Schwartz, 2012). Pro-

grams that encourage reflection on personal values and their impact on sustainable development have been proven to increase individuals' commitment to sustainable action. To successfully promote sustainable values, it is important to encourage a sense of personal responsibility and ownership for making sustainable decisions, as this is the only way to ensure lasting change. It is crucial that sustainable values do not represent an additional task but are naturally embedded in individuals' everyday choices. This includes not only ecological responsibility but also the social and economic dimensions of sustainable development (Holladay Lofthouse, 2021).

Sustainability values are not merely theoretical concepts, but the force that can guide us toward sustainable action. The key is for each individual to find their own value within this broader framework and embrace it as their personal mission. When an individual recognizes a value that reflects their own values and beliefs, they are more likely to incorporate it into their daily decisions and actions. Personalizing sustainable values is vital – if we want people to truly embrace sustainable practices, we must encourage them to experience these as their own, not as externally imposed obligations. If people are told they have to do too many things, they are very likely to do nothing. Therefore, the personalization approach is extremely important – it enables individuals to take responsibility for their actions and engage in a way that suits them best. Only in this way can we create a sustainable world that we all actively contribute to.

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Short BIO

Dr. **Zinka Kosec**, spec. org. – manag., is the founder and directress of Akademija Akcija, which is dedicated to the active development of individuals. For twenty years, she has been leading various training programs, seminars, and workshops focused on staff development. Her doctoral dissertation was centred on predicting employee performance using various predictors. She is the author of the Values Cards, several professional and scientific articles and books, and is also a lecturer at multiple colleges and universities, where she successfully mentors' students in their final theses.

INATURALIST AND CITIZEN SCIENCE: WHO CONTRIBUTES AND WHY?

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Keywords: iNaturalist, citizen science, biodiversity

ABSTRACT

iNaturalist (<https://www.inaturalist.org>) is a popular app based on the concept of citizen science that enables the recording and identification of organisms while promoting communication between users - both amateur and professional naturalists (About · iNaturalist, 2024; Boone and Basille, 2019). Due to its ease of use, it also has great potential in an educational context (Rode and Torkar, 2023). The aim of the study was to gain insight into the type of users of the app, as background knowledge is important for the development of further training and for the use of such tools in educational contexts. Our sample consisted of Slovenian users of this app who have recorded sightings of species belonging to the order Mantodea. We analysed users who recorded at least one sighting of Mantodea in Slovenia between 2008 and 2021 ($N = 52$) and the three users with the most observations on the platform. We contacted them via the iNaturalist platform and invited them to participate in semi-structured interviews. The questions focused on the reasons for using the app,

the background of the users (occupation, education, hobbies), how they use the app and their knowledge of natural sciences. The interviews were analysed qualitatively, looking for common themes. In total, 19 users responded.

The results show that the users of the app are very diverse. About half of them have a background in natural sciences and biology, while the other half come from other fields and are only interested in nature purely as a hobby. Among their common hobbies, they mentioned photography, hiking, and nature observation. Some users use the app primarily to document their observations, others to gain knowledge. Most of them use species identification keys or rely on the help of the community within the app to identify species. Users often report that they have learned more about the species of praying mantises and biodiversity in general through the app. The results suggest that iNaturalist plays an important role in promoting interest in natural sciences, even among those who have no formal education in the field. The app therefore appears to be suitable for inclusion in broader educational and awareness-raising programs, especially in the context of promoting natural science literacy and active nature observation.

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Short BIO of presenter

Žan Rode is a teaching assistant of Biological Education at the Faculty of Education, University of Ljubljana. His main research interest is the application of information and communication technologies in science education and plant awareness disparity. In 2020, he completed a master's degree in chemistry and biology for Teaching and is currently a PhD student at the University of Ljubljana. He is also an illustrator, having worked with a group of special education teachers to adapt the Slovenian constitution in a Easy-to-read Constitution of the Republic of Slovenia project, where he created numerous illustrations to act as aids with text comprehension. He then also illustrated adapted poems by France Prešeren.

INCLUSIVE THEMATIC PATH AS A STRATEGY FOR LEARNING IN PUBLIC OPEN SPACE

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Keywords: thematic path, informal learning, public space, cultural heritage

ABSTRACT

The article presents a development and research project in which a thematic path was designed and implemented as an inclusive strategy for learning, inter-generational networking and tourist experience. The project work was interdisciplinary, involving experts and students from the fields of education, tourism, ethnology, music and agriculture.

The theoretical framework of the research and development project was formed by the concepts of sustainable and accessible tourism, learning in public open space (Furlan, 2024), cultural heritage (Fakin Bajec, 2024; Caloggero, 2025), intergenerational cooperation and learning, ecological education and the ethics of care (Mortari, 2020). We started from the needs of the local environment (the Upper Vipava

Valley) for greater intergenerational networking and the inclusion of cultural heritage in intergenerational transfer and the development of sustainable behaviour.

The research question was: What characterises the process of interdisciplinary development of a new strategy for informal learning? The aim of the project work was to develop opportunities for meeting, informal and incidental learning, and networking without interfering with the natural environment. The design thinking method (DTM) was used to develop the thematic pathway, which was applied as a participatory method within the post-anthropocentric paradigm (Quinn, 2024). Local residents participated in the entire process of creation and testing.

Data was collected through interviews and field observations. Thirty interviews were conducted at various stages of the development of the “product” or the strategy for informal learning. The result of the project is a thematic pathway that is (also) intended for people with disabilities. It is 1.4 km long and has six “stations” with tasks related to local cultural heritage to raise awareness of the natural and cultural heritage among visitors and locals. The Actionbound app is used to ensure that the environment is not disturbed and that the tasks can be easily replaced by new ones.

Following initial testing of the trails, we have concluded that thematic trails are a suitable strategy for raising awareness of sustainable development and cultural heritage and can lead to transformative learning and transformative tourism.

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Short BIO of presenter

Teaching assistant **Meta Furlan**, Ph.D., her main research focus is on learning in public open space and intergenerational learning.

STRENGTHENING GREEN COMPETENCES AND SKILLS IN THE JUST TRANSITION PROCESS: OPPORTUNITIES AND CHALLENGES IN ZASAVJE

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Keywords: green competences and skills, just transition, Zasavje, participatory learning, regional development

ABSTRACT

Since 2019, Zasavje has been one of the two coal mining regions in Slovenia included in the Just Transition Fund. The quality-of-life indicator ranks the region 6th among 12 Slovenian regions, while its GDP per capita is the lowest in Slovenia (Report on Regional Development of Slovenia 2018-2022, 2023). The first part of the article uses the example of Zasavje to highlight the specificity of regional development in a region in transition. The second part presents the theory of participatory learning and the most commonly used competence frameworks. The conclusion discusses two examples of participatory environmental education. The aim of the article is to critically evaluate the impact of participatory education on development potential and to identify the factors that influence its successful implementation. The integration of circular content into educational

processes and the strengthening of the competences of the unemployed and job seekers with skills for green jobs form the basis for the long-term transformation of the region's competence profile. The development and upgrading of green competences is also defined as a development opportunity in the document Zasavje–Beyond 2027 (START technical assistance, 2025) and the Regional Plan for a Just Transition (2021). For a successful sustainable transformation, it is crucial that the educational process does not remain solely within the domain of the formal system, but is extended to the wider community through a participatory approach, which promotes 'active citizenship and enables individuals and communities to become co-creators of a sustainable future' (UNESCO, 2017). To overcome potential challenges such as conflicts of interest, lack of engagement and lengthy decision-making processes, clear mechanisms for cooperation, access to resources and trust in institutions are key to the successful implementation of participatory educational processes. One of the key measures for a just transition is therefore to improve the local education system. In the framework of the open call Enriched delivery of quality and accessible learning and the introduction of circular content the selected consortium will upgrade didactic approaches by integrating good practices for the development of digital, entrepreneurial and green competences, with an emphasis on career orientation, circular content and a whole-school approach. This article presents the project idea of project idea Preplet and highlights it with a comparative analysis of the Swedish project The School of the Future. Through comparison, the article analyses the possibilities of upgrading the project and identifying potential risks in order to con-

tribute to the sustainability of the project idea.

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Short BIO of presenters

Anja Šerc, MSc, Regional Development Agency Zasavje (directress). Throughout her professional career, she has been engaged in the development of communities, people, and projects that support sustainable development. She actively fosters the creation of innovative approaches that drive transformation within communities, organizational cultures, competences, and modes of collaboration—both within and across organizations—at theoretical and practical level.

Barbara Avsenak, Regional Development Agency Zasavje (expert associate). She works in the Just Transition and Projects Department at the Regional Development Agency Zasavje, where she is involved in the preparation and implementation of development projects related to the region's restructuring and transition towards a sustainable and inclusive future. Her work includes cooperation with local communities, municipalities, businesses, and other stakeholders to develop integrated solutions that support economic revitalization and social resilience. She places particular emphasis on education and skills development as key drivers of community capacity building and sustainable development.

GREEN SKILLS AND PRECIOUS METALS

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Keywords: human, green work, skills, precious metals

ABSTRACT

In the European Qualifications Framework, skills are defined in contrast to knowledge, which encompasses facts, principles, and theories, and are defined primarily by practical and cognitive elements, such as ways of thinking or problem solving.

Competences represent a demonstrated set of knowledge, skills, abilities, and also personal characteristics, values, motivation, self-image, emotions, thinking patterns, etc. They mean that you have the knowledge and understanding, abilities, and skills to perform, and at the same time you are motivated to actually do something. Competencies are demonstrated in successfully completed work in accordance with the set requirements or even enable above-average performance. They can only be observed in your behavior in various work and life situations (ZRSZ 2025).

I have been working in the field of employment for 16 years and, in addition to formal requirements, facts, and circumstances, I try to identify skills related to relationships, e.g., with other people, work, and nature (Gabrovšek 2016). Phrases such as "green" and "eco"

are often used in public discourse solely as marketing products. However, when it comes to green competencies in specific circumstances, we often find a large gap between principles and practice in times of abundance. The environment and interpersonal relationships are under pressure in times of abundance. Abundance for all is not possible indefinitely. Therefore, feelings of insecurity in the face of extreme weather, international conflicts, and a market that limits food and other forms of security for certain groups of people, such as the unemployed, are not surprising.

Silver, as an undervalued precious metal, is worth €1/gram on the day I am writing this, while a gram of gold costs €90. So the ratio of gold to silver is 1/90. The price and ratio of precious metals changes over time, so it is worth asking whether green competencies and green skills are appropriately valued today. Are they, or will they become, worth their weight in silver and gold as security challenges continue?

It is about people and nature, not just market value. This is where we must seek a way forward. Perhaps through our hands, skills, competencies, and personal virtues. Every skill, no matter how small, counts and is not self-evident or insignificant. Perhaps it has its roots in early childhood or youth and developed through contact with nature and past generations. Although it may not be formally recognized (or even deliberately unrecognized), we feel its value and share it, seeking a way forward. This is where the participatory and environmental aspects of our search come in. Our efforts will one day be rewarded. Perhaps even in silver and gold.

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Short BIO

Mag. **Marko Gabrovšek** has an education as a forestry technician, a university degree in theology, and a master's degree in natural heritage protection. He loves working with people. He is a pioneer of green work and a promoter of green jobs. He received first prize for poetry in the literary competition - The Heart Survives the Change of Times. In the spring of 2025, he received the Reference winners award as part of the Ambassadors of Knowledge program, for raising awareness in the field of green job development.

ETHICS FOR SUSTAINABLE DEVELOPMENT AS A BASIS AND SOLUTION FOR COEXISTENCE BETWEEN HUMANS AND THE ENVIRONMENT AND NATURE

Critical infrastructure and microplastics in our lives

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ABSTRACT

The link between microplastics and critical infrastructure covers several areas that are essential to the security of every country. Particularly important are: water supply, healthcare, waste management, energy, and transportation. In this way, microplastics are present in our environment due to industrial production, consumption, and inadequate waste management, with critical infrastructure playing a key role in their control and reduction. Advanced technologies (e.g., membrane filtration, activated carbon) in critical infrastructure help reduce the presence of microplastics in drinking water. Microplastic particles act as sponges for various environmental pollutants. Their hydrophobic surface attracts and adsorbs toxins from water, air, or food. When we consume microplastics, these toxins can enter the body and cause various diseases. Some components of plastic (e.g., bisphenol A – BPA) act as endocrine disruptors, which means that they affect the hormonal balance and thus cause infertility, obesity, and various carcinogenic changes.

Key words: microplastics, critical infrastructure, hydrophobic surface, endocrine disruptors, carcinogenic changes.

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Short BIO

Dr. **Nada Pavšer** is a Slovenian environmental scientist, educator, expert and political activist. Her special fields are ecology, sustainable development, environmental crime and environmental education. She works in local government. She has been awarded the highest national award and is a strong advocate for environmental policy. She has made significant contributions to the development and implementation of innovative educational practices, especially with the Eco-School project, which she began to implement in Slovenia 30 years ago. Dr. Pavšer is known for her work in the field of educational reforms, teacher training and improving teaching methods.

THE MERGING OF COMMUNITY AND ENVIRONMENT EXPRESSES PARTICIPATION AND SUSTAINABILITY



EDUCATING THROUGH NETWORKING: BUILDING COMMUNITIES OF PRACTICE IN THE ENVIRONMENTAL FIELD

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Keywords: community, environment, networking

ABSTRACT

This article reflects on the experience of establishing Rete Italiana dei Territori di Vita (RITeVi), an informal network located at the intersection of the Italian rural commons movement and the ICCA Consortium, a global association of indigenous peoples and local communities engaged in environmental conservation. The circulation of values and information across different domains of experience has produced a cross-fertilization effect, fostering an overall educational impact on individuals involved in daily environmental governance. Theoretically, the concept of Communities of Practice (CoP) offers a pedagogical framework most closely aligned with the RITeVi experience. However, the network has not yet developed the specific instruments usually associated with CoP. Nevertheless, its hybrid competencies introduce innovations that are worth considering for the further development of CoP theory.

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Short BIO

Prof. Dr. **Marco Bassi** is an Associate Professor of Anthropology at the University of Palermo (Italy). He has held positions at Addis Ababa University, Alma Mater Studiorum University of Bologna, Johns Hopkins University, the University of Oxford, and the University of Trento. He received the Distinguished Scholarship Award from the Oromo Studies Association in 2011. From 2021 to 2023, he served as President of the Italian Association for Applied Anthropology (SIAA) and continues to co-direct the association's journal, *Antropologia Pubblica*. He is currently the Councilor for Europe of the ICCA Consortium.

PARTICIPATORY DECISION-MAKING AND COMMUNITY-BASED MODELS AS FOUNDATIONS FOR DEVELOPING GREEN COMPETENCES IN ADULT EDUCATION

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Keywords: participation, green competences, education, environment

ABSTRACT

This article argues that participatory decision-making and community governance of natural resources are critical mechanisms for fostering these competences in adult education.

Participatory decision-making extends beyond mere stakeholder involvement; it is a transformative process that enables collective reflection, joint analysis of complex issues, and the search for legitimate and feasible solutions. Social capital—defined by trust, norms of collaboration, and interpersonal connectivity—proves to be a key enabling factor for effective collective action (Bourdieu, 1986). Ostrom (1990) demonstrated that communities can overcome the "tragedy of the commons" through participatory governance, maintaining long-term sustainable practices.

Empirical evidence from European studies on collective

agri-environmental schemes highlights that participation in these frameworks enables knowledge sharing between different actors, supports intergenerational transmission of experience, and facilitates co-creative problem-solving (Westerink et al., 2020). These practices align closely with the green competences outlined in GreenComp.

As part of our research, we developed a methodological model integrating Multi-Criteria Decision-Making (MCDM), SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), and the DEXi qualitative decision modeling tool. This combined approach enables comprehensive evaluation of environmental, social, economic, and institutional factors, while actively engaging stakeholders in the process (Rudolf and Udovč, 2022). Crucially, the model functions not only as an analytical tool but also as a pedagogical process through which participants develop systems thinking, long-term reasoning, and collaborative problem-solving—competences foundational to sustainable citizenship.

When applied within the context of collective agri-environmental management, this methodology has proven to be extremely effective not only for enhanced governance (Viaggi et al., 2011), but also for the development of key competences such as systems thinking, collaboration, communication, and impact assessment—all central to the GreenComp framework. In adult education, similar methods can be utilized to design community-based learning modules, participatory workshops, and project-based learning that directly address real-world environmental issues.

In conclusion, we advocate that participatory decision-making should not be treated solely as a subject of adult education, but also as a method of learning.

It serves as a pedagogical tool that integrates formal knowledge with lived experience and personal values of adult learners.

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Short BIO

Dr. **Janja Rudolf** is a researcher who primarily focuses on developing new methodologies for data integration in the field of agricultural economics and collective farmer associations. She is also a sworn court appraiser and an expert in agricultural land, and a mother of three children.

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to farm management, coexistence of rural economies and high-value natural landscapes and common pool resources management and has broad experience with national and EU projects: (eg. PLUREL, NEPROVALTER, IDARI, AGRI-2010-EVAL-13 and others.

OPPORTUNITIES FOR EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) TO INTEGRATE EUROPEAN TRADITIONAL COMMONS

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ABSTRACT

Is it possible to enhance European green competences if commons land tenure, governance and management are unrecognised?

This submission seeks to give a brief summary of the 2024 European commons conference and then open a world café in which all the conference goers can participate. The world café would brainstorm how Education for Sustainable Development (ESD), theory and practice, can be used to inform decision makers and practitioners to recognise the contribution that European commons bring to various International, European and national policies. In such a way that European commons are included and actively participate in the discussions. Eurostat underestimate that 7% of European land tenure is commons. This fact questions the widely held belief that there are only two-sorts of tenure in Europe – private and public. Many private and public land tenure ownership regularly change, some commons lands owners have not changed since the middle-ages.

Today this third form of land tenure is found in many European states. These commons are usually rich in both culture and biodiversity; it is likely that the three are linked.

Non-recognition of commons is compounded by their governance and management also being invisible. Even though their activities have formed the landscape, the biodiversity and the culture that surrounds the commons.

For hundreds of years many of these commons have been contributing to Sustainable Development Goals (SDGs), biodiversity conservation, ecosystems services and a plethora of other objectives and policies. For the commoners this is not a new policy. However, their contribution is not only invisible, but the application of these policies can hindered the commoner's contribution, or worse result in commons grabbing.

At the end of 2024, the European chapters of the International Association for the Study of Commons (IASC) and the Indigenous and Community Conserved Areas consortium (ICCA) met up to discuss commons in Europe. Among their conclusions was the need to educate the general public, but more importantly politicians, civil servants and other who advocate for and put into practice the various International and European and local objectives, such as SDGs, climate and the protection of biodiversity goals.

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Short BIO

An activist researcher with a undisciplinary approach, defying disciplinary boundaries. He advocates a community-first approach to scientific inquiry, arguing that meaningful research on local community, and environmental issues, must first be explored with communities before determine which academic disciplines, with their siloed theories and methods, are the most relevant. Though originally trained as an ecologist and later transitioned to anthropology, he can now be found immersed in historical archives, analysing old faded maps, head-scratching over accounting spreadsheets for cost-benefit analyses, or investigating past pandemics. For over two decades, he has strove to integrate with local communities in Africa and Europe, seeking to understand their interactions with their environments and how these dynamics are disrupted by external interventions. Currently, his focus are European local communities, particularly Territorial Commons, where he views European nature conservation ideologies on them

as outdated, and increasingly lagging significantly behind recognised global good-practice. Dedicated to advocating for the integration of European Territorial Commons practices, often voluntary, into various 2030 and 2050 Agendas. He envisions a return to an enlightened scientific approach, akin to Socrates' philosophy, where anyone, regardless of formal education, can, and does, contribute meaningfully to the development, co-created with communities. A vision that aligns with the growing international recognition of Indigenous Peoples science as valid.

COMMUNAL GOVERNANCE, TRANSHUMANCE AND PASTURELAND ECOLOGY

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Keywords: pastoralism, transhumance, commons, environmental conservation, sustainability

ABSTRACT

Community-based natural resource governance is increasingly valued, particularly for its ability to combat biodiversity loss and climate change, as well as for many other ecosystem services and socio-cultural values and benefits (Zanjani et al., 2023). We focused on three neighbouring mountain pastures, located on the north-eastern Andalusian mountains in Spain, Castril, Santiago, and Pontones, which exhibit similar phys-

ico-chemical conditions but different forms of communal organization and two main types of mobility: long-distance transhumance and short-distance transhumance (here after LDT and SDT respectively) (Godoy et al., 2024; Parra et al., 2025). The rules for using these pastures are collectively agreed upon by all users, but tend to be more strictly implemented in Pontones than in Castril, while Santiago is an intermediary point. Through a transdisciplinary anthropological and ecological study, we aimed to compare these three commons, how different types of communal governance and transhumance modalities (LDT vs SDT) affect plant communities and soil physico-chemical properties in CSP high-altitude rangelands. We conducted long-term ethnographic study (2017-2023) to connect with local stakeholders and understand communal forms of governance, pastoral practices and other related factors, such as the impacts of public policies and global markets on these commons. At the same time, we conducted ecological sampling and analyses to examine the impact of these three communal governance types and the two types of mobility (LDT vs. SDT) on pasture ecology (72 vegetation transects were sampled, 18 in Castril, 42 in Santiago and 20 in Pontones, subjected to the two main transhumance modalities (SDT and LDT)). As a general result, we found that local pastoralism has a positive impact on the environment. There were differences between commons and mobility regimes, with a positive impact related mainly to closer forms of cooperation between herders and daily guiding of flocks, along with seasonal long-distance transhumance, especially when the latter is combined with stricter formal community rules. In order to disseminate knowledge and sustainable

practices, it is essential to encourage cooperation between academics, herders, local stakeholders, representatives of the public in order to obtain more reliable data and make the results more easily usable by others through training and environmental education involving of these actors. This would be a first step towards better integration of anthropological, ecological and local stakeholders' knowledge for a more comprehensive understanding and revitalisation of pastoral commons.

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Short BIO of presenter

Dr. Pablo Dominguez, BSc in Environmental Biology (UAM-Madrid and AMU-Marseille). PhD in Social Anthropology (EHESS-Paris and UAB-Barcelona). Specialization on agro-silvo-pastoralist systems of the Mediterranean region - Morocco, Spain, France and the Balkans - with over 20 years

of experience with his main focus on sustainable community-based governance of natural resources and territories of life as a key element for global sustainability and a source of cultural heritage that is a keystone in maintaining these systems.

THE “CHORES” IN THE COMMON LAND SYSTEMS : A TOOL FOR “GREEN COMPETENCES” EDUCATION

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Keywords: experience, transmission, rurality, GreenComp, societies.

ABSTRACT

In rural societies where common land systems still exist, chores have long been the usual way of managing local resources. This is a collective work, organized according to specific rules for maintaining collective property. These practices are not merely a strictly functional necessity, but are based on shared moral obligations and mutual responsibility, ensuring the sustainability of collective property and the transfer of knowledge essential to its management. By participating in the maintenance of common lands, community members acquire and apply technical skills while developing a detailed understanding of ecological cycles and socio-environmental interactions. They may manage forests, monitor irrigation canals or clean up pastures. In this way, chores are based on intergenerational learning linked to practice, where knowledge about the territory and its dynamics is passed on through collective action. In some mountain regions of France, collective main-

tenance of mountain pastures remains a practice for preserving pastoral ecosystems, preventing landscape closure and maintaining biodiversity. This helps to promote nature and the importance of its conservation among younger people and new members of the community. Furthermore, some community-owned land parcels are located within the boundaries of a regional park, Natura 2000 zone or a national nature reserve, which further reinforces the interest in transferring the practice of chores to ensure the sustainability of these areas through collective action. Thus, long before the institutionalization of "green skills" in European contexts, such as the GreenComp, this knowledge was already being used by the rights-holders of collective property systems.

Today, the transmission of this knowledge is more or less alive and ritualized, depending on the area. The gradual disappearance of this dynamic, linked in particular to the departure of younger people from rural areas, raises the question of the erosion of local ecological knowledge and the decline of direct interaction with the environment. At the same time, we are witnessing a revival of participatory forms of collective action in environmental management, such as participatory work camps, eco-volunteering and citizen initiatives for landscape restoration. The analysis of chores in collective properties highlights the importance of memory transmission and experiential learning in the construction of contemporary ecological skills. Indeed, this recurring practice can be an important tool for collective action for the benefit of the environment, as well as for the preservation and restoration of nature with the aim of ensuring the sustainability of natural spaces and resources.

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Short BIO of presenter

Julia Ambrosio, PhD student in public law, Savoie Mont Blanc University. Title of the PhD thesis : Collective obligation. A study of the resurgence and nature of individual duties in a society of commons. Both authors are members of the Valcom Chair.

TRADITIONAL ECOLOGICAL KNOWLEDGE AND NATURAL RESOURCE MANAGEMENT IN ALPINE COLLECTIVE PROPERTIES

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Keywords: commons, traditional ecological knowledge, alps, Veneto, Regole

ABSTRACT

In the face of global challenges like climate change and socioeconomic shifts, mountain territories are particularly vulnerable. This vulnerability often manifests itself in land abandonment, resulting in the loss of ecosystem services that can negatively impact urban communities downstream. Mountain communities are crucial for sustainable land management because of their Traditional Ecological Knowledge (TEK). In Europe, TEK is defined as "knowledge based on decades of personal experience in the territory of residence, acquired through direct land management, containing centuries of community experience collectively preserved" (Molnàr et al., 2008). TEK encompasses recognition of local plants for medicinal or culinary purposes, historical boundaries, and pasture and forest management practices. In a way, TEK can be understood as the basis for green competencies of local communities. Our research examines the state and

transmission of TEK in two forest commons in the Italian Alps. These are ancient forms of collective ownership, whose members jointly own assets for agricultural, forestry, and pastoral use. Our objectives were to: i) identify knowledge and practices that can be classified as traditional in Belluno Province; ii) understand their usage level in the two communities and iii) identify the main TEK transmission methods. A mixed qualitative-quantitative approach was used, including in-depth interviews with 6 key experts, a literature review, questionnaires, and a focus group with local key informants. We identified 10 traditional practices related to the use of natural resource use and 16 traditional ecological knowledge elements. These include knowledge of local tree species, specific forest areas with environmental significance, high-quality timber areas and specific uses for different tree species. Traditional practices include medicinal and culinary herb collection, and wood cutting techniques. Our results aim to support communities in preserving their TEK. Potential approaches include the development of sustainable tourism programmes like experiential workshops based on traditional knowledge, the organisation of cultural events, and the implementation of environmental monitoring programmes that incorporate TEK elements to track climate change impacts. These initiatives could also be considered as participatory environmental education activities, due to their ideal large involvement of visitors and their focus on sustainable use of natural resources.

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Short BIO of presenter

Dr. **Giacomo Pagot** is a postdoctoral researcher at Tesaf Department, University of Padova. His research focus is on rural commons, forest owners, EU forest policies and mountain and rural development.

TRANSLATING TRADITIONAL LAND COMMONS: LANDSCAPES CONTRIBUTING TO SUSTAINABLE DEVELOPMENT IN FRANCE

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Keywords: commons, sustainable development, France, landscape, policy translation

ABSTRACT

European ancestral land commons are territories governed by local residents, often with user rights to pastures, forests, or water, amongst other resources. These ancestral ways of governing resources are often unrecognized by European countries, which equate them to outdated forms of land use. There are more than 40,000

such areas in France, and at the level of the municipality, they can represent up to 50% or more of the land. These land commons remain invisible in public policies, such as those related to sustainability, partly because their practices have not been translated into contemporary political frameworks such as sustainable development, ecosystem services, or green competencies. We present an interdisciplinary and participatory method which uses “two-eyed seeing”, bringing together multiple perspectives, alongside traditional knowledge, to gain a holistic understanding of the system and thus localise contributions to the Sustainable Development Goals. In early 2025, a team of interdisciplinary researchers and local residents combined their methods and practices in the Margeride area of the Haute-Loire department, using participatory meetings and walks, landscape renderings, maps, interviews, and a joint analysis of sustainable development goals to translate the commons in the landscape (in this case, the sections de commune) in terms of sustainable systems that manage forests and water, while contributing to livelihoods, food, biodiversity, energy, climate change mitigation and adaptation, water access, and cultural heritage. We propose that this method of translation, which brings the perspective of the community to sustainability policy, be used to support technical and political recognition of these systems, demonstrating how they contribute to societal challenges today.

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Short BIO of presenter

Prof. dr. **Gretchen Walters**, professor at the Faculty of Geosciences and the Environment of the University of Lausanne's and the Institute of Geography and Sustainability, conducts action research with rights-holders of land commons in Europe, particularly in France and in Switzerland. She is a rights-holder in a section de commune in France and a honorary member of the ICCA consortium.

PRESERVED OLD BOUNDARY MARKS OF CADASTRAL MUNICIPALITIES AND AGRARIAN COMMUNITIES AS A LINK BETWEEN LOCAL RESIDENTS AND LOCAL SPACE

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Keywords: old boundary marks, participation, linking local communities to space

ABSTRACT

As part of the applied research project L2-50090 Geodetic marks as material witnesses of the geodetic networks development in Slovenia, financially supported by the Slovenian Research and Innovation Agency and the Surveying and Mapping Authority of the Republic of Slovenia, several lectures on local geodetic history were held in the years 2024-2025 for local residents in southern Primorska region and central Slovenia. After the lectures, we engaged in discussions with the audience at most of the lectures and obtained information about old geodetic markers from their local environment that were still preserved but unknown to us – we

identified informants. The information obtained in this way was later verified in the field, where we checked the inscriptions on the preserved boundary marks, measured their dimensions and their exact location. Later, through a review of geodetic and historical sources, the significance of these geodetic marks was examined in detail. The results were presented individually to each informant, some of them were presented to the wider professional public in the form of professional publications in the *Geodetski vestnik* or in the more popular booklets *Geodetic Highlights* intended for general public (Triglav Čekada et al., 2022; Triglav Čekada, 2023; Triglav Čekada in Bratož-Ježek, 2024; *Geodetski utrinki*, 2022), and some publications are still to follow. Most of the geodetic marks identified in this way, which may be 200 or more years old, still have an officially valid role as boundary marks of cadastral municipalities or parcel boundaries. Some of them were also the boundaries of districts, counties or even older estates in the past. The most interesting finds were the old agrarian community boundary stones, which today represent the parcel boundaries. This approach has enabled us to discover old boundary stones and other geodetic marks much faster than we would have by analysing archival sources alone. Both sides, the lecturers and the locals, gained knowledge, the lecturers about the still preserved boundary stones, while the locals gained a popular explanation of the importance of surveying history for the administrative development of their local area. Thus, each preserved old boundary mark became a "talking stone" or a testimony of local history for the local residents. In addition, the training provided them with knowledge about other interesting surveying marks in

the vicinity of their local community. Thus, the lectures encouraged the participation of the local community, i.e., the sharing of information about forgotten old geodetic marks from their local environment, which is mutually beneficial.

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Short BIO

Assist. prof. **Mihaela Triglav Čekada**, PhD, is head of geodetic department at the Geodetic Institute of Slovenia. In last couple of years, she has been intensively involved in the research of the history of various old geodetic marks and geodetic networks. She is also partly employed at the University of Ljubljana, Faculty of Civil and Geodetic Engineering, where she passes on her research findings to the new generations of surveyors.

FORGOTTEN BUT VITAL: AGRARIAN COMMUNITIES AS GUARDIANS OF NATURE, BIODIVERSITY, AND CULTURAL LANDSCAPES

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Keywords: commons, governance, lifelong learning, biodiversity preservation, ecosystem services

ABSTRACT

Slovenia has a long tradition of managing common land through agrarian communities, which today, in addition to their economic role, are gaining increasing ecological and social significance. Despite several studies and legislative changes, crucial data on the number, location, and functioning of active agrarian communities and their land remain incomplete.

This article presents an empirical analysis of the current state of registration and spatial distribution of common lands in the Western and Central Gorenjska region. An additional GIS-based analysis, focused on the area of Triglav National Park, reveals that more than half of the common lands there consists of forests, approx. 4% are meadows or alpine pastures, and nearly 35% are rocky mountains. Although these lands have low economic value, they represent essential ecological and social capital, contributing to preservation of biodiversity and

cultural landscapes, and the provision of various ecosystem services.

However, informal discussions with members of various agrarian communities revealed that despite possessing extensive knowledge—particularly in forest and pasture management—they often lack a comprehensive understanding of the broader benefits their common lands provide to general public. This is largely due to a lack of research and limited awareness of environmental and nature conservation policies. Improving understanding of such policies and raising awareness of the social and ecological value of common lands is essential to empower agrarian communities in sustainable natural resource management. For policymakers, this knowledge will provide clear and objective arguments to support more stable and long-term community-based governance.

With their long history of managing common land, agricultural communities are the bearers of local knowledge about natural resources, forests, and pastures. This knowledge holds significant educational value, yet it remains under-recognized. Involving these communities in participatory environmental education (e.g. through workshops, study circles, interpretive activities) enables a two-way transfer of knowledge: communities contribute their practical experience while gaining a better understanding of environmental policies and the ecosystem services. This approach strengthens their role in nature protection, fosters deeper engagement and connection with the local environment, and contributes to the development of sustainable, inclusive models of natural resource governance.

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Short BIO

Dr. **Mateja Šmid Hribar** is a Research Associate at the ZRC SAZU and an Assistant Professor at the Postgraduate School ZRC SAZU. Her research explores human-nature interactions. Her work encompasses the governance of traditional and new commons, and also the role of ecosystem services in natural resource governance. She is employing various methodological approaches such as qualitative data obtained through conducting interviews, focus groups, field visits as well as analysing quantitative data.

FROM ŠTRNINA TO PLANINA: THE RELATIONSHIP OF AGRARIAN COMMUNITY MEMBERS TO LAND AND ANCESTRAL HERITAGE AS A SOURCE OF GREEN COMPETENCES

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Keywords: community, relationship, values, sustainability

ABSTRACT

Agrarian communities are an old form of organized activity of a group of people in a specific territory with the aim of preserving the agricultural use of land. Despite numerous social, political, economic, and capital pressures, they have managed to preserve the agricultural purpose and natural value of their land. This proves that they have been practicing sustainable land management for centuries and demonstrate strong green competencies.

This article explores the elements of green competencies underpinning such sustainability, using the case of the Agrarian Community of Merče and Plešivica.

The Agrarian Community of Merče and Plešivica resumed its activities at the turn of the century, after a 50-year dispossession (due to nationalization) created a gap during which much of the community's heritage,

activities, knowledge, and values were lost. The main remaining link was the territory: 140 hectares of land between two parcels – Štrnina above Plešivica and Planina above Merče.

The research approaches used include analysis of archival documents, interviews with selected members, field surveys of the land's condition and value, descriptions of terrain characteristics and traditional field names.

These were used to test four key hypotheses:

1. Members of the agrarian community are strongly connected to specific plots of land, characterized by names, terrain features, plant communities, and other particularities.
2. In their relationship to the land, memories (both personal and passed down through storytelling) of specific parts of the territory (rocks, boundaries, ponds, paths, etc.), customs (communal use), events (joyful, tragic, related to livestock, weather, etc.), and traditions play an important role.
3. This heritage and ancestral tradition influence the current behaviour of agrarian community members primarily on an emotional level, leading them to make decisions that preserve this heritage for future generations.
4. Respect for the land as such and for the community heritage shapes the individual attitudes of agrarian community members, who view the agrarian community as a value in itself, even if it lacks significant economic value.

The results show that the emotional and value-based relationship of members to the land and tradition is essential, and that in most decisions (on infrastructure, land use, etc.), the values of community and sustainability prevail over otherwise greater individual eco-

conomic interests. In this way, members make sustainable decisions without necessarily being rationally aware of it. However, this is the case for all members, which is why it is important to raise awareness of these values as green competencies and promote them among all members and beyond the community.

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Short BIO

Marica Uršič Zupan is a university graduate in journalism, specializing in environmental issues, sustainable development, and agrarian communities. She has also closely followed these communities as the initiator of the revival of the Agrarian Community Merče and Plešivica, and as its president for several years. In both of these roles, she emphasized the sustainable importance of agrarian communities, both in terms of environmental conservation and democratic, long-term decision-making processes.

COMMUNITY CAPACITY BUILDING IN SINGAPORE: SOCIAL LEARNING AND SOCIAL INNOVATION FOR RESILIENT NEIGHBOURHOOD COMMUNITIES

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Keywords: Capacity building, Climate change, Neighbourhood community, Social innovation, Social learning

ABSTRACT

Community capacity building is seen as key to building resilient neighbourhoods that can withstand the impact of climate and social change. This involves resource mobilization, skills development, leadership training, social learning and social innovation. Social learning is the result of the mutual exchange of ideas and knowledge between stakeholders and promotes social innovation, such as new ideas, services, and strategies that can empower local communities to collectively face, adapt to, and influence change, thereby responding to internal and external sustainability challenges. Social innovation is also linked cross-sector partnerships that promote social learning among stakeholders.

The purpose of the study is to understand the role of social learning and social innovation in building community capacity to withstand the impact of climate change. It focuses on the Pek Kio neighbourhood in Singapore as an example of a government-led pilot project that aims to build a resilient neighbourhood community by strengthening its capacity to identify and address the impacts of climate change in the city. Despite its limited scope and outcomes, the pilot project demonstrates the importance of social learning and partnership building among residents, civil society organizations and government agencies in creating local communities that can collectively anticipate, plan, and implement innovative community strategies for climate change mitigation and adaptation. These strategies were focused on combating extreme heat in the neighbourhood and included community gardening and greening, activation and maintenance of communal spaces, environmental education, and social learning about community climate action.

The Pek Kio neighbourhood in Singapore is a distant but valuable example that demonstrates the importance of social learning and social innovation in building community capacity to withstand the impact of climate change. Moreover, the study highlights the need for alternative models of climate change management that can transform the relationship between the state and local communities, enabling effective participatory environmental education and community climate action.

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Short BIO

Prof. **Blaž Križnik** is an Associate Professor at the Department of Asian Studies, University of Ljubljana. He was teaching at the Graduate School of Urban Studies, Hanyang University in Seoul in the past. He has worked at the Institute for Advanced Architecture of Catalonia in Barcelona, the Seoul Development Institute, the Seoul National University Asia Center, and the Asia Research Institute in Singapore. His research includes comparative urban studies, community development and Asian studies. He is the co-founder of the Institute for Spatial Policies in Ljubljana. **Jan H. M. Lim** is a voluntary post-doctoral Research Associate at the Department of Architecture at KU Leuven in Belgium. In her research on community participation, planning politics, and urban governance, she examines how the politico-institutional context of urban planning shapes public engagement and civil society activism in Singapore. Her current interests are in urban climate governance,

collective action, and climate justice. She is the co-founder and director of research and strategy at the nonprofit consultancy Participate in Design in Singapore.

HOW CAN COMMUNITY EDUCATION CONTRIBUTE TO MORE INCLUSIVE PUBLIC AND GREEN SPACES

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Keywords: public and green spaces, vulnerable populations, community education, good practices, sustainable development

ABSTRACT

The aim was to explore how adult education and learning can contribute to the achievement of target 11.7 of the 2030 Agenda, which aims to provide access to safe, inclusive, and accessible green and public spaces, particularly for persons with disabilities, older persons, children, and women.

Urban public green spaces provide a healthy environment for the urban population and are crucial for improving the quality of life, especially for vulnerable groups. In addition to physical and communicative accessibility, which is particularly important for people with functional impairments, it is important that public and green spaces are open to everyone, regardless of their cultural background, is essential (Atikur and Zhang, 2018, p. 1–2). A crucial factor in ensuring equal access is safety, as the mere perception of danger can restrict the free use of such spaces (Iqbal, 2021, pp. 1–3).

Community building and community education have proven to be key factors for achieving change. Community education is defined as education within the community for the community. It brings education closer to the needs of individuals and communities, thereby encouraging co-operation for the effective implementation of set goals. One of the key features of community education is that it is controlled by the community itself, which fosters participation by offering the opportunity of co-creation (Močnik, 2009, pp. 55–57). Research shows that communities that combine activities with dialogical and transformative learning contribute to the development of a sustainable society by creating new practices (Ličen et al., 2017, p. 37). Two examples of good practices were discussed in detail. The first concerns the creation of an inclusive thematic trail in Vipava. In addition to their informational, educational, and recreational purposes, thematic trails also play a role in protecting and preserving nature and cultural heritage (Prah, 2023, p. 153). In the context of sustainable development, the thematic trail in Vipava was designed in a way that does not alter the surrounding environment. Furthermore, it serves as both an educational and tourist activity. The local community was also involved in the planning process and had the opportunity to participate in designing the trail route. The second example relates to the LivadaLAB project, which represents an example of community gardens in Slovenia. LivadaLAB (LivadaLAB, n.d.) describes its operation as participatory management, food self-sufficiency, and sustainable spatial planning. It represents a community space that experiments with ways of coexistence, co-creation, and cooperation among young people, encouraging their engagement in addressing the climate crisis.

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Short BIO of presenters

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PRACTICES AND APPROACHES OF PARTICIPATORY ENVIRONMENTAL EDUCATION



UNLOCKING THE POTENTIAL OF STUDY CIRCLES TO TRANSFORM ADULT BIODIVERSITY VALUES

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Keywords: study circles, values, biodiversity, Green Deal

ABSTRACT

The loss of biodiversity, habitats, and the ecosystem services they provide poses an existential threat to Europe and worldwide. Achieving the EU Green Deal's vision—protecting 30% of Europe's land and sea and restoring at least 20% of these areas by 2030 (and all degraded ecosystems by 2050) will require profound societal changes. These targets are aligned with the European Commission's EU Biodiversity Strategy for 2030. However, realizing these ambitions is not just a matter of policy, but also requires a fundamental shift in how people understand, value, and engage with biodiversi-

ty in their daily lives.

To explore and contribute to this shift, the Horizon 2020 SHARED GREEN DEAL project (2022–2027; <https://sharedgreendeal.eu/>) conducted social experiments in 4 European countries (Ireland, Greece, Slovenia and Sweden) using the Study Circle approach, which is based on informal community learning. As part of this social experiment, groups of 10–15 adults met monthly between May 2023 and April 2024 to encourage participants to change their perception of biodiversity. Based on 40 structured interviews, we found that there was a shift in the participants' perceptions, knowledge and sometimes behaviour in relation to nature and biodiversity. Importantly, a strong sense of community and enjoyment of learning together developed in the study groups, highlighting the power of social interaction and peer learning in promoting environmentally conscious behaviour. In addition, the interviews revealed strong support for community-based biodiversity conservation initiatives such as community gardens, habitat restoration, photo exhibitions, bird counts and educational field trips, as effective ways to raise awareness, encourage behaviour change, strengthen social bonds, and integrate local knowledge and traditions.

The Study Circle approach proves effective in: 1) increasing adults' knowledge and awareness of biodiversity, 2) strengthening citizen participation in its conservation, and 3) encouraging personal involvement in local initiatives that promote knowledge sharing and stimulate collective action.

These findings highlight the potential of the Study Circle approach as a powerful tool for supporting the societal shift to meet biodiversity goals. By creating inclusive, peer-led spaces for reflection and dialogue,

Study Circles help adults rethink their relationship with nature, strengthen community ties, and promote long-term environmental responsibility and engagement at the local community level.

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Short BIO of presenter

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GREEN KNOWLEDGE DAY IN ADULT EDUCATION GUIDANCE

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Keywords: Guidance, adult education, outreach, promotion

ABSTRACT

Green Knowledge Day was a thematic event held in 2024 as part of the traditional Days of Guidance for Knowledge, an annual professional and promotional initiative aimed at promoting and raising awareness of adult education (AE) guidance, implemented as a public service (Andragoški center Slovenije, n.d.) among the general adult population. The event is coordinated by the Slovenian Institute for Adult Education and carried out by all 35 AE organisations across Slovenia that provide AE guidance as a public service.

In order to inform adults about the various counselling, learning, and education options available, the implementing organisations open their doors widely during the event and also reach out to adults outside their premises—on town squares and streets, in parks, through local media, and in cooperation with various partners in their communities.

Each year, one of the three event days is thematic. Under the title Green Knowledge Day, the 2024 edition connected AE guidance with topics related to caring for nature, protecting the environment and living and working sustainably.

A wide range of activities—including events, workshops, open days, and information stands—were prepared in alignment with the thematic focus of Green Knowledge Day and adapted to the specific needs and characteristics of the local communities. The “green content” proved to be both relevant and attractive (e.g., Swap Market, Biodynamic Gardening and Herbalism, Sustainable Kitchen, etc.), and the initiative received a positive response from adults and partner organisations in local communities.

In the future, we aim to develop awareness-raising, information and motivation of adults to engage in learning and education for sustainable action and development—including various forms of participatory environmental education (Robinson, Gradišek, Bevk, Bogataj, 2024), as one of the permanent components of AE guidance. In the European context, this aspect of guidance has already been referred to as green guidance (Plant, 2021). AE counsellors can play a key role in informing adults about participatory environmental education, encouraging their involvement, or motivating them to organize themselves (e.g., in Self-Directed Learning Centres or Study Circles). However, this requires that counsellors are well acquainted with these topics, are aware of their relevance to contemporary society and individual (work and personal) life and are familiar with the opportunities available both locally and more broadly. One of the key roles of a counsellor is to act as a bridge between the adult and education (Jelenc Krašovec, 2009), and to

encourage their inclusion (Pavlič, Vilič Klenovšek, 2020).

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Short BIO

Urška Pavlič holds university degrees in Sociology and Japanology from the University of Ljubljana. She has over a decade of experience in the field of adult education guidance, where she is engaged in both developmental activities and direct support to the public network of adult education guidance providers, including the preparation of professional materials, programs, etc. to support this network and foster collaboration with stakeholders. She is a (co-)author of various professional materials and a lecturer in training programmes for counsellors in adult education.

CO-CREATING GREEN COMMUNITIES: THE ROLE OF ADULT EDUCATION CENTRES IN DEVELOPING GREEN COMPETENCES

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Keywords: green competences, GreenComp, lifelong learning, participatory approach, local community

ABSTRACT

The proposed panel addresses the role of adult education centres as co-creators of green communities, which develop green competencies defined within the GreenComp framework (EC, 2022). A set of approaches and practices are presented that link the values of sustainability, systemic thinking, action and future orientation with concrete local community activities. The emphasis is on interdisciplinarity, participation, cross-sectoral cooperation, awareness-raising and encouraging sustainable behaviour, as well as the social impact of lifelong learning programmes on changing environmental habits and values. By emphasizing experiential learning and integration into the local environment, the

panel will demonstrate practical methods for strengthening the green competencies of adults. It also opens a discussion on the challenges of measuring these competencies, the role of educators in responding to environmental issues and the integration of ReNPIO 22–30 objectives into formal and informal education. The panel aims to encourage reflection on the role of adult education centres as key actors in the transition to a more sustainable future.

Eva Mermolja; LU Ajdovščina, builds on its long-standing local presence. Through VGC programmes in remote communities, it ensures access to content in the field of sustainable development, primarily through intergenerational learning and cooperation with stakeholders.

Irena Bohte; ZIK Črnomelj has been combining education, knowledge transfer and the strengthening of local self-sufficiency for nine years with its project Days of Herbalism in Bela Krajina.

Dragica Glažar; Cene Štupar – CILJ is improving existing practices of incorporating sustainable content into the prison system. The aim is to spread green knowledge and encourage long-term behavioural changes in prisoners, even after they have served their sentences.

Alenka Kučan; LU Murska Sobota develops green competencies through the preservation of crafts, using local raw materials, and organising practical learning activities for the community with its unique study circle, Lipovci.

Viki Ivanuša; LU Ormož emphasises the role of nature as a classroom and the inclusion of green topics in informal and project content, from study circles to European projects that appeal to all generations.

Maja Marija Sadar; LU Ravne na Koroškem offers a comprehensive sustainable educational framework based

on the personal experience of participants and community action through the 'PLANET B DOES NOT EXIST' project.

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Institutional BIO

The Association of Adult Education Centres of Slovenia (ZLUS) brings together 22 adult education centres from all over Slovenia. It acts as an advocacy and development organisation that strengthens the role of adult education centres in the development of local communities and supports high-quality and accessible lifelong learning. A key area of its work is the development and strengthening of all basic competences, including the development of sustainable and green competences in adults, in line with European and national guidelines.

CITIZEN SCIENCE TOOLS FOR INCLUSIVE ADAPTATION TO CLIMATE CHANGE

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Keywords: citizen science, climate change, adaptation, education

ABSTRACT

The conservation and restoration of coastal ecosystems play a significant role in climate change adaptation and risk reduction (Spalding et al., 2014). The success of these measures largely depends on community participation and the establishment of deeper levels of cooperation in the co-creation and co-management of ecosystem-based adaptation measures (Toxopeus et al., 2020). Citizen science can make a valuable contribution in this context by enabling more efficient data collection, faster response and better collaboration between decision-makers, researchers, and active civil society, including in the initiatives of climate change adaptation (Neset et al., 2021). This increasingly widespread approach to scientific research, in which non-professional researchers are involved in research in various ways, can also contribute to raising awareness and disseminate knowledge about sustainability among various

stakeholders, including students and teachers (Rodríguez-Loinaz et al., 2022).

This article presents a citizen science tool developed as part of the ECO2SMART project (www.ita-slo.eu/eco2smart). The project, which was carried out between 2023 and 2025, was co-funded by the European Union under the Interreg VI-A Italy–Slovenia Programme. Its aim was to encourage public participation in the design and implementation of ecosystem-based measures for climate change adaptation and natural disaster risk reduction.

The first part of the article provides an overview of the scientific literature on key concepts related the involvement of stakeholders and the wider public in climate change adaptation initiatives using citizen science—for example, for mapping risks and vulnerabilities and co-creating solutions (Freschi et al., 2024). The second part presents the contribution to these efforts, namely a citizen science tool developed within the project, which is available on the project’s online education portal (www.eco2smart.si). This tool encourages citizens of the coastal areas of the northern Adriatic to actively collaborate with researchers and contribute data on best practises of ecosystem-based climate adaptation. This accelerates knowledge transfer and greater integration between different stakeholders in the border area, which further contributes to strengthening mutual understanding and the cross-exchange of experiences. The creation of new networks among residents is essential for a coherent sustainable development and a more effective adaptation of the border area to the effects of climate change.

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Short BIO

Dr. **Liliana Vižintin**, a biologist with a PhD in biotechnology, is a researcher and project leader at the Mediterranean Institute for Environmental Studies of ZRS Koper. Her work primarily focuses on sustainable development, nature conservation, climate change adaptation, and knowledge transfer. She employs innovative communication and didactic approaches to engage stakeholders, with a particular emphasis on developing educational games and citizen science tools.

COMPETENCES FOR SUSTAINABLE DEVELOPMENT IN LIBRARIES: A CASE STUDY OF GOOD PRACTICE

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Keywords: libraries, reuse, awareness, acitve citizenship, volunteering

ABSTRACT

Libraries are inherently sustainable institutions in their mission, as they are based on the lending of materials and thus encourage reuse. For a long time, they have not only been lending books, maps, and audio-visual materials, but have increasingly started to focus on other areas as well, such as lending toys, games, e-readers, laptops, and even useful items such as various household appliances, tools, etc. In the Strategy for the Development of Slovenian Public Libraries 2022–2027, the goals of sustainable development have become part of their vision. Libraries are thus also taking on the role of raising user awareness about sustainable behaviour. A good example is the project “Let’s Air Out Our Closets”, which the Logatec Library runs in cooperation with the Logatec Municipal Utility Company. The first event took place in May 2019 and included a market for exchanging clothes, objects, toys, and books. The

event was accompanied by a second-hand bookshop offering decommissioned library books, and a garage sale, where the citizens of Logatec sold used items at free stalls. Despite initial hesitation from some visitors, the event was a success and, at the request of users, has grown into a regular project with at least two events held annually.

The initiative for the project came from an active local resident who also obtained equipment for the events through participatory budgeting (portable folding clothes racks, folding tables, storage boxes for hangers, ladders with shelves, and a mirror). At the events, we carried out a number of different activities (collection and repair of household appliances) and workshops (clothing repair workshop, making candles from waste oil, making moss balls or kokedama). At the events, we also highlight educational infographics on the impact of the fashion industry on the environment. As the events have become extremely well-attended, their successful execution would not be possible without the valuable support of volunteers who help set up the equipment, sort donations, and clean up after the event. After each event, the municipal utility company takes care of the proper recycling of the remaining material, while well-preserved clothing is donated to the local Red Cross branch.

With increasing participation in events over the years, the project has contributed to developing sustainable habits among all generations—from children to the elderly. This is an example of successful cooperation between two public institutions that have raised awareness in the local community about the importance of reuse, reduced the amount of discarded clothing and items, and contributed to more responsible consumer

behaviour and environmental protection. This successful approach could serve as a model for similar partnerships in other municipalities where similar initiatives are carried out solely by volunteers.

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Short BIO

Urška Orešnik is a librarian at the Logatec Library, where she has been leading the Let's Air Out Our Closets project since its inception. She is also a co-author of the Strategy for the Development of Slovenian Public Libraries 2022–2027, in which she particularly contributed to shaping the goals of sustainable development. Her work combines professional expertise in librarianship with a commitment to sustainability and the promotion of responsible practices within the community.

FORESTRY – OPPORTUNITIES AND CHALLENGES FOR YOUNG PEOPLE IN THE GREEN CAREERS OF THE FUTURE

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ABSTRACT

As one of the key green sectors of the present and the future, forestry plays an important role in mitigating climate change, preserving biodiversity and providing ecosystem services. Therefore, forestry professions are becoming an increasingly important part of green jobs, which require the development of green competences—from the sustainable management of natural resources to community engagement and responsible behaviour on a personal and institutional level.

Nevertheless, forestry in Slovenia is still marked by the traditional perception of a physically demanding and predominantly male profession, which represents one of the major challenges in attracting young people—especially girls and women—to this sector. The forestry profession is often equated with the work of a logger, overlooking the role of foresters as educators, researchers and planners of sustainable land use, which is also reflected in the low representation of women, especially in leadership positions. On the other hand, 41% of forest owners are women, which puts Slovenia at the top of the European rankings. However, this does not mean that

women actually participate in decision-making on forest management, as they often leave this role to male family members.

The results of a survey among female forestry students show that personal interest plays a key role in career choice, but financial aspects and work-life balance also have a significant influence. The forestry sector is still characterised by gender stereotypes, misconceptions about the profession and concerns about safety and physical demands, which present additional barriers for women. This highlights the need for more participatory environmental education that empowers young people to take an active role, linked to hands-on experiences in nature and the strengthening of green competences. Research has shown that women in forestry contribute significant added value—they pay greater attention to the ecological and social functions of forests, bring fresh perspectives and creativity, and encourage innovation. By breaking down stereotypes and promoting equal opportunities, the forestry sector can become more inclusive. Targeted projects, education, training and promotional campaigns, such as the identification and promotion of female role models who can inspire future generations, provide an opportunity to do so. Only then will young people recognise forestry as a profession of the future that combines working in nature, technological progress, research, and social responsibility.

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Short BIO of presenter

Darja Stare, MSc Forestry Engineer, is a researcher at the Slovenian Forestry Institute. Her research focuses on the socio-demographic characteristics of private forest owners, their response to natural disturbances and adaptation to climate change, which is also the topic of her PhD thesis. She is active in the field of equality and diversity in forestry, focussing on the role of women and the inclusion of young people in the forestry sector.

FOREST MANAGEMENT AS A PLATFORM FOR PARTICIPATORY ENVIRONMENTAL EDUCATION AND SUSTAINABLE GOVERNANCE

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Keywords: forest management, participatory environmental education, forest management plans, sustainable governance, community engagement

ABSTRACT

Slovenia is one of the most forested countries in Europe, with forests covering nearly 60 % of its territory. This article demonstrates how forest management can be a key part of participatory environmental education, uniting landowners, local communities, and experts to co-design and implement sustainable governance measures. We first outline the challenges in implementing forest management plans – only about 40 % of the planned measures are actually implemented. We then present examples of good practices where citizen involvement and biodiversity-oriented education programs have contributed to greater motivation among owners to care for their forests. Finally, we propose a collaborative model adaptable to local conditions and capacities.

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Short BIO

Jože Prah is a forest ranger at the Slovenian Forest Service. As a mountain and tourist guide, he actively promotes sustainable forest management and the development of forest educational trails. He serves as President of the Society of Charcoal Burners of Slovenia and chairs commissions for European long distance paths and forest educational trails at the SFS. He is the author of monographs and guides, dedicated to knowledge transfer and community engagement in forestry.

SUSTAINABILITY COMPETENCES AND EDUCATIONAL CONTEXT FOR SUSTAINABLE BEHAVIOUR PERFORMANCE

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Keywords: education for sustainability, green competencies, practical example, tourism product, values of sustainability.

ABSTRACT

The geopolitical and socio-economic reality of 2025 calls for ecological and environmental transition to be taken seriously. The ecological transition is aimed at establishing a new economic, cultural and social system that will society more sustainable. The United Nations Agenda paves the way for the achievement of the Sustainable Development Goals by 2030. The 17 goals fall into three groups of values: economic, social and environmental. Environmental transition means systemic changes in the way we produce and consume, as society must move towards a more sustainable and resilient economy.

To overcome these challenges, the European Green Deal is a new European growth strategy that aims to transform the Union into a modern, resource-efficient and competitive economy. The European Commission helps EU Member States to design and implement reforms that support

the green transition with the necessary legal framework, recommendations, instruments and methodologies. The article presents an example of participatory education for sustainability in the field of tourism: green competencies in the context of sustainable development values were taken into account in the development of learning and training competencies for tourism management. The first set of green competencies represents responsibility for sustainable values, the second set of green competencies served to verify understanding of environmental and socio-social problems, the third set to reflect on the consequences of actions (i.e., results) and the fourth set to empower sustainable action. The added value of the analysis in the practical example is that the values of sustainable development are taken into account when planning opportunities for the development of tourism products.

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Short BIO

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SCHOOL LEARNING GARDENS AS OPEN LEARNING SPACES FOR ALL GENERATIONS

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Keywords: school gardens, education, intergenerational learning, self-sufficiency.

ABSTRACT

In times of global challenges such as climate change, environmental degradation, and social alienation, education for sustainable development has become a key tool for change. One of the most effective approaches to shaping sustainable values in children is to foster an early connection with the natural environment. For this reason, integrating nature into educational processes is more important than ever. School learning gardens are among the most powerful tools to offer children direct contact with nature while simultaneously creating a space for active learning, cooperation, and responsibility.

For decades, the development of learning gardens in kindergartens and primary schools has been supported in many regions across the world, including in our local context. These projects involve children, educators, and parents in meaningful collaboration, which strengthens community bonds and raises awareness of the importance of self-sufficiency. Gardens are becom-

ing experiential learning spaces where children acquire competencies for sustainable development and where intergenerational cooperation can naturally flourish. Learning gardens are much more than just areas where children plant, water, and harvest crops. They are complex educational environments that enable the development of numerous skills—from planning and hands-on work to critical thinking, research, and teamwork. These are open-air laboratories where science, social studies, mathematics, and even art can be meaningfully integrated into real-life experiences.

Importantly, gardens are not limited to children—they invite the participation of people of all ages. Elderly individuals, such as grandparents or retired gardeners, can contribute their valuable knowledge, experience, and traditional cultivation methods. In this way, the learning garden becomes a platform for the transfer of knowledge that transcends the boundaries of formal education.

The pedagogical effects of school gardens are multifaceted. Beyond academic content—such as plant biology, the role of pollinators, seasonal cycles, soil, water, and weather—gardens also develop social and emotional competencies: responsibility, patience, care for living beings, teamwork, and respect for both nature and other people. Students acquire valuable experiential knowledge that is often difficult to achieve within a conventional classroom.

In addition, learning gardens nurture soft skills such as collaboration, communication, problem-solving, and innovation. A vital aspect of learning gardens is their potential to promote self-sufficiency. From a young age, children learn how food is grown, the value of local and seasonal production, composting, waste reduction, and

circular economy practices. Rather than being passive consumers, they learn to appreciate the effort behind food production and understand the need to care for the Earth.

Such learning promotes respect for food and natural resources—an especially important value in today's world, where global food chains are often unsustainable and disconnected from reality. At the same time, gardens serve as spaces for developing personal and collective resilience, an increasingly crucial ability in times of environmental and social crises.

A key element of the successful development of school gardens is the use of a bottom-up approach, rooted in the motivation and initiative of local communities. This means that gardens are not imposed by top-down directives but instead arise from the real needs and aspirations of teachers, children, parents, and the wider community.

This approach enables long-term sustainability, as it fosters a sense of ownership and responsibility among participants. When children, educators, and families jointly plan, create, and maintain a garden, they develop deep bonds that go far beyond the classroom. Simultaneously, social cohesion in the community strengthens through cooperation and shared goals.

Learning gardens have enormous value as intergenerational spaces. In many cases, elderly individuals—including grandparents, local horticulturists, and members of senior associations—actively participate in garden activities, sharing traditional techniques and personal stories. Children learn first-hand from these elders, gaining practical advice and life wisdom while developing a deep respect for older generations.

This exchange is never one-sided: older adults also

benefit from the energy and creativity of children, often learning new perspectives and digital skills. The learning garden thus becomes a space for mutual growth and dialogue—a rare opportunity for generations to meet and work toward a common vision of the future. One of the most transformative effects of school learning gardens is their ability to connect people. Schools that implement gardens often report greater parental involvement, improved collaboration among teachers, and stronger engagement with the wider community. The garden becomes a hub of activity, ideas, and celebration—from group workdays to harvest festivals. Community-based learning that takes place in the garden has long-term positive effects: it builds trust, encourages mutual support, and lays the groundwork for more resilient and inclusive communities. In an era of social fragmentation and digital isolation, this kind of reconnection is invaluable.

Over the past decades, our organization has participated in the establishment of more than 50 school and preschool learning gardens. Each of them has its own unique story, specific features, and learning focus, but all share the same core values: cooperation, respect for nature, experiential learning, and openness to all generations. Some notable examples of good practice include:

- A rural primary school garden, where children work together with parents and local farmers to cultivate traditional crops while exploring biodiversity and soil health.
- An urban school garden, created on a once-abandoned concrete courtyard, now thriving through the efforts of students, teachers, retirees, and a local permaculture group.

- A sensory garden at a kindergarten, where children engage with nature through smell, touch, sound, and color—while also interacting with elderly residents from a nearby care home.

In all of these cases, the garden is far more than just a place to grow food—it is a comprehensive learning environment that fosters sustainability, critical thinking, and community spirit.

Learning gardens are a powerful integrative element within the education system. They combine formal and informal learning, theory and practice, science and humanities, children's creativity and adult wisdom. These are spaces where local development, sustainability education, social equity, and civic engagement converge. In addition, school gardens often become part of wider networks and international projects, such as Erasmus+, eTwinning, or regional garden networks. These collaborations expand learning opportunities and foster the exchange of best practices among schools and communities.

School learning gardens are not just a tool for better education—they are the seeds of change. They represent a tangible response to many of today's complex problems: climate change, social isolation, food insecurity, and the loss of practical knowledge. They symbolize a return to essential values: connection with nature, collaboration, and responsible resource management. In a society striving for a fairer, greener, and more inclusive future, school learning gardens have a vital role to play. Like any seed, they require care, space, and time—but once they take root, they have the potential to grow into vast forests of knowledge, solidarity, and hope.

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Short BIO

Prof. dr. **Ana Vovk**, full professor at the University of Maribor, is an internationally renowned expert in sustainability, permaculture and holistic self-sufficiency based on the geographical characteristics of landscapes. Her research includes ecosystem-based solutions to climate change, soil and water conservation. As a project manager at the International Centre for Ecoremediation, she develops innovative models for sustainable living and works with municipalities to introduce natural ways of managing space. Her

publications in scientific journals, books and media contributions highlight the importance of integrated approaches. She is actively involved in educational programmes, leading workshops, conferences and excursions, and encouraging students to explore self-sustainable living models. Her efforts link academic knowledge with practice for a more sustainable future.



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