URBANI IZZIV

Revija *Urbani izziv* je namenjena razširjanju znanstvenih in strokovnih dognanj ter obravnavi problemov urejanja prostora. Na leto izideta dve številki. Prva številka izide junija, druga decembra. *Urbani izziv* se vsebinsko deli na dva dela. Prvi (daljši) del se imenuje »Članki«. V njem so objavljeni izvirni in pregledni znanstveni članki, kratki znanstveni prispevki in strokovni članki. Članki, ki so objavljeni v tem delu revije, so recenzirani. Drugi (krajši) del se imenuje »Predstavitve in informacije« in je namenjen objavi recenzij, predstavitvam (na primer knjig, projektov, dogodkov, predavanj, konferenc in podobno), knjižničnim informacijam in podobno. Prispevki, ki so objavljeni v tem delu revije, niso recenzirani. *Urbani izziv* je dvojezična revija – vsi prispevki so objavljeni v slovenskem in angleškem jeziku. Povzetki in polna besedila člankov so vključeni v slovensko podatkovno zbirko COBISS in slovensko digitalno knjižnico dLib.si ter v mednarodne bibliografske baze SCOPUS Elsevier, ERIH PLUS, EBSCOhost (Art & Architecture Complete, Academic Search Complete), ESCI (Clarivate Analytics), ProQuest (ProQuest Central), CEEOL (Central and Eastern European Online Library), IBSS (Intenational Bibliography of Social Sciences), IBZ (International Bibliography of Periodical Literature in the Humanities and Social Sciences), GEODOK (Geographic Literature Database), EZB (Electronic Journals Library), CGP (Current Geographical Publications), ICONDA (International Construction Database), DOAJ (Directory of Open Access Journals), OCLC (Online Computer Library Center), Ulrich's Periodicals Directory, Academic Journals Database, Sciencegate, Index Copernicus International, J-Gate in Genamics JournalSeek. Revija je vpisana v razvid medijev, ki ga vodi Ministrstvo za kulturo Republike Slovenije, pod zaporedno številko 595. Revija izhaja s podporo Javne agencije za raziskovalno dejavnost Republike Slovenije.

Urbani izziv ("Urban Challenge") is intended for the dissemination of research and technical information as well as the discussion of issues relating to spatial planning. The journal is published twice a year. The first issue is published in June, and the second in December. *Urbani izziv* is divided into two parts. The first (longer) part is titled "Articles" and includes original research, review articles, short studies and technical studies. Articles in this part of the journal are subject to blind peer review. The second (shorter) part of the journal is titled "Reviews and information" and contains reviews, announcements (e.g., announcements of books, projects, events, lectures, conferences, etc.), library information and other material. The material published in this part of the journal is not peer-reviewed. The journal is published in two languages: all contributions are published in Slovenian and English. Abstracts and full texts of articles are included in the Slovenian COBISS database and the Digital Library of Slovenia (dLib.si), as well as in the international bibliographic databases SCOPUS Elsevier, ERIH PLUS, EBSCOhost (Art & Architecture Complete, Academic Search Complete), ESCI (Clarivate Analytics), ProQuest (ProQuest Central), CEEOL (Central and Eastern European Online Library), IBSS (Intenational Bibliography of Social Sciences), IBZ (International Bibliography of Periodical Literature in the Humanities and Social Sciences), GEODOK (Geographic Literature Database), EZB (Electronic Journals Library), CGP (Current Geographical Publications), ICONDA (International Construction Database), DOAJ (Directory of Open Access Journals), OCLC (Online Computer Library Center), Ulrich's Periodicals Directory, Academic Journals Database, Sciencegate, Index Copernicus International, J-Gate and Genamics JournalSeek. *Urbani izziv* is registered in the media register kept by the Ministry of Culture of the Republic of Slovenia under serial number 595. The journal is subsidised by the Slovenian Research Agency.

Kazalo

Uvodnik

Članki

Recenzije in predstavitve

Contents

Editorial

Articles

Reviews and information

Vizije in strategije

Strateško načrtovanje se včasih zdi nepotrebno in preveč nedorečeno, da bi sploh bilo uporabno. Vsaj v prostorskem načrtovanju. A brez jasne usmeritve o želenem prihodnjem stanju v prostoru nas izvedbeni projekti odnašajo v zelo različne smeri. Čemu v prostoru, ki je omejena dobrina, dati prednost? Poselitvi, kmetijstvu, umeščanju obnovljivih virov energije, razvoju turizma ali ohranjanju narave? Ob takih dilemah in prostorskih konfliktih se lahko z jasno vizijo, ki ji sledi tudi strategija za njeno doseganje, v družbi (mestu, občini, regiji, državi) hitreje oblikujejo ustrezni odgovori na različne razvojne težnje in pobude.

V medijih prevladujejo slabe novice in v času, ko se pričakuje hitra odzivnost na vse svetovne dogodke, se energetska kriza kaj hitro pokaže v podobi slovenske vasi, v kateri so vse strehe prekrite s fotovoltaičnimi celicami, prehranska kriza pa v skrbno izkoriščenem domačem vrtu in balkonu, polnem sadik paradižnikov.

Taki časi kličejo po oblikovanju vizij z jasnim pogledom v prihodnost, na temelju vrednot in vključevanja gospodarstva, okolja, družbe in kulture. Pri tem je s sodelovanjem prebivalcev ključen postopek, ki nam omogoča, da smo vizionarji in idealisti, in nazadnje vodi do tega, da vizijo sprejmejo vsi deležniki. Dolgoročno pa nas usmerja do boljše družbe in okolja. Za navdih o tem priporočam članek, ki predstavlja vizije prihodnosti slovenskih in hrvaških mest*.

V junijski številki *Urbanega izziva* si poleg omenjenega članka o strateškem urbanističnem načrtovanju lahko preberete še članek o trajnostnem razvoju mest v Kazahstanu, članek o stanju zelene infrastrukture in povezanosti z naravo v Lagosu v Nigeriji ter članka slovenskih avtorjev o prenovi razvrednotenih območij in dostopnosti javnega potniškega prometa. Tokratno izdajo končuje recenzija knjige o (ekonomskih) posledicah migracij in neenakosti v svetu.
Prijetno in poučno branje vam želim.

Damjana Gantar, glavna urednica

* Glej članek Poljak Istenič, S., in Gulin Zrnić, V., objavljen v tej številki *Urbanega izziva.*

Visions and strategies

Strategic planning sometimes seems unnecessary and too vague to be of any use, at least in spatial planning. However, without a clear orientation toward a desired future spatial arrangement, implementation projects can take us in very different directions. What should be given priority in space, which is a limited resource? Settlement, agriculture, renewable energy sources, tourism, or nature conservation? When faced with such dilemmas and land-use conflicts, a clear vision supported by a strategy for how to achieve it can be used to suitably respond to various developmental tendencies and initiatives in society (a city, municipality, region, or country). The media are dominated by bad news and, in a time when a rapid response to various developments across the globe is expected, an energy crisis may very well manifest in a Slovenian village with solar panels on all the roofs, or a food crisis in a well-maintained home garden or a balcony covered in potted tomatoes.

Times like these call for visions with a clear view into the future that are based on values and the integration of the economy, environment, society, and culture – ones that are developed together with residents, in a process that allows them to be visionaries and idealists, and leads to the vision being accepted by all. In the long run, such visions also direct us toward a better society and environment. For more inspiration on this subject, I recommend reading the article that discusses the visions of future (Slovenian and Croatian) cities.*

In addition to this article on strategic urban planning, the June issue of Urbani izziv also features an article on sustainable urban development in Kazakhstan and an article on the current state of green infrastructure and connectedness with nature in Lagos, Nigeria, along with two articles by Slovenian authors discussing brownfield redevelopment and public transport accessibility. The issue concludes with a review of a book on the (economic) effects of migration and inequality across the globe. I wish you pleasant and informative reading.

Damjana Gantar, Editor-in-Chief

* See the article by Poljak Istenič and Gulin Zrnić in this issue of *Urbani izziv*.

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Proučevanje trajnostnega razvoja mest: primer večjih mest v Kazahstanu

Ugotavljanje primerjalne ravni trajnostnega razvoja mest ima pomembno vlogo pri oblikovanju njihove trajnostne prihodnosti. V članku avtorji na podlagi geografske podatkovne baze, izdelane ob podpori geografskega informacijskega sistema, proučujejo trajnostni razvoj 17 največjih mest v Kazahstanu med letoma 2007 in 2019. Izsledki njihove raziskave kažejo, da nobeno od proučevanih mest ni doseglo stopnje trajnostnega razvoja, ki bi bila po indeksu trajnostnega razvoja mest enaka ali višja od 0,750, hkrati pa nobeno ni doseglo stopnje razvoja, nižje od 0,300. Vseh 17 mest so zato avtorji ocenili kot zmerno trajnostne. V prihodnjih raziskavah bodo proučevali, kako lahko še izboljšajo sistem proučevanja trajnostnosti mest v Kazahstanu.

Ključne besede: trajnostni razvoj mest, geografska podatkovna baza, kazalniki trajnostnega razvoja, indeks trajnostnega razvoja mest, Kazahstan

1 Uvod

Kazahstan se je zavezal, da bo izpolnil naloge, opredeljene v Agendi 21, ki je bila leta 1992 sprejeta v Riu de Janeiru (Organizacija združenih narodov, 1993), ter deklaracijah, sprejetih leta 2000 na milenijskem vrhu v New Yorku in leta 2002 na svetovnem vrhu OZN o trajnostnem razvoju v Johannesburgu. Država je, da bi dosegli cilje trajnostnega razvoja, uvedla številne ukrepe. Je članica Komisije Združenih narodov za trajnostni razvoj, poleg tega aktivno sodeluje v procesih Okolje za Evropo in Environment and Sustainable Development for Asia (Okolje in trajnostni razvoj za Azijo) ter regionalni evrazijski mreži Svetovnega gospodarskega sveta za trajnostni razvoj.

S sprejetjem Agende za trajnostni razvoj do leta 2030 so se svetovni voditelji zavezali, da bodo odpravili revščino, ohranili planet za prihodnje generacije ter ustvarili miroljubno in vključujočo družbo, s čimer bodo zagotovili, da bodo vsi ljudje živeli človeka vredno življenje v blaginji. Kazahstan je podprl izpolnjevanje ciljev trajnostnega razvoja, saj so se usmeritve navedene listine OZN v celoti ujemale z njegovimi prednostnimi nalogami in cilji, opredeljenimi v strategiji Kazahstan 2050, državnem načrtu 100 konkretnih korakov za uvedbo petih institucionalnih reform (ang. *100 Concrete Steps to Implement Five Institutional Reforms*), petih socialnih pobudah predsednika države in programu Rukhani Zhangyru (Duhovni preporod).

Leta 2016 je odbor za gradnjo, stanovanja in komunalno opremo pri kazahstanskem ministrstvu za nacionalno gospodarstvo objavil nacionalno poročilo o stanovanjih in trajnostnem razvoju mest HABITAT III (Committee for construction, housing, and utilities infrastructure, 2016), ki se je osredotočalo na zadeve, povezane s trajnostnim razvojem naselij, vključno z demografskimi problemi, prostorskim načrtovanjem, okoljskimi vprašanji in urbanizacijo, zakonodajo s področja upravljanja regionalnega razvoja in urbanim gospodarstvom. Poleg tega so bili v poročilu opredeljeni glavni izzivi in nevarnosti na navedenih področjih ter možni načini doseganja dolgoročnega trajnostnega razvoja naselij in stanovanj.

1. januarja 2022 je v Kazahstanu živelo skupno 19.125.600 ljudi, od tega 59,4 % v mestih. V državi je 87 mest, delež mestnega prebivalstva pa se je med letoma 1991 in 2022 povečal za 2,1 %. V raziskavi so avtorji analizirali kazalnike trajnostnega razvoja 17 največjih mest, med katerimi so tri državnega
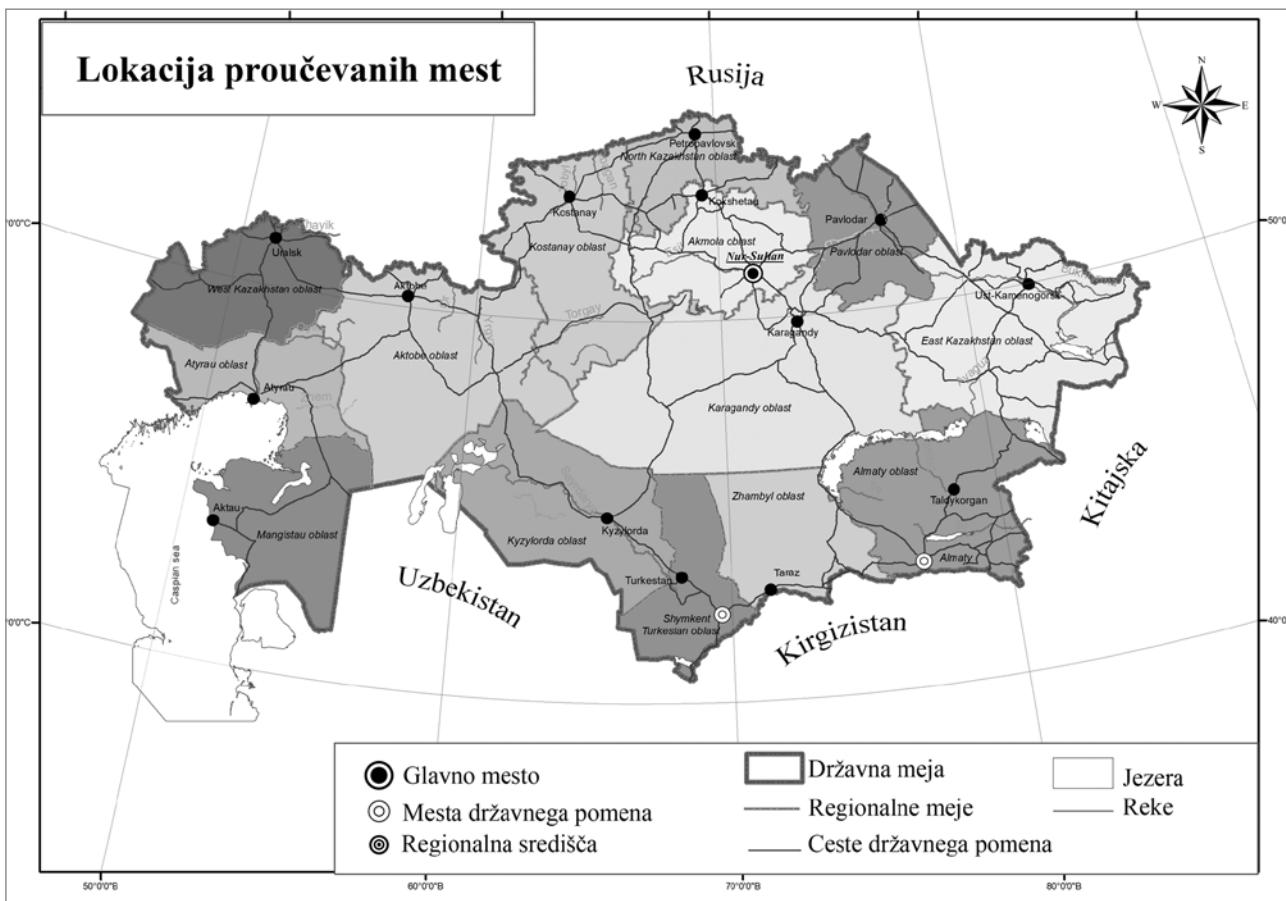
Slika 1: Lokacije proučevanih mest (ilustracija: avtorji)

Preglednica 1: Prebivalstvo proučevanih kazahstanskih mest leta 2019

Do 250.000	250.000–500.000	500.000–1.000.000	Več kot 1.000.000
Aktau	Aktobe	Shymkent	Almaty
Kokshetau	Atyrau	Karaganda	Nursultan
Kostanay	Kyzylorda		
Petropavl	Pavlodar		
Taldykorgan	Taraz		
	Oral		
	Oskemen		
	Turkistan		

Vir: Državni statistični urad Republike Kazahstan (2020)

pomena, 14 pa jih opravlja funkcijo regionalnega upravnega središča (slika 1). Mesta državnega pomena so tista, ki imajo za državo poseben pomen ali imajo več kot milijon prebivalcev (3. člen zakona o upravno-teritorialni zgradbi Kazahstana iz leta 2017). Omenjenih 17 mest je bilo izbranih na podlagi uradnih statističnih podatkov za obdobje 2007–2019, pridobljenih iz uradnih evidenc, ki zagotavljajo najbolj popolne podatke, zlasti za mesta državnega pomena in regionalna upravna središča. Približno 44,9 % vseh prebivalcev in 77,2 % mestnih prebivalcev v državi je zgoščenih v teh 17 mestih (preglednica 1). Prebivalstvo glavnega mesta Nursultan hitro narašča: od leta 1997 (ko je pridobilo status prestolnice) se je število njegovih prebivalcev povečalo za skoraj 950.000.

Uradni statistični podatki o glavnih gospodarskih, demografskih in okoljskih kazalnikih za preostalih 70 mest ne omogočajo obsežnih raziskav o doseganju ciljev trajnostnega razvoja. Zanimanje, da bi se kazahstanska mesta razvijala trajnostno, je čedalje večje, in sicer tako pri njihovih upravah kot prebivalcih, ki jih zanimajo novi urbanistični pristopi, ki se osredotočajo ne samo na gospodarsko rast, ampak tudi na izboljšanje kakovosti življenja in družbeno blaginjo prebivalcev. Pomembna naloga pri razvoju mest je povečati njihovo privlačnost s poslovnega vidika ter z vidika prijetnega življenja prebivalcev in racionalne porabe mestnih virov.

Avtorji so trajnostni razvoj proučevanih mest analizirali tako, da so izračunali skupne indekse na podlagi 27 kazalnikov, razdeljenih v tri sklope: gospodarskega, okoljskega in socialnega. Na podlagi ekonomske in geografske analize so ugotavljali stopnjo doseženih kazalnikov trajnostnega razvoja v proučevanih mestih med letoma 2007 in 2019. Analiza temelji na hipotezi, da bi se morali kazalniki ciljev trajnostnega razvoja ob izvajanju državne politike urbanega razvoja v državi, ki podpira trajnostni razvoj, izboljšati. V primerjavi z drugimi proučevanimi mesti bi morala Nursultan (glavno mesto) in Almaty (finančno in znanstveno središče države) pričakovano imeti visoko raven trajnostnega razvoja.

2 Pojmi, povezani s trajnostnostjo mest

Avtorji proučujejo trajnostni razvoj največjih kazahstanskih mest na podlagi prostorske geografske podatkovne zbirke, izdelane z uporabo geografskega informacijskega sistema. Njihov glavni cilj je izdelati informacijsko bazo gospodarskih in okoljskih kazalnikov za navedena mesta, opredeliti načine doseganja ciljev trajnostnega razvoja in ugotoviti, kakšni so napovedi za njihov razvoj v prihodnosti. Izraz *trajnostni razvoj* je bil prvič uporabljen leta 1987 v poročilu Our Common Future (Naša skupna prihodnost), ki ga je objavila Svetovna komisija za okolje in razvoj (WCED). V njej je bil trajnostni razvoj opredeljen kot človekova dejanja, ki ohranjajo ravnovesje med človeškimi potrebami in okoljem ter med sedanjimi in prihodnjimi človeškimi potrebami (WCED, 1987).

Za boljše razumevanje pojma *trajnostnost* pri proučevanju mest je treba upoštevati pomen trajnostnega razvoja mest (Dizdaroglu in Yigitcanlar, 2016). Gre za proces sprememb, pri katerem se izkoriščanje virov, smer naložb, tehnološki razvoj in institucionalne spremembe ujemajo s sedanjimi in prihodnjimi potrebami (WCED, 1987). Izraz *trajnostno mesto*, ki se je razširil v 90. letih 20. stoletja (Roy, 2009), se nanaša na povezavo med gospodarskimi, socialnimi in okoljskimi vidiki trajnostnega razvoja ter na kombinacijo kazalnikov za vsakega izmed teh vidikov (Ahvenniemi idr., 2017; Medeiros in Van der Zwet, 2020; Svirčić Gotovac idr., 2021). Na podlagi navedenih vidikov so Hiremath idr. (2013) trajnostni razvoj mest opredelili kot doseganje ravnovesja med razvojem mest in varovanjem okolja, pri čemer sta zagotovljeni enakost dohodkov ter enakost pri dostopu do zaposlitve, stanovanj, osnovnih storitev, družbene infrastrukture in prometa na mestnih območjih.

Proučevanje trajnostnosti omogoča boljše razumevanje in opredelitev trajnostnosti mest. Na voljo je ogromno virov za proučevanje trajnostnosti po sektorjih in po ravneh, poleg tega je čedalje več raziskav, ki se osredotočajo na proučevanje mestnih območij. Na ravni mest proučevanje trajnostnosti

običajno vključuje opredelitev in merjenje kazalnikov ter objavo dokumentov s številnimi kazalniki (Xing idr., 2009; Boyko idr., 2012; Zhou idr., 2012; Ameen idr., 2015; Mudau idr., 2020). Vzpostavljeni so najrazličnejši sistemi proučevanja trajnostnosti (Olalla-Tarraga, 2006). Tovrstno proučevanje pogosto temelji na opredelitvi in merjenju kazalnikov, izbor kazalnikov za proučevanje trajnostnosti mest pa običajno nima teoretične podlage, saj se avtorji osredotočajo predvsem na državno in svetovno raven (Sumner, 2004; Davidson, 2011; Davidson idr., 2012; Chesson, 2013; Moyer in Hedden, 2020).

Trajnostni razvoj temelji na treh glavnih sklopih: socialnem, gospodarskem in okoljskem. Vsaka država ima svoje socialne in gospodarske značilnosti ter vsaka regija ima svoje okoljske naloge. Trojna narava koncepta trajnostnega razvoja ne pomeni samo, da je trenutno pomembno, da se zbere več podatkov o negativnem vplivu okolja na človekovo zdravje, ampak je treba opraviti tudi celostno analizo vzrokov in posledic, ki se pojavljajo v odnosu človeka do njegovega življenjskega okolja. Številne države in skupine znanstvenikov v okviru mednarodnih raziskovalnih inštitutov razvijajo kazalnike za proučevanje in spremljanje trajnostnega razvoja (Dizdaroglu, 2017).

Za merjenje kakovosti in trajnostnosti mestnih območij se je v okviru Programa Združenih narodov za okolje (UNEP) v sodelovanju s centrom GRID-Arendal začel izvajati poseben projekt. Za pripravo spletnih okoljskih poročil za posamezna mesta (ang. *Cities Environment Reports on the Internet*, CE-ROI) je bil uveden sistem kazalnikov stanja okolja, ki omogočajo podrobno analizo posameznih problemov na mestnih območjih. Prvotni niz kazalnikov je bil razvit leta 1998. Švicarski sistem kazalnikov trajnostnega razvoja, imenovan MONET (nem. *Monitoring Nachhaltiger Entwicklung*), vključuje 80 kazalnikov, razdeljenih v 12 tematskih sklopov: bivalne razmere, zdravje, socialna kohezija, mednarodno sodelovanje, izobraževanje in kultura, raziskave in tehnologija, delo, gospodarski sistem, proizvodnja in potrošnja, mobilnost in promet, energetika in podnebje ter naravni viri. Sistem obvešča javnost o trenutnem stanju in smeri razvoja socialnih, gospodarskih in okoljskih vidikov trajnostnega razvoja v Švici (SFSO, 2019). Kitajski indeks trajnostnega razvoja mest, ki je bil leta 2010 razvit v okviru pobude Urban China Initiative (UCI), je sestavljen iz kazalnikov, ki omogočajo celovito proučevanje trajnostnega razvoja mest v štirih sklopih: gospodarstvo, družba, viri in okolje. Indeks je bogat vir podatkov za akademske raziskave, hkrati pa je kitajskim politikom v pomoč pri proučevanju nacionalnih prizadevanj na področju trajnostnega razvoja in oblikovanju urbanistične politike (UCI, 2019). Indeks ciljev trajnostnega razvoja ameriških mest (U.S. Cities SDG Index), za katerega podatke zbira skupina neodvisnih strokovnjakov sekretariata mreže SDSN (Sustainable Development Solutions Network), temelji na 44 kazalnikih, ki se nanašajo na 15 od 17

ciljev trajnostnega razvoja. Izbrani kazalniki so tesno povezani s kazalniki, ki jih je odobrila Statistična komisija Združenih narodov (Espey idr., 2018).

Indeks STAR (Sustainability Tools for Assessment and Rating) vključuje 21 kazalnikov, ki se nanašajo na osem ciljnih sklopov proučevalnega sistema STAR, ti so: naravni sistemi; grajeno okolje; podnebje in energetika; gospodarstvo in zaposlitev; izobraževanje, umetnost in skupnost; inovacije in postopki; enakost in opolnomočenje ter zdravje in varnost. Glavni kazalniki so navedeni na spletnem mestu, na katerem lahko ameriška mesta letno posodabljajo podatke o ključnih kazalnikih trajnostnega razvoja (STAR Communities, 2019). Mednarodno oblikovalsko in svetovalno podjetje Arcadis in Center za ekonomske in poslovne raziskave (CEBR) sta razvila indeks, ki se uporablja za proučevanje uspešnosti mest pri doseganju ciljev trajnostnega razvoja na podlagi socialnih, okoljskih in gospodarskih vidikov. CEBR na podlagi 32 kazalnikov proučuje trajnostnost stotih največjih mest na svetu. Mesta se proučujejo na podlagi treh vidikov trajnostnega razvoja, skupni indeks za posamezno mesto pa je enak povprečju vrednosti treh podindeksov za omenjene tri vidike (Arcadis, 2018). Med indeksi trajnostnega razvoja mest, ki jih razvijajo po svetu, je treba omeniti indeks mestne blaginje Programa Združenih narodov za naselja (UN-Habitat, 2013). Indeks združuje pet sklopov kazalnikov: produktivnost, kakovost življenja, razvoj infrastrukture, okoljska trajnost in enakost. Na podlagi proučevanja konstruktivnosti uporabljenega metodološkega pristopa je treba opozoriti na spornost dobljenih rezultatov in potrebo po izboljšanju indeksa (Cohen, 2017).

Ker so mesta kompleksni sistemi, povezani z edinstvenimi ekološkimi sistemi, in ker vsako mesto določajo drugačne kulturne in zgodovinske okoliščine, je med več sto ali celo tisoč kazalniki težko izbrati najustreznejše, na podlagi katerih bi lahko proučevali vsa mestna območja po svetu (Gonzalez idr., 2011). Zato je morda bolj smiselno, da se določi skupen okvir proučevanja trajnostnega razvoja mest na podlagi skupnih smernic, s katerimi se določijo merila in kazalniki za vsako mesto posebej. Učinkovitost kazalnikov trajnostnega razvoja se meri na podlagi treh vidikov: zanesljivosti, legitimnosti in pomena (Ciegis idr., 2009). Trajnostni razvoj je večplasten problem in vključuje veliko kompleksnih informacij. To količino informacij bi bilo treba pri oblikovanju piramide informacij, ki temelji na neobdelanih podatkih in pri kateri so indeksi na vrhu, sistematično zmanjšati v bolj zgoščeno obliko. Pri analizi in proučevanju stopnje trajnostnega razvoja večjih mest so bile upoštevane izkušnje vodilnih raziskovalnih skupin, organizacij in pobud, kot so PWC (Dolgikh in Antonov, 2015), Ernst & Young, Australian Conservation Foundation (ACF, 2010), Forum for the Future (2019) in Zelena prestolnica Evrope (Evropska komisija, 2022).

Od leta 2012 ruska agencija za upravljanje trajnostne rasti enkrat letno proučuje trajnostni razvoj ruskih mest z več kot 100.000 prebivalci, pri čemer uporablja svoj indeks trajnostnega razvoja mest, ki upošteva gospodarske, socialne in okoljske vidike (SGM Agency, 2016). Proučenih je bilo 185 ruskih mest, v katerih živi skupno 78,4 milijona ljudi ali 78 % vseh mestnih prebivalcev v državi (v Rusiji je skupno 1.112 mest). Agencija uporablja tudi skupni kazalnik – indeks trajnostnega razvoja mest, tega izračuna na podlagi 42 statističnih kazalnikov, ki se nanašajo na že omenjene tri glavne vidike trajnostnega razvoja mest. Kazalniki za vsako sestavino izražajo različne vidike razvoja mest: stopnjo in kakovost gospodarske osnove mesta, stanje komunalne, tehnične in socialne infrastrukture, stanje prebivalstva, strukturo delovne sile in stanje okolja.

Večina opisanih načinov proučevanja trajnostnega razvoja se nanaša samo na velika mesta, pri čemer je poudarek na teh kazalnikih: zadovoljevanje osnovnih potreb prebivalcev, kakovost življenja, stanje okolja, varstvo okolja, racionalna poraba virov, razvoj infrastrukture, učinkovitost upravljanja in možnosti za trajnostni razvoj v prihodnosti. Ponekod se poleg statističnih podatkov uporabljajo tudi izsledki socioloških raziskav in rezultati drugih proučevanj.

V Kazahstanu primanjkuje raziskav o trajnostnosti urbaniziranih območij in mest. Opravljenih je bilo nekaj ekonomskih raziskav posameznih mest in regij. Za mesto Almaty je bil razvit načrt trajnostnega razvoja (Zhumaeva, 2007), proučevali pa so tudi stopnjo dosežene trajnostnosti v navedenem mestu. Alibekova idr. (2018) so ugotovili, da se indeks njegovega trajnostnega razvoja zvišuje. Leta 2016 je razvoj Almatja postal trajnosten zaradi visoke ravni trajnostnosti njegovega gospodarskega in socialnega podsistema, njegov okoljski podsistem pa je še vedno kazal znake netrajnostnega razvoja. Raziskave, ki so jih opravili ekonomisti, so se osredotočale na kazahstanska industrijska območja. Med drugim so z uporabo Lorenzove metode izračuna koeficienta koncentracije proučevali družbenogospodarsko trajnostnost kazahstanskih naftnih območij, pri čemer so upoštevali tudi prispevek vsakega kazalnika k trajnostnemu razvoju. Izračuni so temeljili na devetih družbenogospodarskih in petih okoljskih kazalnikih (Yeleusizova, 2008). Ignatyeva (2010) je razvila konceptualni model trajnostnega razvoja regije Vzhodni Kazahstan. Na podlagi svoje metodologije proučevanja rabe naravnih virov, proizvodnje in potenciala delovne sile je izračunala skupni indeks trajnostnega razvoja navedene regije. Karimbergenova (2014) je na podlagi desetih socialnih, sedmih gospodarskih in treh okoljskih kazalnikov proučevala trajnostni razvoj industrijske regije Pavlodar v primerjavi z industrijskima regijama Vzhodni Kazahstan in Karagandy. Za Kazahstan so pomembne podrobne ekonomske in geografske raziskave, ki temeljijo na mednarodnih teoretič-

nih in metodoloških izsledkih s področja strateškega načrtovanja in inovativnega trajnostnega razvoja mest.

Na poti k trajnostnemu razvoju kazahstanska mesta izvajajo projekte, kot so EXPO-2017: Energy of the Future, Industrialization 4.0 in Digital Kazakhstan. Na državni ravni so določili štiri med seboj povezane naloge, ki omogočajo doseganje ciljev trajnostnega razvoja: zagotavljanje dolgoročnega trajnostnega gospodarskega razvoja mest, vzpostavljanje podpornega okolja in trajnostne infrastrukture, razvoj socialnega vidika trajnostnega razvoja in kakovosti življenja mestnih prebivalcev ter izboljšanje sistema upravljanja mest. V skladu z mednarodnimi izkušnjami na področju načrtovanja trajnostnega razvoja mest so bili opredeljeni številni kazalniki tovrstnega razvoja ter njihove ciljne vrednosti za gospodarski, socialni in okoljski sklop (CSDC, 2019).

3 Gradivo in metode

Avtorji so v raziskavi uporabili uradne podatke statističnega odbora kazahstanskega ministrstva za gospodarstvo, statističnih oddelkov mestne uprave v Almatyju in Nursultanu ter regionalnih statističnih uradov. Prostorsko analizo kazalnikov so izvedli na podlagi statističnih podatkov za večja kazahstanska mesta za obdobje 2007–2019. Za obdelavo podatkov so uporabili informacijsko-analitični sistem Taldau in programsko orodje ArcGIS 10.2. Metodologija proučevanja trajnostnega razvoja izbranih mest je vključevala najširši možni izbor kazalnikov trajnostnega razvoja mest.

Faze proučevanja trajnostnega razvoja mest so bile:
- pregled mednarodnih dognanj v zvezi z oblikovanjem skupnih indeksov trajnostnega razvoja mest,
- izbor najprimernejših kazalnikov za kazahstanska mesta,
- razdelitev izbranih 27 kazalnikov v pet skupin in tri sklope,
- zbiranje primarnih statističnih podatkov za 17 proučevanih mest,
- izračun standardiziranih vrednosti vsakega izmed 27 kazalnikov z metodo linearnega skaliranja,
- določitev celostnega kazalnika (podindeksa) za vsako izmed petih skupin kazalnikov na podlagi izračuna povprečja njihovih standardiziranih vrednosti,
- določitev indeksov trajnostnega razvoja mest (ITRM) na podlagi podindeksov vsake skupine kazalnikov ob upoštevanju utežitvenih faktorjev,
- oblikovanje tipologije mest glede na njihovo stopnjo trajnostnega razvoja (ITRM) za leti 2007 in 2019.

3.1 Proučevanje trajnostnosti mest na podlagi kazalnikov

Za analizo in proučevanje stopnje trajnostnega razvoja večjih mest so avtorji izračunali skupni ali zbirni indeks ITRM. Izračunali so ga na podlagi 27 statističnih kazalnikov, obdelanih v prostorski geografski podatkovni bazi proučevanih mest za obdobje 2007–2019. Podatkovna baza je sestavljena iz treh sklopov: gospodarskega, okoljskega in socialnega. Vsak sklop vključuje pet skupin kazalnikov razvoja mest: stopnjo in kakovost gospodarske osnove mesta, stanje komunalne, tehnične in socialne infrastrukture, stanje prebivalstva, strukturo delovne sile in stanje okolja.

Večina mednarodnih indeksov trajnostnega razvoja se nanaša na posamezne države ali regije, pri čemer upošteva posebnosti njihovega razvoja in značilnosti nacionalnih sistemov zbiranja podatkov. Statistični odbor kazahstanskega ministrstva za gospodarstvo ne zagotavlja podatkov za številne statistične kazalnike, ki se uporabljajo v tujih indeksih. Kazalniki za proučevanje trajnostnega razvoja mest so bili zato izbrani na podlagi zdajšnjega sistema statističnih kazalnikov v državi. Izbor je temeljil na seznamu kazalnikov ruske agencije za upravljanje trajnostne rasti SGM, ki se uporabljajo za proučevanje trajnostnega razvoja ruskih mest. Zaradi pomanjkljivih statističnih podatkov o parametrih trajnostnega razvoja kazahstanskih mest in zamude pri njihovi uradni objavi so bili nekateri kazalniki izključeni. Izbrani kazalniki so prikazani na sliki 2.

3.2 Izračun indeksa

Skupni indeks za vsak kazalnik je bil izračunan z metodo linearnega skaliranja, zaradi česar so bili kazalniki merjeni na N-stopenjski lestvici, na kateri je vrednost 0 pomenila najnižjo stopnjo, vrednost N pa najvišjo stopnjo trajnostnega razvoja. V našem primeru je bila vrednost N enaka 1.
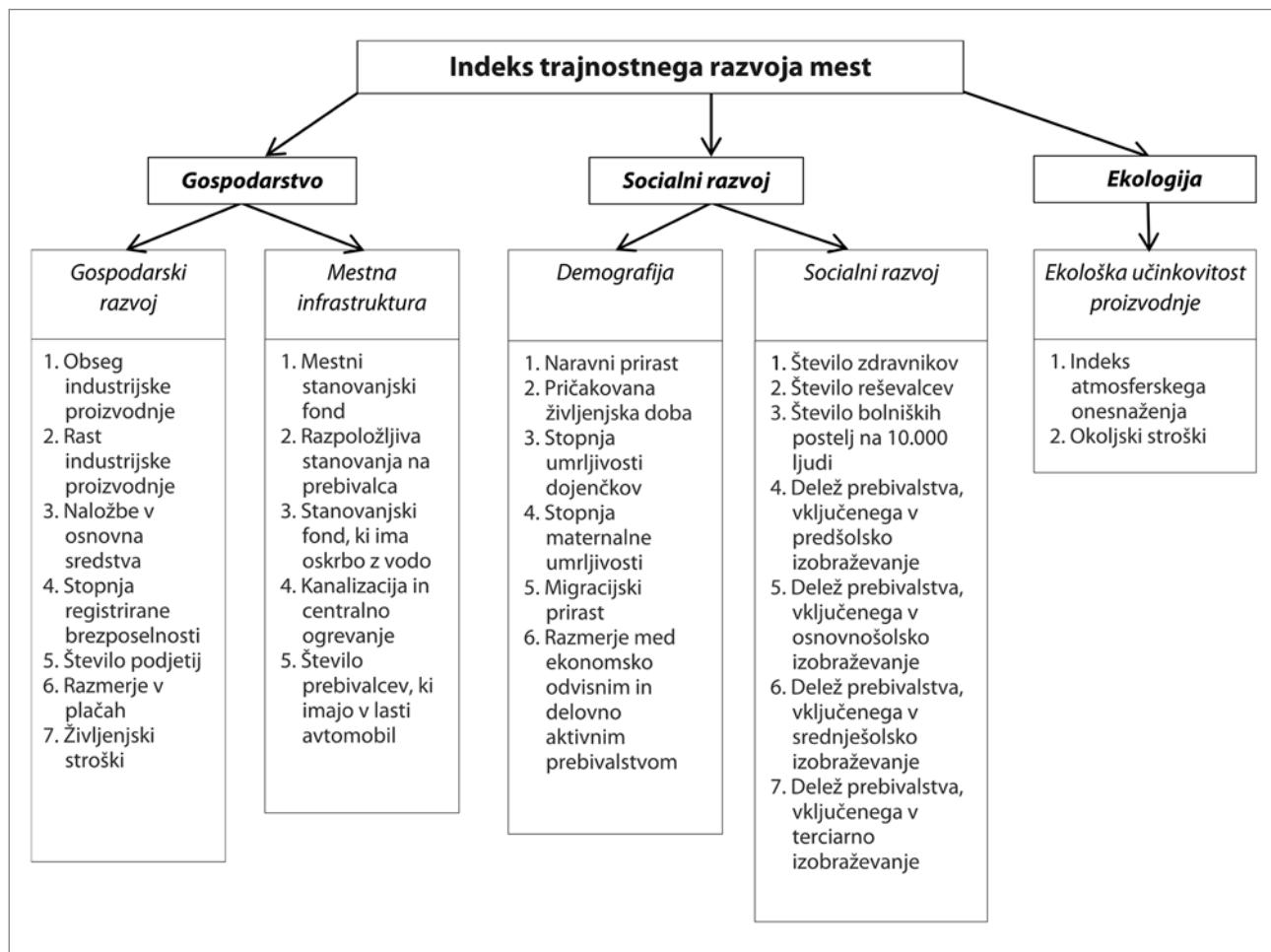
Slika 2: Kazalniki ITRM (ilustracija: avtorji)

Za pretvorbo sta bili uporabljeni naslednji dve enačbi (Tretyakov, 2004):

$$I_j^i = \frac{x_j^i - x_{\min j}}{x_{maxj} - x_{minj}},\qquad (1)$$

in

$$I_j^i = 1 - \frac{x_j^i - x_{\min j}}{x_{maxj} - x_{minj}},\qquad (2),$$

pri čemer je I_j^i standardizirana vrednost kazalnika j mesta i,
x_j^i je kazalnik j mesta i,
$x_{\min j}$ je najnižja vrednost kazalnika j in
x_{maxj} je najvišja vrednost kazalnika j.

Če je statistični kazalnik povezan s skupnim kazalnikom rastoče odvisnosti, se za pretvorbo uporabi enačba 1, če pa je povezan s skupnim kazalnikom padajoče odvisnosti, se uporabi enačba 2. Indeks trajnostnega razvoja mesta se določi na podlagi uteži vsake skupine kazalnikov in z uporabo naslednje enačbe (Denevizyuk, 2012):

$$I_{SUD} = w_1 I_1 + w_2 I_2 + w_3 I_3 + w_4 I_4 + w_5 I_5;\qquad (3),$$

pri čemer je I_n skupni kazalnik posamezne skupine kazalnikov,
w_n je koeficient uteži posamezne
skupine kazalnikov, pri čemer mora biti $w_n \geq 0$, $\sum_{wn} = 1$.

V skladu s primerjalno pomembnostjo kazalnikov in pomenom vsake skupine kazalnikov je bila kazalnikom pripisana ustrezna utež: gospodarski razvoj: 0,3, mestna infrastruktura: 0,1, demografija: 0,1, socialna infrastruktura: 0,3 in stanje okolja: 0,2 (Denevizyuk, 2012). Končni ITRM je bil določen na podlagi petih podindeksov za vsako skupino kazalnikov ob upoštevanju korektivnih uteži, izbranih na podlagi uveljavljenih metod. Koeficienti uteži, pripisani vsaki skupini, so temeljili na strokovnih ocenah ruskih in kazahstanskih geografov in ekonomistov, specializiranih za trajnostni razvoj.

4 Rezultati: tipologija in razvrstitev

Na podlagi izračunanih podindeksov za pet skupin kazalnikov so bile izdelane tipologije proučevanih mest. Mesta so bila razvrščena v tri tipe (trajnostna, zmerno trajnostna in netrajnostna), ki so bili razdeljeni v sedem podtipov glede na stopnjo trajnostnega razvoja (preglednica 2).

Gospodarski sklop je sestavljen iz dveh skupin kazalnikov: gospodarskega razvoja in mestne infrastrukture (slika 2). Tipologija mest glede na gospodarski razvoj je bila oblikovana

na podlagi podindeksov, izračunanih iz šestih kazalnikov za vsako mesto za obdobje 2007–2019. Na splošno so se kazalniki gospodarskega razvoja v proučevanem obdobju izboljšali. Na podlagi stopnje gospodarskega razvoja so bila vsa mesta razvrščena v različne podtipe zmerno trajnostnega tipa. Kljub znižanju vrednosti kazalnikov (z 0,642 leta 2007 na 0,613 leta 2019) je bila v proučevanem obdobju samo za mesto Aktau značilna skoraj trajnostna stopnja gospodarskega razvoja. Mesta Pavlodar (zvišanje vrednosti kazalnikov z 0,446 na 0,521), Kokshetau (z 0,420 na 0,464), Kostanay (z 0,415 na 0,475), Karaganda (z 0,390 na 0,485) in Petropavl (z 0,382 na 0,460) so leta 2007 spadala v podtip mest z netrajnostnimi znaki, leta 2019 pa so napredovala v trajnostni podtip. V preostalih mestih je vidno rahlo izboljšanje vrednosti kazalnikov, ki tvorijo indeks gospodarskega razvoja.

Izračun podindeksov glede na stopnjo razvoja mestne infrastrukture je temeljil na petih kazalnikih proučevanih mest v obdobju 2007–2019. Analiza omenjenih kazalnikov je pokazala precejšnje izboljšanje v proučevanem obdobju. Tako so bila mesta Pavlodar (izboljšanje vrednosti kazalnikov z 0,704 na 0,762), Aktau (z 0,659 na 0,830) in Atyrau (z 0,602 na 0,766) leta 2007 uvrščena v podtip skoraj trajnostnih mest, leta 2019 pa so napredovala v trajnostni podtip. Mesto Oral se je iz mesta s povprečnim trajnostnim razvojem razvilo v trajnostno mesto, pri čemer so se vrednosti njegovih kazalnikov povečale z 0,582 na 0,773. Precejšnje izboljšanje je vidno tudi v Turkistanu, ki se je iz mesta z netrajnostnimi znaki razvilo v mesto s povprečnim trajnostnim razvojem (vrednost kazalnikov se je izboljšala z 0,391 leta 2007 na 0,531 leta 2019).

Tipologija mest glede na demografijo je bila oblikovana na podlagi šestih kazalnikov. V proučevanem obdobju so mesta izboljšala svoj demografski razvoj. Vrednosti kazalnikov vseh mest so ustrezale povprečni in skoraj trajnostni stopnji trajnostnega razvoja.

Preglednica 2: Razvrstitev glede na stopnjo trajnostnega razvoja

Tipi	Razpon vrednosti	Podtip glede na stopnjo trajnostnega razvoja
Trajnostna	≥ 0,900	Zelo trajnostna
	0,750–0,899	Trajnostna
Zmerno trajnostna	0,600–0,759	Skoraj trajnostna
	0,450–0,599	Povprečno trajnostna
	0,300–0,449	Mesta z netrajnostnimi znaki
Netrajnostna	0,150–0,299	Netrajnostna
	< 0,150	Mesta v kritičnem stanju

Vir: avtorji na podlagi Gashu in Gebre-Egziabher (2019) ter Golovanov (2015)

Preglednica 3: Tipologija večjih kazahstanskih mest glede na stopnjo trajnostnega razvoja, 2007–2019

Tipi	Podtipi	2007	2019
Trajnostna	Zelo trajnostna		
	Trajnostna		
	Skoraj trajnostna	Aktau (0,672)	Atyrau (0,613)
		Atyrau (0,667)	Almaty (0,635)
			Nursultan (0,621)
			Pavlodar (0,612)
Zmerno trajnostna	Povprečno trajnostna	Nursultan (0,593)	Oskemen (0,594)
		Almaty (0,559)	Aktau (0,585)
		Kostanay (0,534)	Oral (0,565)
		Pavlodar (0,526)	Aktobe (0,556)
		Kyzylorda (0,516)	Kyzylorda (0,538)
		Oral (0,507)	Karaganda (0,533)
		Aktobe (0,505)	Petropavl (0,532)
		Kokshetau (0,503)	Kostanay (0,527)
		Karaganda (0,487)	Kokshetau (0,521)
		Taraz (0,472)	Taraz (0,506)
		Oskemen (0,458)	Shymkent (0,490)
		Petropavl (0,451)	Taldykorgan (0,486)
	Mesta z netrajnostnimi znaki	Turkistan (0,413)	Turkistan (0,449)
		Taldykorgan (0,407)	
		Shymkent (0,397)	
Netrajnostna	Netrajnostna		
	Mesta v kritičnem stanju		

Vir: avtorji

Tipologija mest glede na stopnjo socialnega razvoja je bila oblikovana na podlagi podindeksov, izračunanih iz sedmih kazalnikov za obdobje 2007–2019. Vrednosti kazalnikov za mesti Almaty (povišanje vrednosti z 0,876 na 0,899) in Nursultan (povišanje z 0,774 na 0,825) so ustrezale trajnostni ravni socialnega razvoja. Vrednosti kazalnikov so se precej izboljšale v Taldykorganu, ki se je iz mesta z netrajnostnimi znaki leta 2007 (0,358) razvil v mesto s povprečnim trajnostnim razvojem leta 2019 (0,533).

Tipologija mest glede na stanje okolja je bila izdelana na podlagi dveh kazalnikov za obdobje 2007–2019. V mestu Aktau se je stanje okolja precej poslabšalo: leta 2007 je bilo mesto uvrščeno v trajnostni podtip (0,827), do leta 2019 pa je nazadovalo v podtip mest z netrajnostnimi znaki (0,411). Stanje okolja v naslednjih mestih se je poslabšalo za eno stopnjo: Oral (poslabšanje vrednosti kazalnikov z 0,506 na 0,443), Kokshetau (z 0,463 na 0,415) in Nursultan (z 0,364 na 0,276). Izboljšanje je bilo opazno v Almatyju, ki je iz mesta v kritičnem stanju leta 2007 (0,086) napredoval za eno stopnjo v podtip z netrajnostnim razvojem leta 2019 (0,247). Na podlagi izračunanih ITRM je bila izdelana tipologija mest glede na stopnjo trajnostnega razvoja za obdobje 2007–2019. Mesta so

bila razvrščena v trajnostni, zmerno trajnostni ali netrajnostni tip (preglednica 3).

Na splošno se je vrednost kazalnikov trajnostnega razvoja v proučevanih mestih v analiziranem obdobju izboljšala. Mesta Nursultan (zvišanje vrednosti kazalnikov z 0,593 na 0,621), Almaty (z 0,559 na 0,635) in Pavlodar (0,526 na 0,612) so se tako iz podtipa mest s povprečnim trajnostnim razvojem premaknila v podtip skoraj trajnostnih mest. Skupni indeksi vseh proučevanih mest pa so v proučevanem obdobju ustrezali stopnji zmerno trajnostnih mest.

5 Razprava

Prehod na novo stopnjo družbenogospodarskega razvoja v Kazahstanu zahteva ustrezno ureditev vseh regij in razvoj njihove infrastrukture. Pri vzpostavljanju osnovnih pogojev in temeljev inovativnega trajnostnega razvoja imajo mesta pomembno vlogo, saj so glavna središča reprodukcije virov, tudi človeških. Mesta se nenehno spreminjajo in razvijajo. Celovit gospodarski, socialni in demografski razvoj ter zagotavljanje ugodnega okolja so glavni osnovni pogoji trajnostnega razvoja.
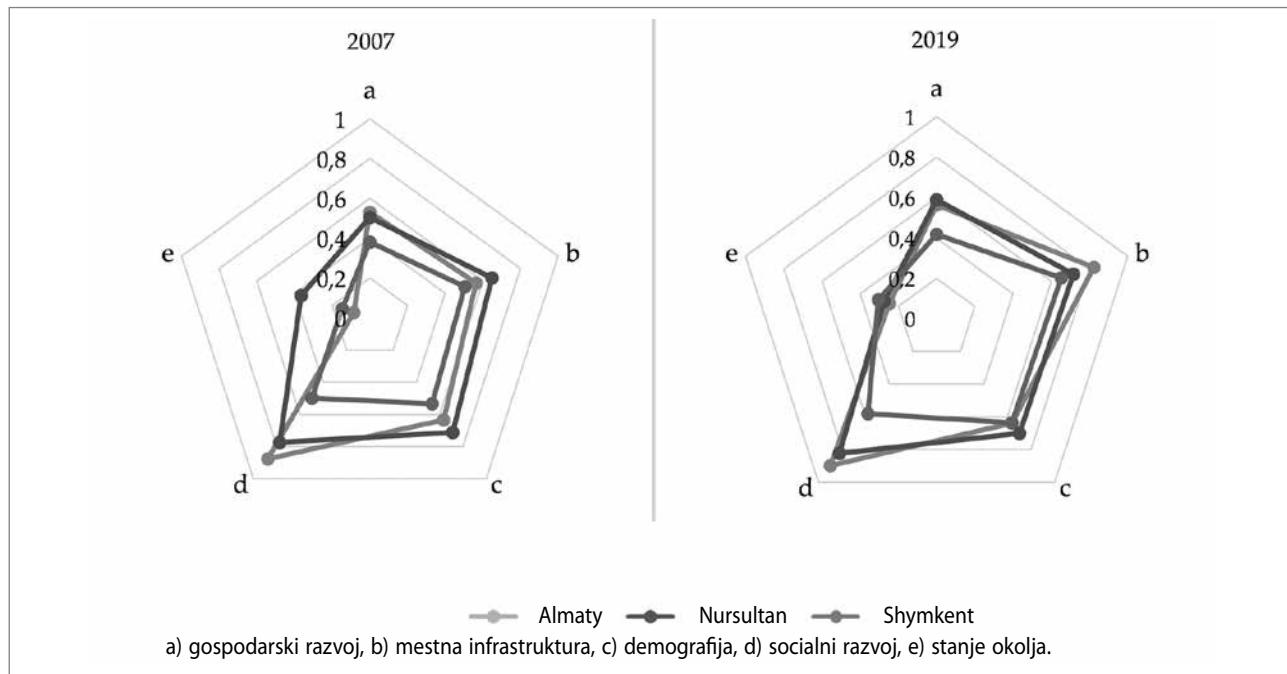
Slika 3: Spremembe v skupinah kazalnikov trajnostnega razvoja za tri mesta državnega pomena (ilustracija: avtorji)

Z raziskavo, predstavljeno v tem članku, so avtorji opredeli-li prednosti in slabosti razvoja mest na podlagi petih skupin kazalnikov trajnostnega razvoja. Rezultati so pokazali, da so bila vsa proučevana mesta zmerno trajnostna (preglednica 3), hkrati pa so med njimi razlike v stopnji dosežene trajnostnos-ti; razdeljena so v tri podtipe: mesta z netrajnostnimi znaki, povprečno trajnostna mesta in skoraj trajnostna mesta.

Vrednosti kazalnikov trajnostnega razvoja so se med letoma 2007 in 2019 izboljšale. Leta 2007 sta samo dve mesti (Aktau in Atyrau) spadali v podtip skoraj trajnostnih mest, dvanajst jih je bilo povprečno trajnostnih, tri (Turkistan, Taldykorgan in Shymkent) pa so kazala znake netrajnostnega razvoja. Traj-nostni razvoj večine mest se je v dvanajstih letih izboljšal. Tako so bila leta 2019 štiri mesta (Atyrau, Nursultan, Almaty in Pavlodar) skoraj trajnostna, preostala pa povprečno trajnostna. Stanje v mestih Nursultan, Almaty in Pavlodar se je izboljšalo predvsem zaradi precejšnjega izboljšanja mestne infrastrukture in socialnega razvoja. Kljub temu zaradi nizkih vrednosti okolj-skih kazalnikov v Nursultanu, Aktauu in Almatyju, razmero-ma nizke vrednosti kazalnikov socialnega razvoja v Atyrauu in slabega demografskega razvoja v Pavlodarju navedenih mest ni mogoče uvrstiti med trajnostna mesta.

Taldykorgan in Shymkent, ki sta leta 2007 kazala znake netraj-nostnega razvoja, sta do leta 2019 dosegla povprečno stopnjo trajnostnosti. Njuni demografski in socialni razvoj ter mestna infrastruktura so se izboljšali, na področju gospodarstva in stanja okolja pa ni bilo vidnega napredka. Po drugi strani je

Turkistan kljub izboljšanju vrednosti kazalnikov trajnostnega razvoja leta 2019 še vedno spadal v podtip mest z netrajnost-nimi znaki. Na sliki 3 so prikazane spremembe v skupinah ka-zalnikov trajnostnega razvoja za tri mesta državnega pomena, proučevana v navedenem obdobju.

Razmeroma visoke vrednosti indeksa za mesti Nursultan in Almaty so posledica visoke stopnje naložb v razvoj mestne infrastrukture in socialni razvoj, pozitivnega demografskega stanja in stabilnega gospodarskega razvoja mest državnega pomena. Köppen (2013) je proučeval projekt oblikovanja nove kazahstanske prestolnice Astane (preimenovane v Nur-sultan) in ugotovil, da se je mesto sprva ni kaj dosti razlikova-lo od klasičnega sovjetskega provincialnega mesta in ni bilo trajnostno. Avtorji raziskave, predstavljene v tem članku, so ugotovili, da je bilo mesto leta 2007 na stopnji povprečnega trajnostnega razvoja (ITRM = 0,593). V proučevanem ob-dobju so se številni kazalniki njegovega trajnostnega razvoja izboljšali (slika 2), zlasti zaradi programov izboljšanja druž-benogospodarskega razvoja. Leta 2019 je tako Nursultan že spadal v skupino mest s skoraj trajnostnim razvojem (ITRM = 0,621). Vrednost njegovega skupnega indeksa se je povišala zlasti zaradi izboljšanja kazalnikov gospodarskega razvoja in mestne infrastrukture. Shymkent je leta 2018 pridobil status mesta državnega pomena, saj je število njegovih prebivalcev preseglo milijon, predvsem zaradi postopne širitve mesta na okoliška podeželska naselja. Avtorji so na podlagi že omenjene prostorske geografske baze izdelali digitalni zemljevid stopnje trajnostnega razvoja večjih kazahstanskih mest (slika 4).
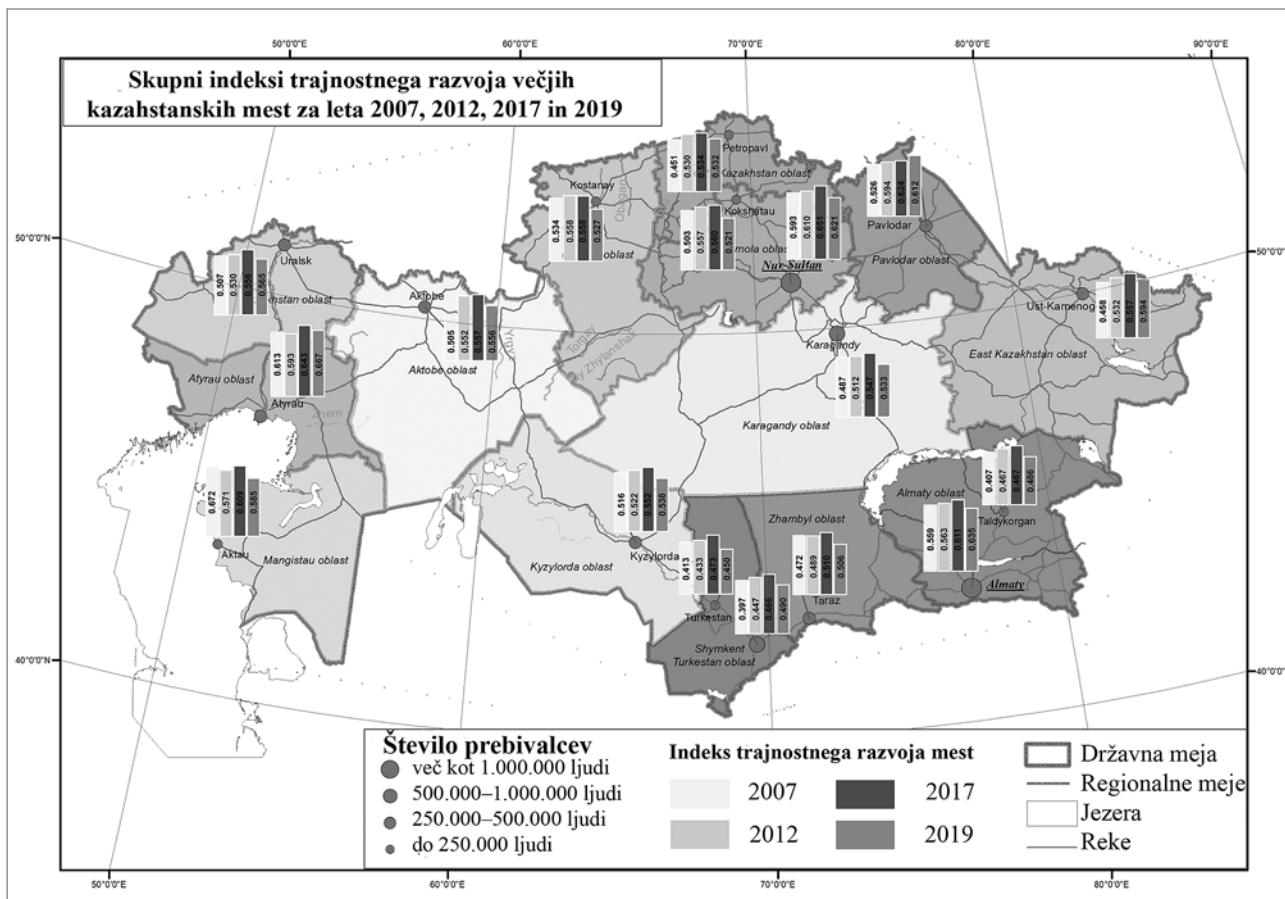
Slika 4: Skupni indeksi trajnostnega razvoja večjih kazahstanskih mest za leta 2007, 2012, 2017 in 2019 (ilustracija: avtorji)

S slike 4 je razvidno, da so se vrednosti ITRM pri vseh 17 mestih v proučevanem obdobju izboljšale. Na zemljevidu so prikazani tudi podatki o številu prebivalcev v proučevanih mestih in o gostoti prebivalstva v regijah (upravnih enotah prve stopnje), označena so največja jezera in reke v državi itd.

Čeprav so avtorji v raziskavi uporabili najrazličnejše kazalnike, so pri njihovem izboru vseeno naleteli na nekatere omejitve, težava pa je bila tudi pomanjkanje statističnih podatkov. V prihodnjih raziskavah bodo zato poskušali izboljšati sistem proučevanja trajnostnega razvoja kazahstanskih mest. Število kazalnikov za izračun ITRM bodo povečali z uporabo subjektivnih metod proučevanja. Avtorji namreč ugotavljajo, da proučevanje trajnostnega razvoja zgolj na podlagi objektivnih kazalnikov ne pokaže celotne slike. Z rednim posodabljanjem podatkov v geografski podatkovni bazi bi lahko poleg tega redno spremljali kazalnike trajnostnega razvoja kazahstanskih naselij.

6 Sklep

Avtorji so v raziskavi proučevali trajnostni razvoj 17 večjih kazahstanskih mest. Pregled literature in razpoložljivih tujih metod proučevanja trajnostnega razvoja je razkril, da navedene metode niso najbolj primerne za tovrstno proučevanje v državah v razvoju, saj tam primanjkuje statističnih podatkov za posamezna mesta. Avtorji so za izbor ključnih kazalnikov za raziskavo uporabili metodologijo proučevanja trajnostnosti mest, ki jo je predlagala ruska agencija za upravljanje trajnostne rasti (SGM).

Na podlagi izračunanih indeksov trajnostnega razvoja za posamezne skupine kazalnikov je mogoče bolje proučiti trend razvoja glede na posamezni kazalnik. Tipologija mest glede na trajnostni razvoj temelji na indeksih trajnostnega razvoja proučevanih mest (ITRM). Raziskava je pokazala, da nobeno mesto ni doseglo vrednosti indeksa večje ali enake 0,750, hkrati pa med njimi ni bilo netrajnostnih mest z vrednostjo indeksa pod 0,300. Posledično so avtorji vseh 17 mest ocenili za zmerno trajnostne. Kljub temu so določili tudi, katera mesta se uvrščajo najvišje oziroma najnižje z vidika stopnje trajnostnega razvoja. Z vrednostmi indeksa med 0,612 in 0,667 za leto 2019 so se najvišje uvrstila mesta Nursultan, Atyrau, Pavlodar in Almaty, ki so bila ocenjena kot skoraj trajnostna. Preostalih 13 mest pa je imelo povprečno stopnjo trajnostnega razvoja, z vrednostmi indeksa med 0,449 in 0,594.

Avtorji so izdelali še prostorsko geografsko podatkovno bazo za gospodarske, socialno-demografske in okoljske kazalnike 17 mest za obdobje 2007–2019. Na podlagi navedene podatkovne baze so izdelali digitalni zemljevid večjih kazahstanskih mest (slika 4). Predstavniki države in lokalnih uprav lahko kazalnike trajnostnega razvoja proučevanih mest uporabijo kot podlago in usmeritev za izboljšanje trajnostnega razvoja obravnavanih mest, pa tudi drugih mest in naselij v državi.

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Vpliv zelene infrastrukture na povezanost prebivalcev z naravo v Lagosu

Zaradi čedalje večjega krčenja zelenih površin v mestih se slabša povezanost ljudi z naravo, mestni prebivalci pa zato manj cenijo naravno okolje in v njem manj uživajo. Še vedno ni veliko znanega o tem, kako trenutna prizadevanja pri načrtovanju zelene infrastrukture vplivajo na povezanost prebivalcev z naravo, zlasti v mestih podsaharske Afrike. Avtorja v raziskavi proučujeta vpliv zelene infrastrukture na občutek povezanosti prebivalcev, kot navajajo sami, z naravo v izbranih stanovanjskih soseskah v Lagosu v Nigeriji. Na podlagi večstopenjskega vzorčenja je bilo v anketo vključenih 1.560 prebivalcev, podatki pa so bili analizirani z deskriptivno in kategorično regresijsko analizo. Rezultati kažejo, da čeprav so prebivalci večinoma nezadovoljni s kakovostjo in količi-no zelene infrastrukture v svojih soseskah, hkrati menijo, da ta pomembno pozitivno vpliva na njihovo povezanost z naravo. Regresijska analiza je poleg tega pokazala, da stanje in razpoložljivost zelenih površin za preživljanje prostega časa v soseskah najbolj vplivata na občutek povezanosti z naravo. Navedeni izsledki kažejo, da bi morali urbanisti in mestne oblasti za to, da bi z zeleno infrastrukturo izboljšali povezanost prebivalcev z naravo, posebno pozornost nameniti zagotavljanju in vzdrževanju zelenih površin v stanovanjskih soseskah na proučevanem območju in drugje.

Ključne besede: povezanost z naravo, soseske, zelena infrastruktura, mestni prebivalci, Lagos

1 Uvod

Z rastjo mestnega prebivalstva in močnim širjenjem infrastrukture, ki naj bi zadovoljila njegove čedalje večje potrebe, se zelene površine na pozidanih območjih manjšajo in postajajo čedalje bolj razdrobljene. Navedeno resno ogroža okoljsko trajnost in povezanost ljudi z naravo (Shwartz idr., 2014; Botzat idr., 2016) ter povzroča, da je v mestih čedalje manj naravnega okolja (Matz idr., 2014; Soga in Gaston, 2016), zaradi česar se drastično slabša njegov prispevek k javnemu zdravju, kakovosti življenja v mestih (Shwartz idr., 2014; Ives idr., 2016) in privlačnosti mestnih območij za bivanje (Forouhar in Forouhar, 2020). Nekateri raziskovalci (Naumann idr., 2011; Soga idr., 2014; Richardson idr., 2020; Dipeolu idr., 2020, 2021a) zato ugotavljajo, da je oblikovanje mestne zelene infrastrukture lahko učinkovito orodje, ki ljudi znova poveže z naravo in ustvari bolj trajnostne mestne soseske, privlačnejše za bivanje.

Izraz »zelena infrastruktura« je bil skovan leta 1994 na Floridi, v poročilu o strategijah ohranjanja zemljišč in pomenu naravnih sistemov (Benedict in McMahon, 2006). Ni popolnoma nov pojem na področju okoljskih ved, je pa nov in bolj ekološko usmerjen izraz za že znani pristop k načrtovanju in urbanističnemu oblikovanju zelenih prostorov, ki se je v 19. in 20. stoletju razvijal zaradi naraščajočih okoljskih problemov v ameriških in evropskih mestih (Sandstrom, 2002; Fábos, 2004). Navedeni problemi so bili tudi povod, da je Ebenezer Howard oblikoval koncept vrtnega mesta, na podlagi česar so nato začeli urejati osrednje parke v mestih, na primer centralni park v New Yorku, ter urbane parke drugje po Severni Ameriki in Evropi (Nabila, 2021). Ob tem so se razvile nove stroke, kot je krajinska arhitektura, v Združenem kraljestvu pa tudi koncept načrtovanja zelenih koridorjev (Turner, 2006). V tem članku se zelena infrastruktura nanaša na skupek zelenih prvin in naravnih značilnosti, ki lahko z zagotavljanjem osnovnih ekosistemskih storitev v grajenem okolju ljudi znova povežejo z naravo (Naumann idr., 2011; Adegun, 2018). Vključuje naravne ali polnaravne prvine, kot so vrtovi in parki, športna igrišča, travnate površine, skupnostni gozdovi, zelene strehe in vodna telesa ter druge antropogene sisteme, ki zagotavljajo ključne ekosistemske storitve (Naumann idr., 2011; Adegun, 2018; Dipeolu idr., 2021b). Pojem povezanosti z naravo pa se nanaša na to, kako ljudje dojemajo naravo, kakšen odnos imajo do nje in kako ocenjujejo lastno vključenost v naravno okolje (Soga in Gaston, 2016; Richardson idr., 2020). Skratka, je pokazatelj posameznikove čustvene navezanosti na naravo in njene prvine (Mayer in Frantz, 2004).

Zelena infrastruktura (v nadaljevanju: ZI) ima več funkcij: povezuje razdrobljen mestni prostor (Naumann idr., 2011), krepi občutek pripadnosti skupnosti (Cramm in Nieboer, 2015; Dipeolu idr., 2020), izboljšuje telesno in duševno zdravje (Tzoulas idr., 2007), omogoča večje skladiščenje ogljika, zmanjšuje temperaturo v mestu in hitrost vetra (Idiata, 2016; Dipeolu in Ibem, 2020) ter lepša grajeno okolje (Adegun, 2018). Številni avtorji (Hartig idr., 2014; Botzat idr., 2016; Nisbet idr., 2019, 2020; Zuniga-Teran idr., 2020; Dipeolu idr., 2021b) ugotavljajo, da narašča število raziskav, ki proučujejo vlogo ZI pri krepitvi povezanosti ljudi z naravo v hitro urbanizirajočem se svetu. Izsledki kažejo, da lahko pogostejše zadrževanje na vrtovih, v parkih, mestnih gozdovih, na športnih igriščih, med uličnimi drevesi in v bližini vodnih teles ugodno vpliva na zdravje, dobro počutje in kakovost življenja (Ja-Choon idr., 2013; Allen in Balfour, 2014). Raziskave so pokazale še, da so prebivalci, ki so imeli dostop do zelenih površin v svojih soseskah, od sosedov prejemali več skrbi in podpore (Park in Mattson, 2009), bili so manj izpostavljeni kriminalu in nasilju (Cramm in Nieboer, 2015) in občutili so večjo pripadnost skupnosti (Dipeolu idr., 2020). To, da ni ZI ali je je manj, slabi človekovo povezanost z naravo in negativno vpliva na zdravje mestnih prebivalcev (Soga in Gaston, 2016).

Kljub izsledkom dosedanjih raziskav je le malo empiričnih dokazov za to, kako lahko razpoložljivost ZI vpliva na občutek povezanosti z naravo med prebivalci mest v podsaharski Afriki. Posledično je le malo znanega o tem, katere vrste ZI omogočajo večjo povezanost z naravo v hitro urbanizirajočih se državah, kot je Nigerija. Avtorja v članku zato proučujeta vpliv ZI na povezanost prebivalcev z naravo v Lagosu, pri čemer analizirata, kako prebivalci zaznavajo splošne značilnosti ZI v izbranih stanovanjskih soseskah v Lagosu, ugotavljata, kako razpoložljiva ZI vpliva na to, kako prebivalci zaznavajo svojo povezanost z naravo, in opredelita vidike ZI, ki najbolj vplivajo na občutek prebivalcev glede povezanosti z naravo.

Izsledki opisane raziskave dopolnjujejo znanje na področju trajnostnega urbanističnega oblikovanja, načrtovanja in upravljanja, saj pomagajo bolje razumeti posamezne vidike ZI, ki najbolj prispevajo k večji povezanosti ljudi z naravo v gosto poseljenih mestih podsaharske Afrike. Raziskava je del aktualnih prizadevanj za oblikovanje učinkovitih strategij, ki bi številno mestno prebivalstvo po svetu znova povezale z naravo, in izboljšanje gospodarskih, socialnih in okoljskih koristi ZI v državah v razvoju.

1.1 Pojem povezanosti z naravo

Povezanost z naravo je ena od treh glavnih strukturnih sestavin modela odnosov med človekom in naravo, ta model je razvil Schultz (2002; drugi sestavini sta zavezanost in skrb). V literaturi je povezanost z naravo različno opredeljena. Opisana je na primer kot način, kako posamezniki dostopajo do naravnega

okolja (Schultz, 2002), in kot posameznikovo afektivno doživljanje narave (Mayer in Frantz, 2004). Navarro idr. (2017) so jo opredelili kot odnos z naravnim okoljem, kot ga zaznava posameznik. Na podlagi navedenih definicij se povezanost z naravo v tem članku nanaša na to, koliko ljudje fizično dostopajo do naravnega okolja ter so psihološko in čustveno navezani nanj in na njegove prvine v mestnem okolju.

Raziskave povezanosti ljudi z naravo temeljijo na predstavi, da lahko to, kar ljudje v nekem trenutku zaznavajo, slišijo in doživljajo, vpliva na njihovo čustveno navezanost in odziv ali obnašanje (Hartig idr., 2003). Zato povezanost z naravo velja za znak človekove naklonjenosti naravnim prvinam, kot je bujno zeleno rastlinje (White idr., 2017). Razlogi za navedeno naklonjenost so morda povezani z obnovitvenimi (Allen in Balfour, 2014; Uzobo, 2020) in zdravilnimi (Martin in Czellar, 2016; Richardson idr., 2019) učinki narave ter vlogo naravnega okolja pri lajšanju telesnega in psihološkega stresa ter utrujenosti, izboljšanju samopodobe in krepitvi občutka pripadnosti skupnosti (Cramm in Nieboer, 2015). V literaturi je poleg tega zelo veliko dokazov o tem, da povezanost z biotsko raznovrstnim naravnim okoljem spodbuja medosebne stike in povezanost (Coley idr., 1997) ter je pozitivno povezana z altruizmom, skrbjo za biosfero (Olivos idr., 2011), okolju prijaznim vedenjem (Balundė idr., 2019), življenjskim zadovoljstvom (Navarro idr., 2017), pozitivnim doživljanjem življenja (Zelenski in Nisbet, 2014) ter dobrim zdravjem in počutjem (Mitchell in Popham, 2008; White idr., 2017; Nisbet idr., 2020). Navedene koristi povezanosti z naravo, ki se nanašajo na ZI, so povezane z dejstvom, da lahko pogled na okolje v ljudeh povzroči čustveno spremembo iz mirnosti v nemir, veselja v žalost, upanja v nemoč ali obratno, odvisno od tega, ali je okolje neprijetno ali prijetno (Tzoulas idr., 2007; Cramm in Nieboer, 2015). Raziskave povezanosti z naravo so zato pomembne pri napovedovanju okolju prijaznega vedenja in odnosa ljudi ter iskanju načinov za izboljšanje njihovega zdravja, počutja in življenjskega zadovoljstva v mestih.

1.2 Povezava med mestno zeleno infrastrukturo in povezanostjo z naravo

V naravi je ogromno naravnih virov, ki ljudem zagotavljajo razne ekološke storitve, potrebne za življenje. Raziskave (npr. Irwin in Bockstael, 2007; Haase idr., 2014; Kozamernik idr., 2020) kažejo, da spreminjanje zelenih pasov in odprtega prostora v grajeno okolje povzroča velik upad in izgubo mestnega rastlinja, zaradi česar so mestni prebivalci odrezani od narave in z njo povezanih ekoloških storitev. Posledično se čedalje več raziskav osredotoča na to, kako spodbujati, povečati in ohranjati povezanost ljudi z naravo v hitro urbanizirajočem se svetu (Haase idr., 2014; Zelenski in Nisbet, 2014). Raziskovalci (npr.

Tzoulas idr., 2007; Dipeolu in Ibem, 2020) se strinjajo, da je eden izmed najboljših načinov, da se mestni prebivalci znova povežejo z naravo, ta, da se ohranijo zdajšnje zelene površine in/ali se načrtuje dodatna ZI v grajenem okolju.

Najpogostejše naravne prvine v grajenem okolju vključujejo rastlinstvo v obliki travnatih površin, uličnih dreves, grmičevja in mestnih gozdov ter v vrtovih in parkih, vodna telesa (npr. poplavne ravnice ali mokrišča, potoke, reke, ribnike, jezera in vodnjake), naravne krajine (npr. gozdove, skalnate vzpetine in gore) in druge prvine (npr. odprt prostor, habitate divjih živali in rastlin, šolska igrišča in pokopališča) (Naumann idr., 2011; Adegun, 2018; Dipeolu idr., 2021a). To so različne oblike in prvine ZI, opredeljene v literaturi (Idiata, 2016; Adegun, 2018; Obi idr., 2021). Odprt prostor in zelene površine so torej ključne sestavine mestne ZI in opravljajo številne funkcije, med drugim blažijo negativne posledice podnebnih sprememb (Idiata, 2016), ljudi znova povežejo z naravo (Tzoulas idr., 2007; Botzat idr., 2016; Dipeolu in Ibem, 2020), ohranjajo naravne ekosisteme (Madureira idr., 2018), spodbujajo biotsko raznovrstnost (Zuniga-Teran idr., 2020), krepijo privlačnost mestnih območij za bivanje (Conedera idr., 2015) ter zagotavljajo preskrbo s hrano in zdravilnimi rastlinami (Obi idr., 2021).

Ali ZI učinkovito povezuje ljudi z naravo, je odvisno od številnih dejavnikov, vključno z vrsto in kakovostjo ZI (Tzoulas idr., 2007; Hartig idr., 2014), njeno vzdrževanostjo (Karanikola idr., 2016; Madureira idr., 2018) in dostopnostjo (Conedera idr., 2015) ter pogostostjo in trajanjem izpostavljenosti zaželenim oblikam ZI (Hartig idr., 2003; Coutts in Hahn, 2015). Vrsta ZI se nanaša na različne oblike te na mestnih območjih in aktivnosti, ki jih omogoča (npr. sprostitev, ustvarjanje in vizualni stik) (glej Dipeolu in Ibem, 2020), njena kakovost pa se nanaša na njene značilnosti (količino, velikost, urejenost, gostoto in barvo, velikost listov in vrsto rastlin) (Samimi in Shahhosseini, 2020). Navedeni dejavniki so bili prepoznani kot ključni pri opredelitvi preferenc glede ZI med mestnimi prebivalci v več državah (Samimi in Shahhosseini, 2020; Dipeolu idr., 2021a). Na podlagi navedenega avtorja tega članka predvidevata, da vrsta in kakovost ZI v mestnih soseskah pomembno vplivata na zaznano povezanost prebivalcev z naravo.

2 Raziskovalne metode

2.1 Območje raziskave

Raziskava je potekala v zvezni državi Lagos v jugozahodni Nigeriji, kjer je leta 2013 v mestih živelo več kot 13 milijonov ljudi. Gostota prebivalstva je bila približno 6.871 ljudi na km² (LSBS, 2015). Lagos je razdeljen na dvajset lokalnih upravnih enot (glej sliko 1), od katerih jih je šestnajst na me-
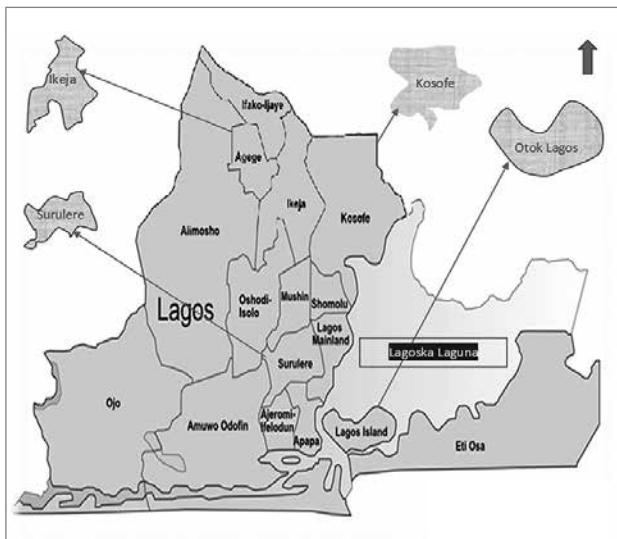
Slika 1: Zemljevid Lagosa z lokalnimi upravnimi enotami Ikeja, Kosofe, Otok Lagos in Surulere, izbranimi za raziskavo (vir: Ministry of Physical Planning and Urban Development, 2021)

tropolitanskem območju, preostale štiri (Badagry, Epe, Ibeju/Lekki in Ikorodu) pa so v predmestju Lagosa (Dipeolu idr., 2020). Dipeolu idr. (2021b) navajajo, da je v zadnjih 50 letih hitra urbanizacija močno prispevala h krčenju naravnega okolja in virov ter zmanjšanju biotske raznovrstnosti na metropolitanskem območju Lagosa. Posledično je velik delež prebivalcev odrezanih od naravnega okolja in z njim povezanih podpornih storitev.

Kot ugotavlja Dipeolu (2017), je vlada zvezne države Lagos za to, da bi nadomestila izgubljene zelene površine in prebivalce znova povezala z naravo, dala pobudo za obsežno načrtovanje raznovrstne ZI v mestu, tega pa je zaupala Agenciji za parke in vrtove v zvezni državi Lagos (LASPARK). Agencija, ustanovljena leta 2011, je pristojna za ozelenjevanje metropolitanskega območja Lagosa s sajenjem dreves ter urejanjem parkov, vrtov in drugih zelenih površin ter za zagotavljanje skladnosti z ustrezno zakonodajo, povezano z urejanjem, ohranjanjem in upravljanjem odprtega prostora in zelenih površin. Z raziskavo, predstavljeno v tem članku, sta avtorja želela bolje razumeti, kako je ZI, ki jo zagotavlja LASPARK, izboljšala povezanost ljudi z naravo v Lagosu.

2.2 Zasnova raziskave, populacija in spremenljivke

Raziskava je imela presečno anketno zasnovo, pri kateri sta avtorja opazovala izbrani vzorec populacije v istem obdobju. Navedeno zasnovo sta izbrala zaradi ciljev raziskave in ker so takšno zasnovo imele tudi druge podobne študije (npr. Dipeolu idr., 2020; Nisbet idr., 2020). Raziskovalno populacijo so sestavljali prebivalci štirih lokalnih upravnih enot: Ikeja, Ko-

sofe, Otok Lagos in Surulere. Da so izbrani udeleženci tvorili reprezentativni vzorec raziskovalne populacije in da je bila za njihov izbor uporabljena uveljavljena znanstvena metoda, sta avtorja velikost raziskovalnega vzorca izračunala s formulo, ki jo je razvil Turner (2003), glej enačbo 1. Z njo lahko natančno določimo interval zaupanja, raven statistične značilnosti, območje napake in druge ključne parametre, ki jih morda z drugimi metodami ne moremo.

$$n = \frac{(Z_\alpha)^2 r(1-r)fk}{phe^2}$$

V formuli n pomeni velikost vzorca, Z_α je kritična vrednost normalne porazdelitve iz preglednice standardne normalne porazdelitve pri 95-odstotnem intervalu zaupanja, ki znaša 1,96, r je ocenjeni pričakovani delež anketirancev, določen pri 50 %, f je učinek vzorca in je enak 4, k je delež neodgovorov, ocenjen na 20 %, $p = 0,03 \times 18 = 0,54$ in pomeni delež celotne raziskovalne populacije, na podlagi katerega je izračunan parameter r. Ključni predpostavki sta vrednost 0,03 za vsako leto starosti ciljne populacije in h, ki pomeni povprečno velikost gospodinjstva (tj. v večini držav v razvoju je to šest oseb), e pomeni območje napake (0,05) ali stopnjo natančnosti, ki znaša 5 % vrednosti r. Potem ko so bile vse omenjene vrednosti vstavljene v enačbo, je najmanjša velikost vzorca znašala približno 380 anketirancev; glej enačbo 2:

$$n = \frac{(1,96^2 \times 0,5 \times 0,5 \times 4 \times 0,2)}{(0,54 \times 6 \times (0,05 \times 0,5)^2)} = 379,4 \approx 380$$

Za raziskavo v vsaki izmed štirih lokalnih upravnih enot je bilo tako izbranih najmanj 380 anketirancev, na podlagi česar bi moralo v anketi skupno sodelovati najmanj 1.520 oseb. Za vsak primer je bilo v vsaki lokalni upravni enoti dodanih še po 20 anketirancev, kar je znašalo približno 5 % izračunanega števila anketirancev. Tako je bilo najmanjša velikost vzorca v posamezni lokalni upravni enoti 400, v celotni raziskavi pa najmanj 1.600 anketirancev.

Podatki so bili zbrani s strukturiranim vprašalnikom, ki sta ga avtorja izdelala posebej za to raziskavo. Spremenljivke za vprašalnik sta izbrala na podlagi pregleda literature. Vprašalnik je bil v skladu z raziskovalnimi cilji razdeljen na tri dele. Prvi del je vključeval vprašanja o družbeno-demografskih značilnostih anketirancev, drugi del se je osredotočal na splošne značilnosti mestne ZI v proučevanih soseskah, tretji del pa se je nanašal na posamezne vidike mestne ZI, ki najbolj vplivajo na občutek povezanosti anketirancev z naravo. V tretjem delu vprašalnika so anketiranci svojo povezanost z naravo ocenjevali na podlagi 14 izjav na lestvici povezanosti z naravo, ki sta jo razvila Mayer in Frantz (2004). Za ocenjevanje človekove povezanosti z naravo so na voljo številne lestvice (glej Mayer in Frantz, 2004; Martin in Czellar, 2016), avtorja pa sta navedeno lestvico izbrala na podlagi izsledkov v literaturi (Dipeolu idr.,

2019; Nisbet idr., 2019), ki kažejo, da lahko z njo učinkovito ocenimo posameznikovo doživljanje narave in opišemo čustva.

Lestvica povezanosti z naravo je bila prvotno zasnovana na podlagi petstopenjske Likertove lestvice (1 = sploh se ne strinjam, 5 = močno se strinjam), avtorja pa sta jo spremenila v sedemstopenjsko lestvico, pri čemer so vprašanja ostala enaka (1 = se sploh ne ujema, 4 = se zmerno ujema, 7 = se popolnoma ujema). Omeniti je treba, da je bilo teh 14 izjav že uporabljenih v raziskavi povezanosti z naravo v Hongkongu, v kateri je koeficient zanesljivosti znašal 0,86 (Sobko idr., 2018). V raziskavi, ki sta jo opravila avtorja tega članka, pa je Cronbachov koeficient zanesljivosti α znašal 0,74 in je tako presegal priporočeno najmanjšo vrednost 0,60. Anketiranci so morali na ordinalni lestvici povezanosti z naravo oceniti, koliko se vsaka izmed 14 izjav ujema z njihovim doživljanjem in občutji. Da bi povečala veljavnost izsledkov raziskave, sta avtorja vprašalnik predhodno testirala v eni izmed lokalnih upravnih enot zunaj proučevanega območja, na podlagi česar sta nato nekatera vprašanja preoblikovala.

2.3 Zbiranje in analiza podatkov

Seznami in zemljevidi popisnih okolišev v zvezni državi Lagos, pridobljeni od urada nacionalne popisne komisije v Lagosu, so pokazali, da je na proučevanem območju skupno 17 teh okolišev: trije v Ikeji, po pet v Kosofeju in Surulereju ter štiri na Otoku Lagos. Anketiranci so bili izbrani na podlagi vnaprej določenih intervalov vzorčenja, dobljenih z delitvijo števila hiš v vsakem izmed teh 17 okolišev. V vsakem okolišu je bilo tako za anketo določenih po 400 oseb. Število glav družin (ali odraslih predstavnikov gospodinjstev) se je sistematično izbiralo glede na seznam hišnih številk v vsakem popisnem okolišu, dokler to skupno število ni doseglo ciljne vrednosti, določene za izbrani okoliš. Vzorčenje se je v vsakem popisnem okolišu začelo z izborom prve hiše na vozlišču. Sistematični izbor naslednjih hiš je temeljil na izračunanem intervalu vzorčenja za vsako izmed štirih izbranih lokalnih upravnih enot. Vprašalniki so bili razdeljeni in pobrani osebno med marcem in julijem 2017. Vsako gospodinjstvo je prejelo po en izvod vprašalnika, od skupno 1.600 razdeljenih izvodov pa je bilo vrnjenih in pravilno izpolnjenih 1.560, kar pomeni, da je bila stopnja odziva zelo visoka, kar 97,5-odstotna.

Opravljeni sta bili dve osnovni vrsti analize. Najprej sta avtorja opravila preprosto opisno analizo, s katero sta izračunala frekvenčno in odstotno porazdelitev anketirancev glede na njihove družbeno-demografske značilnosti ter srednje vrednosti splošnih značilnosti mestne ZI in izjav na lestvici povezanosti z naravo, kot jih je ocenilo vseh 1.560 anketirancev skupaj. Avtorja sta nato opravila še kategorično regresijsko analizo, s katero sta proučila, kako zaznana kakovost ZI vpliva na ob-

čutek povezanosti anketirancev z naravo v soseskah. Pri regresijski analizi je bila srednja vrednost rezultatov na lestvici povezanosti z naravo kriterijska spremenljivka, srednje vrednosti rezultatov za vsakega izmed desetih opisov kakovosti ZI pa so bile odvisne spremenljivke. Kategorična regresijska analiza je bila namesto drugih vrst regresije izbrana zato, ker podatkovni niz vsebuje predvsem ordinalne spremenljivke, za katere Shrestha (2009) priporoča uporabo tovrstne analize. Rezultati so navedeni v preglednicah v tretjem poglavju.

V skladu z etičnimi zahtevami je bilo v vprašalniku na začetku razloženo, kaj je namen ankete in da je sodelovanje v njej prostovoljno. Hkrati so bili anketiranci obveščeni, da so njihovi odgovori popolnoma anonimni in da sodelovanje v anketi zanje ne pomeni nobenega tveganja.

3 Rezultati

3.1 Kakovost ZI v Lagosu po mnenju anketirancev

Med anketiranci je bilo 58,6 % moških in 41,4 % žensk, večina (85,8 %) je bila starih med 30 in 49 let. Poleg tega jih je bila večina (57,4 %) poročenih, pri čemer jih je 88,8 % živelo v dvo- ali veččlanskem gospodinjstvu. Med njimi jih je imelo 62,1 % visokošolsko izobrazbo, ob tem je bil zelo velik delež anketirancev zaposlen v raznih sektorjih nigerijskega gospodarstva. Rezultati so na splošno pokazali, da je večina dobro pismena in je bila sposobna podati veljavne odgovore na vprašanja brez (večje) pomoči.

Opisna statistična analiza mnenj anketirancev o splošnih značilnostih ZI na proučevanem območju je pokazala, da so srednje vrednosti ocen desetih izjav o kakovosti ZI znašale med 2,05 ± 1,11 in 3,57 ± 1,26 (preglednica 1). To pomeni, da so anketiranci različno ocenjevali značilnosti mestne ZI.

Rezultati kažejo, da se je večina anketirancev strinjala, da je v njihovih soseskah vsaj en vrt ali park, kjer lahko stanovalci preživljajo prosti čas in se družijo, ter da je zelenih površin malo. Niso pa se strinjali s tem, da v njihovih soseskah ni parkov, kjer se lahko otroci prosto igrajo, da je večina zelenih površin blizu in da so dobro opremljene.

3.2 Povezanost anketirancev z naravo v Lagosu

Rezultati opisne statistične analize ocen štirinajstih izjav, na podlagi katerih sta avtorja proučevala občutek povezanosti anketirancev z naravo, so razkrili, da so srednje vrednosti ocen znašale med 4,89 ± 1,87 in 5,51 ± 1,61 (preglednica 2). Izjave, ki so bile na podlagi njihovih ocen razvrščene od prvega do

Preglednica 1: Mnenja anketirancev o splošnih značilnostih ZI na proučevanem območju

Značilnosti ZI	Sred. vred.	SD
V stanovanjski soseski je malo zelenih površin.	3,57	1,26
V soseski zelene površine hitro izginevajo.	3,47	1,28
V soseski imamo vsaj en vrt ali park, kjer se lahko ljudje družijo.	3,28	1,27
V soseski so zelene površine, ki jih lahko stanovalci uporabljajo za sprostitev.	3,10	1,33
V soseski ni parkov, kjer bi se lahko otroci prosto igrali.	2,82	1,40
Večina zelenih površin na tem območju je blizu stanovanjskih objektov.	2,68	1,26
Zelene površine v soseski so dobro opremljene.	2,54	1,27
Stanovalci po navadi uporabljajo parke v drugih soseskah v mestu.	2,53	1,29
Zelene površine v soseski so v dobrem stanju.	2,46	1,24
V soseski je dovolj zelenih površin.	2,05	1,11

Preglednica 2: Občutek povezanosti anketirancev z naravo v Lagosu

Vpliv ZI na zaznano povezanost prebivalcev z naravo	Sred. vred.	SD	Mesto
Daje mi občutek, da imam v hierarhiji narave najpomembnejše mesto.	5,51	1,61	1.
Pomaga mi, da se zavedam in priznavam inteligenco drugih živih bitij.	5,50	1,32	2.
Pomaga mi razumeti, kako moja dejanja vplivajo na naravo in obratno.	5,50	1,32	3.
Pomaga mi razmišljati o življenju in sebe videti kot del večjega kroga živih bitij.	5,48	1,36	4.
Krepi moj občutek in razumevanje, da sem del Zemlje in obratno.	5,47	1,36	5.
Pomaga mi, da naravo razumem kot skupnost, katere del sem.	5,47	1,33	6.
Daje mi občutek, da sem del mreže živih bitij.	5,45	1,37	7.
Daje mi občutek, da sem del naravnega sveta, tako kot je drevo del gozda.	5,40	1,44	8.
Daje mi občutek, da vse življenje na Zemlji, tudi nečloveško, vodi ista življenjska sila.	5,36	1,43	9.
Daje mi občutek, da je moje osebno blagostanje enako pomembno kot blagostanje naravnega sveta.	5,35	1,55	10.
Krepi moj občutek enosti z naravo, ki me obdaja.	5,31	1,48	11.
Krepi moj občutek globoke povezanosti z živalmi in rastlinami.	5,21	1,55	12.
Pomaga mi, da se ne počutim odrezanega od narave.	5,16	1,69	13.
Krepi mojo samopodobo in mi daje občutek, da sem pomemben.	4,89	1,87	14.

trinajstega mesta (glej preglednico 2), se močno ujemajo z njihovimi občutji o tem, kako ZI vpliva na njihovo povezanost z naravo, izjava, uvrščena na 14. mesto, pa se le zmerno ujema z njihovimi občutji. Rezultati torej kažejo, da ZI pozitivno vpliva na občutek povezanosti anketirancev z naravo.

3.3 Vpliv ZI na občutek povezanosti prebivalcev z naravo

Rezultati uporabljenega regresijskega modela, F (329,881, 1.230,119) = 20,636, $p < 0,000$ in $R^2 = 0,211$, kažejo, da je delež variance vpliva ZI na zaznano povezanost prebivalcev z naravo znašal 21 %. Vrednosti p razkrivajo, da samo dve od desetih proučevanih značilnosti ZI – prisotnost zelenih površin v soseski, ki jih lahko prebivalci uporabljajo v prostem času ($p = 0,000$), in stanje zelenih površin v soseski ($p = 0,000$) – pomembno napovedujeta vpliv ZI na povezanost z naravo, kot ga dojemajo prebivalci (preglednica 3). To pomeni, da sta to

edina vidika ZI, ki sta v raziskavi pojasnila zaznano povezanost prebivalcev z naravo.

Koeficienti β kažejo, da dobro stanje zelenih površin v soseski (β = 0,302) močneje vpliva na občutek povezanosti prebivalcev z naravo kot pa prisotnost zelenih površin, ki jih lahko prebivalci uporabljajo v prostem času (β = 0,177) (glej preglednico 3).

4 Razprava

Raziskava se je osredotočala na vpliv ZI na povezanost prebivalcev z naravo v izbranih soseskah v Lagosu. Rezultati so pokazali, da se prebivalci na splošno strinjajo, da so v njihovih soseskah na voljo vrtovi, parki in druge zelene površine, na katerih lahko preživljajo prosti čas in se družijo. Po drugi strani pa menijo, da sta količina in kakovost ZI v soseskah nezadovoljivi, saj se čedalje več zelenih površin namenja gradnji stavb

Preglednica 3: Koeficienti regresijske analize vpliva ZI na povezanost prebivalcev z naravo.

Značilnosti zelene infrastrukture v soseskah	Standardizirani koeficienti				
	β	SE	df	F	p
V soseski je dovolj zelenih površin.	0,087	0,119	2	0,526	0,591
V soseski so zelene površine, ki jih lahko stanovalci uporabljajo v prostem času.	0,177	0,057	3	9,595	0,000*
Stanovalci po navadi uporabljajo parke v drugih soseskah v mestu.	0,023	0,092	1	0,066	0,798
V moji soseski je zelo malo zelenih površin.	−0,082	0,060	2	1,869	0,155
V soseski ni parkov, kjer bi se lahko otroci prosto igrali.	−0,059	0,057	2	1,053	0,349
V soseski je vsaj en vrt ali park, kjer se lahko prebivalci rekreirajo.	−0,110	0,085	1	1,686	0,194
Zelene površine v soseski so v dobrem stanju.	0,302	0,060	2	25,543	0,000*
V soseski se številne zelene površine nenehno krčijo.	0,092	0,054	2	2,957	0,052
Zelene površine v soseski so dobro opremljene.	0,085	0,095	3	0,799	0,494
Večina zelenih površin v soseski je blizu stanovanjskim objektom.	−0,145	0,113	2	1,646	0,193

Opomba: odvisna spremenljivka = srednja vrednost na lestvici povezanosti z naravo; * pomembni prediktorji

in infrastrukture. Navedeno nakazuje, da imajo prebivalci slab dostop do mestnih zelenih površin, kar lahko vpliva na njihov občutek povezanosti z naravo. Rezultati so pričakovani in se ujemajo z ugotovitvijo drugih raziskovalcev (Irwin in Bockstael, 2007; Haase idr., 2014; Obi idr., 2021), da v mestih številnih držav, tudi Nigerije, rastlinstvo in zelene površine izginjajo v čedalje večjem obsegu.

Rezultati so poleg tega razkrili, da so kljub razmeroma majhni količini in slabi kakovosti ZI v soseskah prebivalci menili, da razpoložljiva ZI pozitivno vpliva na njihov občutek povezanosti z naravo. Podatki v preglednici 2 kažejo, da se je večina strinjala, da jim dostop do ZI omogoča številne koristi: zaradi nje cenijo prispevek drugih živih bitij na Zemlji, imajo občutek, da so del skupnosti vseh živih bitij ter da pripadajo Zemlji in njenemu okolju, in da se čutijo eno z naravo. Navedeni izsledki so po eni strani podobni ugotovitvam prejšnjih raziskav vloge ZI pri krepitvi povezave med ljudmi kot socialnimi bitji in naravo (White idr., 2017; Hoyle idr., 2019), po drugi strani pa opisane koristi povezanosti z naravo še dodatno krepijo občutek ljudi, da niso samo prebivalci in spreminjevalci okolja, ampak tudi njegov sestavni del.

ZI v soseskah izboljšuje tudi samopodobo prebivalcev ter krepi njihov občutek pripadnosti skupnosti in pomembnosti v mestnem okolju. Izsledki se ujemajo s prejšnjimi raziskavami (Martin in Czellar, 2016; Hoyle idr., 2019), v katerih so bile navedene koristi prepoznane kot kazalniki človekove povezanosti z naravo, ki vplivajo tudi na kakovost življenja in dobro počutje. Poleg tega ugotovljene koristi ZI pomagajo mestnim prebivalcem dojemati okolje kot sistem, ki omogoča življenje na Zemlji (Stern, 2000), razviti pozitiven pogled na življenje (Zelenski in Nisbet, 2014), ohranjati notranji mir in veselje (Cramm in Nieboer, 2015) ter izboljšati duševno počutje (Mit-

chell in Popham, 2008) in telesno zdravje (Allen in Balfour, 2014; Hartig idr., 2014). ZI v stanovanjskih soseskah tako pozitivno vpliva na zdravje ljudi ter njihov občutek vrednosti in enosti z grajenim mestnim okoljem. Kot so ugotovili že drugi raziskovalci (Soga in Gaston, 2016; Richardson idr., 2020), navedeno poleg kakovosti življenja krepi tudi okolju prijazno vedenje med mestnimi prebivalci.

Od desetih proučevanih vidikov ZI sta samo dva (dobro stanje zelenih površin v soseski in prisotnost zelenih površin za preživljanje prostega časa) pomembno vplivala na povezanost prebivalcev z naravo. Navedeno se ujema z drugimi raziskavami (Martin in Czellar, 2016; Richardson idr., 2019), ki so razkrile močno povezavo med ljudmi in naravo. Da ima dobro stanje zelenih površin v soseski kot ena izmed značilnosti ZI močan vpliv na občutek povezanosti prebivalcev z naravo, dokazujejo tudi izsledki v literaturi (Madureira idr., 2018), ki na primer kažejo, da so čistoča, primerna infrastruktura in redno vzdrževanje ključni dejavniki, ki vplivajo na stanje in obisk zelenih površin v portugalskih mestih. Samimi in Shahhosseini (2020) podobno ugotavljata za iransko mesto Tabriz, kjer so visoka zimzelena drevesa in cvetlice – tudi ti se nanašajo na stanje ZI – med dejavniki, ki vplivajo na to, kako pogosto prebivalci obiskujejo zelene površine v mestu. Raziskava, predstavljena v tem članku, kaže, da stopnja vzdrževanosti ZI pomembno vpliva na občutek povezanosti prebivalcev z naravo na mestnih območjih.

Tudi ugotovitve glede zelenih površin za preživljanje prostega časa v soseskah kot drugega pomembnega vidika ZI, ki je vplival na občutek povezanosti prebivalcev z naravo, se ujemajo z izsledki drugih raziskav (npr. Shan, 2014, ali Hoyle idr., 2019), ki so pokazale, da so parki, travnate površine, športna igrišča ter območja v bližini uličnih dreves in drugih naravnih prvin

privlačni in sprejemljivi kraji, na katerih se prebivalci v mestih radi srečavajo in družijo. Navedeno se ujema tudi z ugotovitvami Samuelssona idr. (2020), da umeščanje ZI bližje stanovanjskim predelom ljudem omogoča, da se ukvarjajo z aktivnostmi, ki blažijo stres, zlasti med izrednimi razmerami, kot je bila na primer pandemija covida-19, ko je zanje zelo pomembno, da se lahko rekreirajo blizu doma, ne da bi za to morali kršiti uredbe o omejitvi gibanja (Hanzl, 2020). Primerna lokacija in dostopnost raznih oblik ZI, ki spodbujajo sprostitev in rekreacijo, lahko zato pomembno vplivata na občutek povezanosti prebivalcev z naravo v mestnih okoljih.

5 Sklep

V raziskavi sta avtorja proučevala vpliv ZI na povezanost prebivalcev z naravo v izbranih soseskah Lagosa v Nigeriji. Ugotovila sta, da sta po mnenju anketirancev količina in kakovost ZI v Lagosu nezadostni, kar nakazuje, da so nezadovoljni s količino in kakovostjo tovrstne infrastrukture v svojih soseskah ter ne morejo uživati vseh koristi, ki jih ponuja v mestnem okolju. Zato bi bilo treba v Lagosu izboljšati količino in dostop do zelenih površin in druge ZI, pri čemer bi morali glavno pozornost nameniti soseskam, kjer je ni ali je je zelo malo. Druga ugotovitev avtorjev je, da so anketiranci kljub majhni količini in slabi kakovosti ZI menili, da pozitivno vpliva na vse vidike njihovega občutka povezanosti z naravo. Navedeno kaže, da bi z zagotavljanjem več in kakovostnejših zelenih površin, parkov in drugih oblik ZI omogočili, da bi se prebivalci počutili še bolj povezani z naravo. Raziskava je poleg tega pokazala, da stanje zelenih površin in prisotnost zelenih površin za preživljanje prostega časa v soseskah najbolj vplivata na to, kako povezani se prebivalci počutijo z naravo. Navedeno nakazuje, da je kakovostna, ustrezno vzdrževana in dobro opremljena ZI, kot so parki in vrtovi, ljudem privlačna in jo radi uporabljajo. Tovrstne zelene površine prebivalce mestnih sosesk spodbujajo k sproščanju, rekreaciji in uživanju v naravi, zaradi česar se počutijo z njo bolj povezani. Urbanisti in mestne oblasti bi zato morali pri prihodnjem načrtovanju in razvoju ZI dati prednost navedenim vidikom. Predstavljena raziskava je imela nekatere metodološke omejitve, zato bi bilo v nadaljnjih raziskavah priporočljivo uporabiti mešane metode, s katerimi bi določili še druge značilnosti ZI, ki vplivajo na to, kako povezani z naravo se počutijo prebivalci mest v Nigeriji in drugje po svetu.

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Kako učinkovite so politike EU za prenovo razvrednotenih območij? Študija primera alpskih industrijskih krajin v malih in srednje velikih mestih

Mala in srednje velika industrijska mesta v Alpah so običajno na obrobnih območjih in so pogosto razvrednotena. Navedeno je večinoma posledica tega, da so se industrijske krajine v zadnjih dveh letih spremenile v razvrednotena območja, katerih prenovo ovira več dejavnikov. Med njimi so upad števila prebivalcev, slabšanje poslovnih priložnosti, draga okoljska sanacija in zahtevno upravljanje preobrazbe. Avtorji v članku proučujejo, katere možnosti za prenovo imajo alpska mesta z razvrednotenimi industrijskimi območji, katero podporo zagotavlja Evropska unija in koliko razvojnega potenciala se dejansko na ta način v celoti uresniči. Obravnavana so štiri obrobna območja v štirih alpskih državah: v Avstriji, Franciji, Italiji in Sloveniji. Izsledki kažejo, da veljavne politike EU nezadostno urejajo razvrednotena območja. Finančne spodbude so razpršene med več viri, zaradi česar jih je težko črpati, poleg tega na proučevanih območjih ni zadostnega znanja in zmogljivosti za pridobitev sredstev, ki jih potrebujejo za to, da svoje zamisli pretvorijo v uspešne zgodbe o prenovi.

Ključne besede: mala in srednje velika mesta, prenova razvrednotenih območij, alpske regije, analiza politik, politike EU

1   Uvod

Štirideset let po začetku pobud za prenovo v Združenem kraljestvu (Oc in Tiesdell, 1991; Parkinson, 1988) je prenova razvrednotenih območij postala ena izmed prednostnih nalog alpskih regij (Modica, 2019). V okviru evropskih programov Interreg so se izvajali nadnacionalni projekti, v katerih je bila prenova obravnavana z večdimenzionalnega vidika (tj. financ, oblikovanja, regionalnega razvoja in okolja) (Wirth idr., 2012; Harfst, 2015; Görmar in Harfst, 2019, Bole idr., 2020; Marot in Harfst, 2020), alpski deležniki pa se z navedeno temo še do pred kratkim niso kaj dosti ukvarjali. V alpskih urbanih središčih (npr. v Torinu, Münchnu in Innsbrucku) je bila prenova razvrednotenih območij že prej prepoznana kot politično in razvojno vprašanje, na obrobnih alpskih območjih pa je bil večji poudarek na spopadanju z demografskimi spremembami, ustvarjanju inovacij in varovanju naravnih virov (Dax, 2008; Steinicke idr., 2012; Humer in Palma, 2013; Bausch idr., 2014; Marot idr., 2015; Chilla idr., 2019). Do zdaj se je tako samo nekaj raziskav, ki so se osredotočale na alpski prostor, ukvarjalo z izzivi, povezanimi z rabo zemljišč, vključno z razvrednotenimi območji (Cortinovis in Geneletti, 2018; Cotic, 2019; Modica, 2019; Migliorati in Veronesi, 2020).

Razvrednotena območja so večplasten pojav. Opredelimo jih lahko kot zemljišča ali objekte, ki so bili zgrajeni in so se nekoč uporabljali, danes pa se morda ne uporabljajo več v celoti. Razvrednoteno območje je lahko prazno, razpadajoče in onesnaženo ter lahko negativno vpliva na okoliški prostor (Alker idr., 2000; Bergatt Jackson idr., 2006), kar pogosto velja za nekdanja industrijska območja (Jigoria-Oprea in Popa, 2017; Walker, 2000). Poznamo številne definicije razvrednotenih območij, v tem članku pa sta izpostavljeni samo dve. Prva je povzeta po Yountovi (2003: 25), ki navaja, da bi morala konceptualna definicija razvrednotenih območij vsebovati nedvoumne izraze ter oblikovalcem politike in izvajalcem omogočiti širok manevrski prostor pri obravnavi dvojne narave razvrednotenih območij kot okoljskih in ekonomskih problemov. Druga definicija, ki naj bi bila med evropskimi državami najbolj znana, izhaja iz projekta Cabernet (2006): razvrednotena območja so tista, ki so skupaj z okoliškimi zemljišči prizadeta zaradi preteklega izrabljanja, so zanemarjena ali premalo izkoriščena, imajo lahko resne probleme z onesnaževanjem, ležijo predvsem na urbanih območjih in je zanje poseg nujen zato, da bi jih lahko spet koristno uporabljali. Številni projekti, ki jih je financirala EU, na primer Clarinet (2002), Cabernet (2006), Cobraman (2009) in Timbre (2012), so se osredotočali na razvrednotena območja in pristope k njihovi prenovi. Thornton idr. (2007) in Vanheusden (2009) so proučevali pobude EU in posameznih držav ter ugotovili, da države članice za reševanje te problematike uporabljajo raznovrstne pobude in

pristope. Med najpomembnejšimi pobudami so bili omenjeni nacionalni programi, na primer nemška prizadevanja, kot jih je predstavila nemška agencija za okolje (Stallmann, 2014), ali francoska prizadevanja (EUGRIS, 2021), ki segajo v osemdeseta leta 20. stoletja. Številne države, tudi Slovenija (Lampič idr., 2017; Cotič in Kerbler, 2019; Cotič in Ažman Momirski, 2020) in Češka (Skrabal, 2020), veliko naporov vlagajo v pripravo registrov in kategorizacijo razvrednotenih območij.

Razvrednotena območja so bila na ravni EU obravnavana s sprejetjem Evropske perspektive prostorskega razvoja (ESDP, 1999), nato pa so bila na podlagi koncepta teritorialne kohezije vključena v kohezijsko politiko. V Teritorialni agendi 2020 (Territorial agenda of the European Union 2020, 2011) so bila razvrednotena območja prepoznana kot območja, katerih vrednost bi se lahko povečala z razvojnimi pobudami. V Teritorialni agendi 2030 (Territorial agenda 2030, 2020) so območja, za katera sta značilna gospodarska preobrazba in industrijski prehod, omenjena kot območja z različnimi razvojnimi potenciali in izzivi. Poleg tega agenda podpira lokalni razvoj in izkoriščanje razvojnih potencialov regij EU. Harfst idr. (2020) so razvrednotena območja opredelili kot notranji potencial malih in srednje velikih mest, za katera se je v angleščini uveljavila kratica SMESTO (ang. *small- and medium-sized towns*), ta je bila prvič uporabljena v okviru projekta ESPON: The Role of Small and Medium-Sized Towns (Vloga malih in srednje velikih mest) (ESPON, 2006). Harfst idr. (2020) so razvrednotena območja najprej uvrstili med naravne potenciale, nato pa so navedli, da so najpomembnejši dejavniki, ki omejujejo prenovo takih območij, pomanjkanje človeških virov in znanja o tem, kako učinkovito črpati sredstva EU.

Avtorji v članku obravnavajo prizadevanja za prenovo razvrednotenih območij v alpskem prostoru. Nekateri raziskovalci (Sielker, 2016; Teston in Bramanti, 2018) so področje upravljanja alpskega prostora ocenili kot zahtevno in večslastno. Stalnica na področju upravljanja tega prostora je program Območje Alp, ki strateško in finančno podpira nadnacionalne projekte. Razvrednotena območja so v programskem obdobju 2014–2020 spadala v prednostno področje 3 – Alpski prostor, primeren za bivanje, in njegov cilj 1: Trajnostno vrednotenje kulturne in naravne dediščine v alpskem prostoru. V raziskavi, predstavljeni v tem članku, so bila razvrednotena območja opredeljena kot alpske industrijske krajine. Navedeni izraz se nanaša na okvir raziskav, ki so jih izvedli partnerji projekta trAILs v okviru programa Interreg Območje Alp (2018–2021) in v katerih so podrobno proučili možnosti preobrazbe in prenove nekdanjih malih in srednje velikih industrijskih mest v alpskih regijah s prostorskega, socialnega, gospodarskega in okoljskega vidika ter z vidika ocenjevanja politik (Weilacher idr., 2021). Da bi pojasnili okvir, v katerem se sprejemajo pobude za prenovo v alpskem prostoru, so avtorji v tem članku

najprej proučili, kako dobro zdajšnje politike EU usmerjajo in pospešujejo prenovo industrijskih krajin, nato so analizirali državne upravne okvire, na katere se morajo zanašati regije, nazadnje pa so se osredotočili še na znane finančne instrumente in spodbude EU na teh območjih ter proučili, koliko jih je ovrednotenih kot podporni instrument za prenovo razvrednotenih območij in v kakšnem obsegu. Raziskava temelji na štirih študijah primera, v katerih avtorji proučujejo razmere v mestih Eisenerz na avstrijskem Štajerskem, L'Argentière-la-Bessée v francoskem departmaju Hautes-Alpes, Borgo San Dalmazzo v italijanski pokrajini Cuneo in Tržič na Gorenjskem. Pri analizi je bil uporabljen pristop od spodaj navzgor, saj so regionalne razvojne agencije navedena območja izbrale na podlagi splošnih projektnih meril (tj. mesto ali širše območje z večjo razvrednoteno industrijsko krajino, potrebno prenove).

V članku je najprej predstavljena uporabljena metodologija, nato okvir EU, na koncu pa še rezultati študij primera. V razpravi so se avtorji osredotočili na izkušnje, pridobljene v alpskem prostoru in širše, ter na dejavnike, ki ovirajo prenovo alpskih industrijskih krajin na izbranih območjih.

2 Metoda

Raziskava je bila metodološko razdeljena v tri faze. Najprej je bila opravljena kabinetna raziskava industrijskih krajin v malih in srednje velikih alpskih mestih na naddržavni ravni (tj. na

ravni EU). Sledila je podrobnejša analiza območij študij primera, v kateri so avtorji proučili veljavne državne, regionalne in lokalne politike ter oblikovali vprašalnik, s katerim so želeli izvedeti več o akterjih in pobudah na regionalni in lokalni ravni. Vprašalnik so izpolnili štirje predstavniki regionalnih razvojnih agencij (Krošelj idr., 2020).

Analiza politik EU se je osredotočala na pregled dokumentov, povezanih s politiko na ravni EU in makroregij, ki se nanaša na alpske industrijske krajine. Avtorji so najprej zbrali dokumente s področij, pomembnih za prenovo te krajine, in jih po vsebini razdelili na splošno področje (krovni dokumenti, kot so ustave in celoviti strateški načrti, tudi na področju prostorskega in regionalnega načrtovanja) ter na področja industrije, biotske raznovrstnosti, energetike, kulture in kmetijstva. Avtorji so nameravali med pomembnejša področja vključiti tudi turizem, a niso našli nobene skupne politike EU, ki bi se nanašala izključno na turizem.

V prvi fazi so pregledali 16 dokumentov, ki so vključevali 12 strategij, tri pogodbe in en letni program dela s področja kulturne politike (glej preglednico 1). Večina pregledanih dokumentov se je nanašala na obdobje 2011–2020, kar sovpada s proračunskim obdobjem EU (2014–2020) in strategijo Evropa 2020 (2010). Starejši dokumenti, kot sta Alpska konvencija (Alpine convention, 2011) in Evropska konvencija o krajini (European landscape convention, 2000), so bili v pregled vključeni zato, ker so obravnavali pravo geografsko območje

Preglednica 1: Pregledani dokumenti, razdeljeni po področjih

Področje	Politike
Splošno	Strategija Evropa 2020 (Europe 2020 Strategy, 2010)
	DG REGIO: Strateški načrt 2016–2020 (Evropska komisija, 2016b)
Načrtovanje (prostorsko, regionalno)	Teritorialna agenda Evropske unije 2020 (Territorial agenda of the European Union 2020, 2011)
	Leipziška listina o trajnostnih evropskih mestih (Leipzig charter on sustainable European cities, 2007)
	Alpska konvencija (Alpine Convention, 2011)
	Strategija EU za alpsko regijo – EUSALP (EUSALP, 2014)
	EUSALP: akcijska skupina 2 (Evropska komisija, 2015)
	Evropska konvencija o krajini (European landscape convention, 2000)
Industrija	DG GROW: Strateški načrt 2016–2020 (Evropska komisija, 2016a)
	Prenovljena strategija industrijske politike EU (A renewed EU industrial policy strategy, 2017)
	Strategije za odporno, vključujočo in trajnostno rast (Strategies for resilient, inclusive and sustainable growth, 2017)
Biotska raznovrstnost	Strategija EU za biotsko raznovrstnost do leta 2020 (EU Biodiversity strategy to 2020, 2011)
Energetika	Energija 2020 (Energy 2020, 2011)
Kultura	Nova evropska agenda za kulturo (Evropska komisija, 2018b)
	Letni program dela Ustvarjalne Evrope za 2019 (Evropska komisija, 2018a)
Kmetijstvo	Skupna kmetijska politika (Evropska komisija, 1999)

ali so bili najpomembnejši dokument na temo krajin. Večino dokumentov je odobrila Evropska komisija, pripravili pa so jih njeni generalni direktorati ali jih je sprejel Svet Evrope. Ker se je v času raziskave že približevalo naslednje proračunsko obdobje (2021–2027), so avtorji na kratko pregledali tudi novejše politike, zlasti najnovejšo kohezijsko politiko kot instrument, ki podpira prostorski razvoj malih in srednje velikih mest. Navedenih politik niso proučili na enak način kot že prej omenjene, saj takrat še niso bile na voljo končne različice.

Analiza je temeljila na iskanju ključnih besed v izbranih angleških različicah dokumentov politik. Ključne besede so bile izbrane na podlagi pogostih izrazov in opisov, povezanih z alpsko industrijsko krajino, ki so jih odobrili strokovnjaki v projektni skupini. Uporabljene so bile te ključne besede v angleščini: *reactivation, reconversion, redevelopment, regeneration, remediation, restoration, reuse, brownfield, degradation, derelict, fallow land, marginal, pollution, polluted, vacant, wasteland, Alps, alpine, cultural heritage, industry, industrial, landscape, mountain, periphery, peripheral, rural* in *small and medium-sized towns*.

Podatki o mestih, izbranih za študije primera, so bili analizirani na podlagi regionalnih poročil projektnih partnerjev in vprašalnikov, ki so se osredotočali na to, kako uspešne so regije pri izvajanju pobud EU. Regionalna poročila so vsebovala informacije o upravnem okviru regij: o upravnih ravneh, upravljanju, načrtovalskih ali drugih instrumentih, mreži regionalnih in lokalnih akterjev ter njihovem interesu in stopnji vpliva pri odločanju o prenovi razvrednotenih območij. Z vprašalniki pa so bili zbrani bolj ciljno usmerjeni in podrobnejši podatki, med drugim tudi o osebnih izkušnjah z uporabo spodbud EU za prenovo razvrednotenih območij in o trenutnih izzivih, s katerimi se regije spopadajo. Za lažjo primerjavo proučevanih regij so podatki temeljili na ravneh klasifikacije teritorialnih enot NUTS 2 in NUTS 3.

3 Proučevana območja

Proučevana območja so manjša območja blizu glavnih mest držav (glej sliko 1). Njihova glavna skupna značilnost je industrijska preteklost, a njihove gospodarske dejavnosti niso vedno enake. Gospodarstvo na proučevanem območju v Avstriji temelji na proizvodni dejavnosti, ki postopno prehaja v servisni sektor, na izbranih območjih v Franciji in Sloveniji pa se gospodarstvo iz industrije preusmerja v turizem. Stopnja brezposelnosti je najvišja na avstrijskem Štajerskem, najnižja pa na Gorenjskem. Vsem območjem so skupne težave pri preobrazbi in odseljevanje zlasti mladih v večje mestne aglomeracije.

3.1 Eisenerz in območje nekdanjega plavža v Münichtalu (Avstrija)

Gospodarstvo v mestu se danes iz industrije preusmerja v turizem. Za razvrednoteno območje nekdanjega plavža v predelu Münichtal se je nedavno zanimalo mnogo vlagateljev, zanj so bili izdelani navdihujoči razvojni načrti in predstavljene številne zamisli (npr. zasnova preoblikovanja Eisenerza iz leta 2006), dejansko pa je bilo izvedenih le malo sprememb. Glavna težava so onesnaženost okoliškega prostora, visoki stroški sanacije in še ne raziskane priložnosti, ki jih lahko območje ponudi morebitnim vlagateljem (Pechhacker in Tiffner, 2019).

3.2 L'Argentière-la-Bessée in nekdanja tovarna Péchiney (Francija)

Podobno kot v Eisenerzu se tudi to mesto preusmerja v športni turizem. Razvrednoteno industrijsko območje na bregu reke Durance je bilo z nedavno sanacijo, ki jo je izvedla javna agencija za medobčinsko sodelovanje, že uspešno prenovljeno. Sanacija tovrstnih industrijskih območij je v Franciji splošna praksa, podprta z državnimi finančnimi spodbudami. Čeprav tovrstni programi financirajo samo začetne faze sanacije, prihodnjim vlagateljem zmanjšajo vsaj nekaj finančnega bremena. Današnje stavbe in odprt prostor na saniranem območju v glavnem uporabljajo lokalna mala in srednje velika podjetja, od katerih se mnoga ukvarjajo z industrijskimi in turističnimi storitvami in proizvodi (Kleitz, 2019).

3.3 Borgo San Dalmazzo in cementarna Italcementi (Italija)

Mesto proučuje nove razvojne priložnosti, ki jih omogoča gastronomija, in možnosti prenove območja cementarne v turistične namene. Trenutno cementarna še vedno delno obratuje. Ker ni vseh dokumentov politik, ki bi reševali problematiko razvrednotenih industrijskih območij, lokalni uradniki in vlagatelji nimajo prave podpore za prenovo območja. Poleg tega lokalne oblasti nimajo ustreznih instrumentov ali pristojnosti, da bi lahko preprečile onesnaževanje okolja, ki ga povzroča industrijska raba območja (Abluton in Curato, 2019).

3.4 Tržič ter nekdanja bombažna predilnica in tkalnica (Slovenija)

Razvrednoteno območje nekdanje Bombažne predilnice in tkalnice Tržič je bilo pred kratkim uspešno prenovljeno, tako da čedalje več njenih nekdanjih površin zdaj uporabljajo lokalna mala in srednje velika podjetja. Njena preobrazba je primer dobre prakse. Kompleks je v skupni lasti občine in zasebnega

Kako učinkovite so politike EU za prenovo razvrednotenih območij? Študija primera alpskih industrijskih krajin ...

31
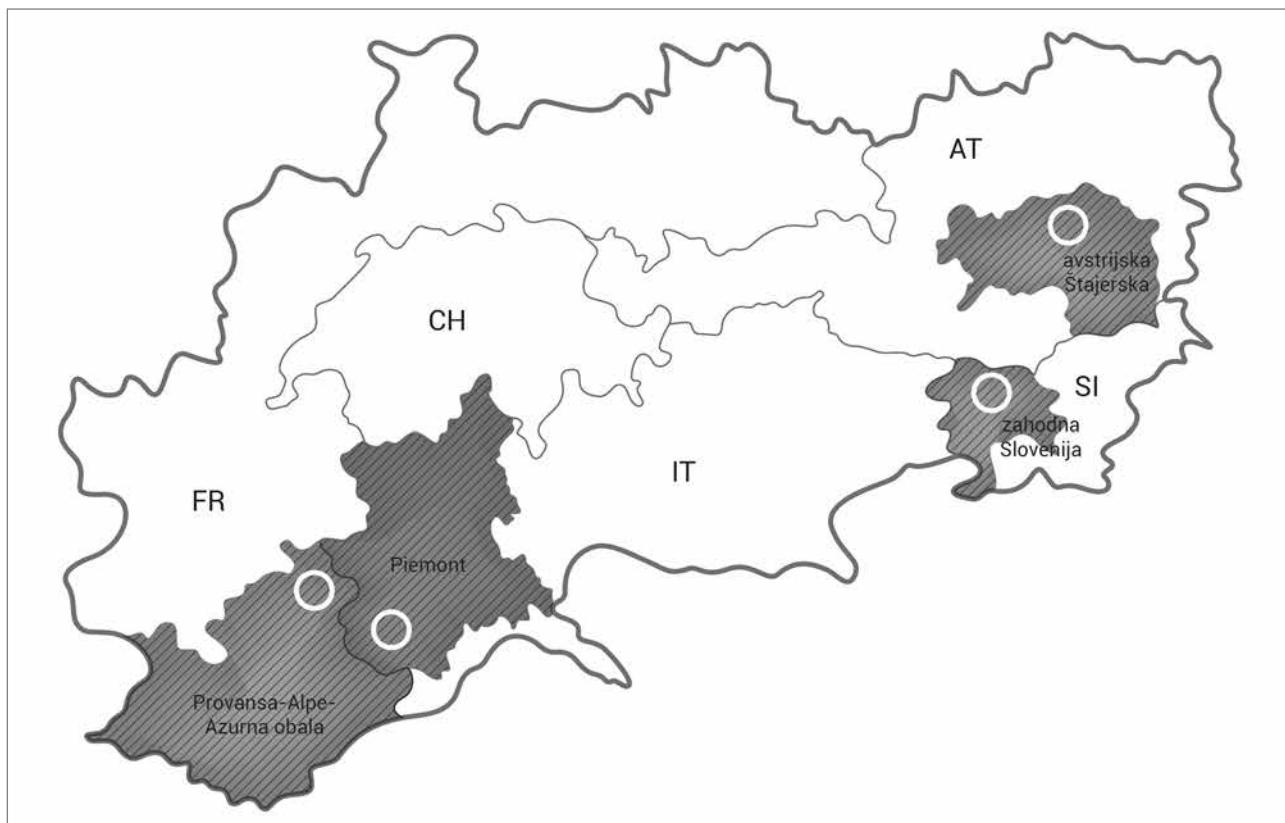
Slika 1: Območja študij primera na ravni NUTS 2. Z belimi krogci so označena proučevana mala in srednje velika mesta (ilustracija: Manca Krošelj)

investitorja, lokalni uradniki pa se osredotočajo predvsem na prihodnje priložnosti, ki jih kompleks omogoča za trajnostni kulturni in športni turizem na tem območju. S tem v zvezi so bili izvedeni že številni posegi, na podlagi uspešnega javno-zasebnega partnerstva pa so bili sprejeti prostorski načrti, ki predvidevajo večnamensko rabo omenjenega prostora (stanovanja, trgovine in storitve splošnega pomena). Glavna težava so negotove prihodnje naložbe v to območje, saj regionalna uprava ne more samostojno odločati o strateški podpori dolgoročni prenovi razvrednotenih območij (Brankovič idr., 2019).

4 Rezultati analize politik

4.1 Obravnava problematike razvrednotenih območij na ravni EU

Avtorji so poskušali upravičenost alpske industrijske krajine dokazati z analizo vključenosti izrazov, ki se običajno uporabljajo v povezavi s to krajino, v dokumentih na naddržavni ravni upravljanja. V ta namen so proučili, katere politike in posledično katera področja najbolj podpirajo teritorialni razvoj malih in srednje velikih alpskih mest. Na podlagi iskanja in analize ključnih besed so ugotovili, da najbolj celovito podporo zagotavlja področje načrtovanja, in sicer Teritorialna agenda

Evropske unije 2020 (Territorial agenda of the European Union 2020, 2011). Analiza, opravljena na naddržavni ravni, kaže, da so v dokumentih vključene ključne besede v raznih kombinacijah, hkrati pa dokazuje, da je alpska industrijska krajina večplastna tema, ki jo obravnavajo številne stroke.

Na ravni EU so avtorje zanimale tri prvine politik: prepoznavanje tematike razvrednotenih območij in njena vključenost v veljavne dokumente politik, primernost ciljev politik za prenovo razvrednotenih območij in raznolikost finančnih spodbud, namenjenih razvrednotenim območjem.

4.2 Prepoznavanje teme razvrednotenih območij

Ključne besede *brownfield* (razvrednoteno območje), *redevelopment* (prenova) in *remediation* (sanacija) se presenetljivo niso pojavile v nobenem pregledanem dokumentu. Nekatere ključne besede so bile lahko preveč specifične, vendar sta izraza *brownfield* in *razvrednoteno območje* danes že dobro znana in se po vsej Evropi pogosto uporabljata za območja, ki se spopadajo s številnimi razvojnimi izzivi (Alker idr., 2000). V nasprotju z navedenim je izraz *small and medium-sized towns* (mala in srednje velika podjetja), ki se nanaša na predmet predstavljene raziskave, omenjen samo v Teritorialni agendi Evropske

unije 2020 (Territorial agenda of the European Union 2020, 2011), kjer je opredeljen kot »območja, ki zaostajajo in potrebujejo posebno pozornost z vidika razvoja«. Politike na splošno ne vsebujejo konotacij v zvezi z razvrednotenimi območji. Skupina ključnih besed brez konotacij se nanaša samo na morfološke značilnosti ali rabo prostora, npr. *industry* (industrija), *rural* (podeželsko) in *landscape* (krajina). Najdenih je bilo nekaj ključnih besed s pozitivno konotacijo, kot na primer *transformation* (preobrazba) in *transition* (prehod), ključnih besed z negativno konotacijo pa avtorji niso našli. Izjema je bila samo beseda *degradation* (razvrednotenje), ki se je pogosto pojavila na različnih področjih. Raba navedenega izraza v dokumentih politik nakazuje, da so razvrednotena območja v politikah prepoznana kot izziv ali problem. Zelo pogost izraz je bila *industrija*, kar je bilo pričakovano, glede na to, da so razvrednotena območja industrijskih regij običajno posledica nekdanje industrijske dejavnosti ali priložnost za prenovo, zlasti v okviru ponovne industrializacije EU, uvedbe konceptov regionalnega razvoja, kot je industrija 4.0, in/ali spodbujanja industrijske kulture.

Največ kombinacij ključnih besed je bilo najdenih v Teritorialni agendi Evropske unije 2020 (Territorial agenda of the European Union 2020, 2011), saj vsebuje smernice za regionalni razvoj in je zato že sama po sebi bolj celovita, in v Skupni kmetijski politiki (Evropska komisija, 1999), ki celovito obravnava različne vidike podeželskega in regionalnega razvoja.

4.3 Določitev ciljev politik

Skupaj so pregledani dokumenti vsebovali 92 ciljev in ukrepov, od katerih se jih je 30 nanašalo na alpsko industrijsko krajino. Večina je bila najdena v politikah na področjih načrtovanja in industrije. Splošno področje ter področja kulture, biotske raznovrstnosti in kmetijstva so imela vsaka po nekaj ciljev in ukrepov, ki so se nanašali na alpsko industrijsko krajino, najmanj pa jih je bilo najdenih v politikah na področju energetike. Na področju načrtovanja so avtorji našli najbolj celostne cilje, ki so se nanašali na skladen in trajnosten razvoj (alpskega) prostora, saj so se osredotočali na povečanje biotske raznovrstnosti, izboljšanje ozemeljskega povezovanja ter povezovanje ekoloških, krajinskih in kulturnih vrednot posameznih območij. Poleg tega podpirajo trajnostno rast, saj spodbujajo inovacije in preobrazbo industrijske zgradbe krajin, kar omogoča ustvarjanje novih delovnih mest ter opolnomočenje prebivalcev in podjetij.

Izjema je bilo področje prostorskega načrtovanja, na katerem avtorji niso našli pravno zavezujočih politik in posledic na naddržavni ravni. EU na navedenem področju ni sprejela akcijskih

načrtov, zato so avtorji kot cilje in ukrepe, ki se nanašajo na alpsko industrijsko krajino, upoštevali smernice, objavljene v Teritorialni agendi EU 2020 (Territorial agenda of the European Union 2020, 2011), Alpski konvenciji (Alpine convention, 2011) in Strategiji EU za alpsko regijo (EUSALP, 2014). Pri pregledu drugih področij (biotska raznovrstnost, kultura, kmetijstvo in energetika) niso odkrili ciljev in ukrepov, ki bi se neposredno nanašali na alpsko industrijsko krajino, razen tistih že omenjenih.

4.4 Pregled razpoložljivih finančnih spodbud

Na ravneh politik EU in v okviru skladov EU so na voljo najrazličnejše finančne spodbude, iz katerih se lahko črpajo sredstva za preobrazbo razvrednotenih območij alpske industrijske krajine. Poleg tega je namen proračuna EU izvajati politike in reševati izzive na podlagi dodeljevanja virov za naložbe, kar zagotavlja stabilnost načrtovanja po celotnem ozemlju EU. Dve tretjini proračuna EU se upravljata v partnerstvu z državami članicami prek evropskih strukturnih in investicijskih skladov. V povezavi z alpsko industrijsko krajino so avtorji proučili razpoložljivost in uporabnost tovrstnih finančnih spodbud za preobrazbo razvrednotenih območij.

Najpomembnejši skladi za alpsko industrijsko krajino so Evropski sklad za regionalni razvoj, Evropski socialni sklad, Kohezijski sklad in Evropski kmetijski sklad za razvoj podeželja. Največ finančnih spodbud za alpsko industrijsko krajino zagotavlja kohezijska politika, ki pokriva okoljske, gospodarske, socialne in druge vidike prenove območij. Najbolj vsestransko finančno podporo za alpsko industrijsko krajino zagotavlja program Interreg v okviru Evropskega sklada za regionalni razvoj, ki podpira sodelovanje evropskih regij s programi financiranja projektov. Navedeni finančni instrument podpira samo razvoj mehkih rešitev, kot so študije, platforme za mreženje, podatkovne zbirke in akcijski načrti, ki večinoma zahtevajo delno sofinanciranje. Poleg tega je konkurenca za pridobitev sredstev zelo močna, pri čemer se od prijaviteljev ali konzorcija partnerjev pričakuje, da imajo ustrezne izkušnje, spretnosti in motivacijo, da se uspešno prijavijo na različne razpise.

Iz navedenega je razvidno, da razvrednotena območja na ravni politik EU niso pomembna tema, hkrati pa ni ciljno usmerjene politike, ki bi se osredotočala samo nanje. Posredno so na voljo številne možnosti financiranja pobud za preobrazbo razvrednotenih območij, a so razpršene med programe in politike EU (npr. sklad za pravični prehod rudarskih območij v Evropi v okviru GD REGIO ali celostne teritorialne naložbe v trajnostno prenovo mest v okviru kohezijske politike).

5　Primerjava štirih študij primera

Vsa štiri izbrana mesta imajo bogato industrijsko zgodovino. Poleg vplivov razvrednotenih območij, ki se lahko razločno vidijo, jih pestijo tudi manj vidne težave, kot je onesnaženost, poleg tega so tudi stroški njihove prenove tako visoki, da zasebni sektor noče prevzeti finančne odgovornosti za njihovo preobrazbo. Posledično se morajo mala ali srednje velika mesta z drago prenovo ukvarjati po svojih najboljših močeh. Zaradi pomanjkanja služb kot posledice globalizacije gospodarstva se mala in srednje velika mesta spopadajo z begom možganov, zaradi česar niso zanimiva za naložbe in ugodna za prebivanje.

Z analizo štirih precej različnih upravnih okvirov so avtorji ugotovili, kako delujejo upravne strukture, akterji in izvedbena

orodja ter kdo ima največ pristojnosti in/ali virov za usmerjanje razvoja razvrednotenih območij. Na podlagi navedenega so pridobili ključne informacije, potrebne za razumevanje trenutnih praks preobrazbe na nižjih upravnih ravneh. Izsledki so pokazali, da imajo štiri regionalne razvojne agencije različne izkušnje z obravnavo razvrednotenih območij. Najpomembnejši akterji za prenovo razvrednotenih območij so upravni organi in ustanove na regionalni ali lokalni ravni, lastniki območij in lokalni prebivalci, na katere posamezno razvrednoteno območje neposredno vpliva.

Analiza politik na štirih proučevanih območjih je pokazala podobne izsledke kot analiza politik na naddržavni ravni. Nobena od držav ni poročala o kateri koli državni politiki, posebej namenjeni industrijskim ali drugim razvrednotenim območ-

Preglednica 2: Razlogi za nečrpanje sredstev iz posameznih finančnih spodbud

Spodbuda	Izzivi in ovire
Konkurenčnost podjetij in MSP (Cosme)	Pomanjkanje povezav s potencialnimi projektnimi partnerji (FR)
	Prezapletni prijavni obrazci (FR)
	Pomanjkanje človeških virov (FR)
	Pomanjkanje strokovnega znanja (SI)
Instrument za povezovanje Evrope	Pomanjkanje povezav s potencialnimi projektnimi partnerji (FR, IT)
	Prezapletni prijavni obrazci (FR)
	Pomanjkanje človeških virov (FR)
	Pomanjkanje strokovnega znanja (IT)
Ustvarjalna Evropa	Pomanjkanje povezav s potencialnimi projektnimi partnerji (AT, FR, SI)
	Prezapletni prijavni obrazci (FR)
	Pomanjkanje človeških virov (FR)
	Pomanjkanje strokovnega znanja (SI)
	Prenizka stopnja sofinanciranja (IT)
Obzorje 2020	Pomanjkanje povezav s potencialnimi projektnimi partnerji (AT, FR, IT, SI)
	Prezapletni prijavni obrazci (FR, IT, SI)
	Pomanjkanje človeških virov (FR, IT)
	Pomanjkanje strokovnega znanja (SI, IT)
	Omejena narava finančne spodbude (brez sredstev za naložbe) (IT, SI)
	Močna konkurenca (nizka verjetnost uspeha) (IT)
	Preveč administrativnih bremen v izvedbeni fazi (SI)
Leader	Pomanjkanje povezav s potencialnimi projektnimi partnerji (FR)
	Prezapletni prijavni obrazci (FR)
	Pomanjkanje človeških virov (FR)
Life	Pomanjkanje povezav s potencialnimi projektnimi partnerji partner (FR, SI)
	Prezapletni prijavni obrazci (FR, SI)
	Pomanjkanje človeških virov (FR)
	Pomanjkanje strokovnega znanja (SI)
	Zahtevano predfinanciranje (SI)
	Prenizka stopnja sofinanciranja (IT)
	Preveč administrativnih bremen v izvedbeni fazi (SI)

Opomba: AT: Avstrija, FR: Francija, IT: Italija, SI: Slovenija.

jem. Strateški dokumenti o tej problematiki so na lokalni in regionalni ravni (npr. regionalni razvojni programi, strategija Leader/CLLD ali občinski prostorski načrti). Večja podpora prenovi razvrednotenih območij je predvidena v okviru spodbud evropske kohezijske politike, kot so programi Interreg, Cosme in Ustvarjalna Evropa. Navedeno je razvidno tudi iz nedavnih aktivnosti, ki jih podpirajo našteti programi: uporaba koncepta kulturne dediščine kot gonilo turizma na izbranem območju (Avstrija, Slovenija, Italija in Francija), aktivacija razvrednotenih območij z endogenimi viri v partnerstvu z lokalnimi prebivalci (Slovenija) in inovativni pristopi k prenovi območij na podlagi pilotnih naložb (Slovenija) (Abluton in Curato, 2019; Brankovič idt., 2019; Kleitz, 2019; Pechhacker in Tiffner, 2019).

Rezultati ankete so pokazali, da je bilo z izjemo slovenskega primera iz spodbud EU v finančni perspektivi 2014–2020 za prenovo razvrednotenih območij črpanih le malo sredstev. Poleg programov Leader/CLLD in Interreg so bili glavni viri sredstev predstavljenih projektov prenove razvrednotenih območij državne spodbude. Analiza vprašalnikov je pokazala še, da črpanje sredstev omejujejo številni dejavniki: pomanjkanje povezav s potencialnimi projektnimi partnerji, prezapleteni prijavni obrazci, pomanjkanje človeških virov in pomanjkanje strokovnega znanja med potencialnimi projektnimi partnerji. Da bi lahko premagali te ovire, bi morale EU ali posamezne državne ustanove ponuditi več podpore za izboljšanje znanja regionalnih akterjev (preglednica 2).

Na podlagi izbora uporabnih in načrtovanih finančnih spodbud ter navedenih izzivov lahko sklepamo, da je bolj kot število in raznovrstnost instrumentov težava sposobnost regionalnih razvojnih agencij, da črpajo sredstva, ki jih ti instrumenti zagotavljajo. Regionalne razvojne agencije obremenjujejo prezapleteni prijavni postopki, poleg tega večina nima zadostnega strokovnega znanja, partnerske mreže ali človeških virov, da bi se lahko uspešno potegovale za finančne spodbude. Čeprav je verjetnost za uspeh v zahtevnih programih, kot sta Obzorje 2020 in Interreg, majhna, se agencije vseeno potegujejo za sredstva iz teh programov, saj so namenjena tudi prenovi razvrednotenih območij.

6 Razprava

V skladu z domnevami naddržavna raven daje splošen okvir in usmeritve, ki naj bi jih države članice upoštevale in vključile v svoje politike. Razpoložljivost finančnih spodbud še ne zagotavlja, da so jih potencialni upravičenci tudi sposobni črpati. Analiza naddržavnih politik za obdobje 2014–2020 je pokazala, da v navedenem obdobju ni bilo strateških politik, neposredno namenjenih prenovi razvrednotenih območij. Podobno so avtorji ugotovili tudi za notranje politike posame-

znih držav. Na regionalni in lokalni ravni so našli posamezne primere strateških dokumentov, in sicer večinoma v okviru regionalnih razvojnih programov, strategij Leader/CLLD in občinskih prostorskih načrtov.

Avtorji so ugotovili, da podpora, ki jo EU zagotavlja prek programov, kot so Interreg, Cosme in Obzorje 2020, ni uporabna samo za preobrazbo razvrednotenih območij, ampak za mala in srednje velika mesta na splošno, saj vključuje bolj celovit pristop. Čeprav omenjena podpora ni neposredno namenjena razvrednotenim območjem, se regije ter njihova mala in srednje velika mesta spopadajo z večplastnimi težavami, povezanimi s preobrazbo, ki bi jih bilo treba strateško in ciljno obravnavati, da bi se za razvrednotena območja zagotovile trajnostne rešitve. Dobrodošlo bi bilo prednostno dodeljevanje virov za najrazličnejše cilje, povezane s preobrazbo tovrstnih območij, kot so varovanje okolja, ohranjanje kulturne dediščine, razvoj obnovljivih virov energije in izboljšanje ozemeljske kohezije.

Čeprav so na voljo številne možnosti financiranja preobrazb, so izsledki ankete pokazali, da se ne izkoriščajo dovolj. Uporaba finančnih spodbud je odvisna od tega, kako dobro regionalne razvojne agencije poznajo postopke za njihovo pridobitev in koliko izkušenj imajo s tem. Dejavniki, ki zavirajo črpanje finančnih spodbud, vključujejo pomanjkanje povezav s potencialnimi projektnimi partnerji, prezapletene prijavne obrazce, pomanjkanje človeških virov in pomanjkljivo strokovno znane partnerjev. EU ali državne ustanove bi morale nameniti pozornost navedenim dejavnikom in zagotoviti ustrezno podporo za izboljšanje strokovnega znanja akterjev, ki se ukvarjajo s tovrstnimi zadevami.

Zaradi izboljšav v novi kohezijski politiki, ki se nanašajo na regije in zagotavljajo boljše možnosti za uspešno izvedbo projektov, avtorji pričakujejo, da se bodo stvari v prihodnje spremenile. Ker je v novi kohezijski politiki število tematskih ciljev zmanjšano z enajst na pet, avtorji pričakujejo tudi več ciljno usmerjenih instrumentov. Navedeno bi regijam omogočilo, da se osredotočijo na samo en instrument, tistega, ki najbolj ustreza njihovim zmogljivostim, strokovnemu znanju in izkušnjam. Hkrati bi morale države več truda vložiti v podpiranje preobrazbe regij, in sicer na samo s spremljanjem in pripravo registrov razvrednotenih območij, kot to počne Slovenija, ampak tudi z zagotavljanjem ciljno usmerjenih finančnih spodbud. Kot je razvidno iz novejših politik, se poskuša oblikovati bolj ciljno usmerjen pristop k preobrazbi razvrednotenih območij (glej preglednico 3). Vse tri politike, omenjene v preglednici 3, obravnavajo vprašanja, povezana z razvojem in prenovo mest ali upravljanjem zemljišč. Teritorialna agenda 2030 (Territorial agenda 2030, 2020) omenja prenovo razvrednotenih območij, Nova leipziška listina (The new Leipzig charter, 2020) daje prednost prenovi razvrednotenih območij ter krepitvi zemlji-

Preglednica 3: Novejše politike, ki namenjajo pozornost prenovi razvrednotenih območij

Politika	Primer ciljev, neposredno usmerjenih v prenovo razvrednotenih območij
Teritorialna agenda 2030 (Territorial agenda 2030, 2020)	Zdravo okolje: boljše, okolju prijazne možnosti preživljanja, podnebno nevtralna in odporna mesta in regije. Cilj predvideva izgradnjo odpornih skupnosti ter razvoj lokalnih in regionalnih strategij kot odgovor na podnebne spremembe in izgubo biotske raznovrstnosti, vključno s prenovo razvrednotenih območij.
Nova leipziška listina (The new Leipzig charter, 2020)	Opolnomočenje mest za preobrazbo: krepitev urbanega upravljanja za zagotavljanje skupnega dobra – aktivna in strateška zemljiška politika in načrtovanje rabe zemljišč. Cilj predvideva prožen in dolgoročen razvoj, pri čemer imata prednost prenova in kompleksna regeneracija mestnih območij, vključno z razvrednotenimi zemljišči.
Strategija EU za biotsko raznovrstnost do leta 2030 (EU Biodiversity strategy to 2020, 2020)	Načrt EU za obnovo narave: obnova ekosistemov na kopnem in morju – obravnava porabe zemljišč in obnovo talnih ekosistemov. Politika priznava potrebo po krepitvi prizadevanj za sanacijo onesnaženih razvrednotenih območij. Za reševanje navedenih izzivov je bila v okviru politike posodobljena Tematska strategija EU za tla do leta 2030, ki je ključen dokument navedene politike, v njegovi novi različici pa bodo sprejeti tudi konkretni ukrepi.

ške politike in načrtovanja rabe zemljišč, Strategija EU za biotsko raznovrstnost do leta 2030 (EU Biodiversity strategy to 2020, 2020) pa se osredotoča na prekritost tal z neprepustnimi materiali, porabo zemljišč in preprečevanje pozidave kmetijskih površin ter spodbuja prenovo razvrednotenih območij.

Glede upravnih okvirov se države samo zato, ker veljajo za alpske, še ne razlikujejo od katerih koli drugih držav, saj so avtorji ugotovili, da državna ali nadregionalna raven ni tako pomembna kot lokalna. Upravne enote, ki imajo po navadi glavno vlogo pri usmerjanju prenove razvrednotenih območij, so občine. Države se večinoma zanašajo na pristop od spodaj navzgor, pri čemer pa so odvisne od finančne in regulativne podpore držav. Francija je edina država, v kateri se na državni ravni izvaja mehanizem, ki zajema vse upravne ravni in neposredno podpira sanacijo razvrednotenih območij, izvajata ga ministrstvo za ekološki prehod ter ministrstvo za visoko šolstvo, raziskave in inovacije prek francoske agencije za ekološki prehod (ADEME, 2021), ki razvija znanje in hkrati dodeljuje finančno pomoč projektom prenove razvrednotenih zemljišč na nekdanjih industrijskih območjih.

Avtorji so pričakovali večjo vlogo slovenskih regionalnih razvojnih agencij, saj so odgovorne za pripravo regionalnih razvojnih programov, vključno s sedemletnim strateškim načrtom črpanja sredstev EU. Čeprav bi morale občine same poskrbeti za to, da izboljšajo svoje znanje, spretnosti in zmogljivosti za uspešno prenovo razvrednotenih območij, bi morale biti tudi finančne spodbude prijaznejše za uporabo, zlasti ker aktivnosti, povezane s preobrazbo, zahtevajo ogromno finančnih virov in velik vložek nepovratnih sredstev za pripravo zemljišč za nadaljnji razvoj. Glede narave rešitev, sprejetih za razvrednotena območja, trenutne preobrazbene prakse na pilotnih območjih vključujejo predvsem mehke rešitve, kot so akcijski načrti, študije, sodelovalne platforme in podatkovne zbirke. Avtorji domnevajo, da so razlog za navedene netrajnostne pra-

kse omejitve sedemletne perspektive agende EU, ki regionalne razvojne agencije sili v ciklično iskanje virov za kratkoročne ali mehke rešitve, in dejstvo, da so razvrednotena območja prepoznana kot priložnosti za razvoj alpske industrijske krajine.

7 Sklep

Analiza politik v predstavljeni raziskavi kaže, da so razvrednotena območja in še zlasti alpske industrijske krajine kot tema politike trenutno razpršeni med več sektorjev ali področij. Da bi odpravili navedeno razpršenost, ki je prepoznana tudi kot eden izmed razlogov za slabše črpanje sredstev, bi morala EU pripraviti posebno strategijo, ki bi jo spremljali tudi finančni ukrepi. Trenutno se preobrazba osredotoča na zelo omejen obseg aktivnosti ter večinoma vključuje posege za povečanje energijske učinkovitosti in energetske inovacije, zanemarja pa mehkejše pristope, kot je turizem. Vsa proučevana območja so v Alpah, a so v različnih fazah preobrazbe. Še pomembnejše pa je, da imajo različne zmogljivosti za proaktivno odzivanje na priložnosti za preobrazbo, zlasti z vidika črpanja sredstev.

Vsem proučevanim območjem malih in srednje velikih mest je skupno to, da spadajo v EU, pri čemer so nekatera bolj iznajdljiva kot druga. Z vidika finančnih spodbud, ki jih črpajo, in ravni znanja, avtorji ugotavljajo, da pri preobrazbi v glavnem uporabljajo pristop od spodaj navzgor, ki ni podprt na državni ravni. Vsa pa se zavedajo pomena politik EU in zlasti finančnih sredstev EU. Za boljše črpanje navedenih sredstev se vsa območja strinjajo, da bi morala biti centralno upravljana, in ne razpršena med programi in skladi, saj to območjem z manjšimi zmogljivostmi otežuje spremljanje in razumevanje razpisov ter posledično črpanje sredstev. Manjša zmogljivost pridobivanja sredstev na proučevanih območjih je morda povezana s tem, da so del malih in srednje velikih mest, čeprav slovenski primer kaže, da je navedena zmogljivost odvisna od lokalnih pobud in

odgovornih ustanov. Program Interreg je bil prepoznan kot najbolj uporaben med pobudami EU, čeprav so bile izpostavljene tudi nekatere njegove pomanjkljivosti, na primer to, da podpira samo mehke rešitve, ne pa tudi gradnjo infrastrukture. Kot je bilo navedeno v projektu Cabernet (2006), se javna finančna podpora ne sme dodeljevati vsem razvrednotenim območjem enako, ampak na podlagi treh modelov. V model A spadajo območja, za katera je zaradi razmeroma nizkih stroškov revitalizacije in visoke vrednosti zemljišča zelo verjetno, da jih bodo zasebni investitorji hitro prenovili.

Raziskava daje nekaj splošnih smernic, ki so lahko uporabne tudi za druga podobna območja v Alpah. Prvič, njeni izsledki lahko pripomorejo k boljši ozaveščenosti o nujnosti in dodani vrednosti procesov preobrazbe. Drugič, daje boljši vpogled v podrobnosti te dolge poti, polne negotovosti, in s tem deležnike spodbudi, da se nanjo podajo. Tretjič, nacionalne in regionalne deležnike bi bilo treba spodbuditi, da več časa in truda namenijo zagotavljanju zadostnih človeških virov, ki lahko pomagajo pri prenovi. Poleg tega morajo pridobiti ustrezno strokovno znanje, vzpostaviti mreže potencialnih projektnih partnerjev ter si prizadevati za oblikovanje močnih skupnosti z jasno vizijo glede prihodnje prenove razvrednotenih območij. Na podlagi navedenega bo morda lažje predvideti bolj trajnostne prostorske spremembe v Alpah in izboljšave, kot so krajevno usmerjene preobrazbe na podlagi lokalnih pobud (npr. ponovna uporaba pozidanih območij in preprečevanje pozidave tal na nezazidanih zemljiščih) ali izboljšana podoba območij.

Na splošno avtorji menijo, da bi morala EU prepoznati in priznati regionalne potrebe po finančni podpori za projekte preobrazbe in strokovnem znanju. Potreben je bolj ciljno in krajevno usmerjen pristop. Tudi izsledki predstavljene raziskave dokazujejo, da trenutni pristop, pri katerem EU predvideva, da vse regije razumejo, kaj jim je na voljo, ne deluje in bi ga morali ustrezno spremeniti tako, da bi postal bolj ciljno usmerjen in bi zagotavljal bolj zadovoljive rezultate.

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37

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Prostorska analiza dostopnosti javnega potniškega prometa v Sloveniji

Prispevek analizira dostopnost javnega potniškega prometa (JPP) v Sloveniji glede na oddaljenost postajališč od prebivališč in pogostnost voženj. S povezovanjem podatkov iz Centralnega registra prebivalcev in podatkov o ponudbi JPP smo z geografskim informacijskim sistemom izračunali delež prebivalstva, ki živi v 500- in 1000-metrski oddaljenosti od postajališč z zadevnim številom dnevnih voženj. Avtorji so analizirali prostorske razlike v dostopnosti do postajališč JPP, na podlagi podatkov o gostoti prebivalstva so prepoznali glavne vrzeli v ponudbi JPP in analizirali razmeščanje novejše poselitve v navezavi na današnje omrežje JPP. Ugotovili so, da je dostopnost JPP v državi glede na 1000-metrsko oddaljenost od postajališč razmeroma zadovoljiva, glede na 500-metrsko oddaljenost od postajališč pa je zadovoljiva le na večini urbanih območij. Obsežna območja nimajo

ustreznega dostopa do postajališč JPP, kar je zlasti na podeželju posledica majhne gostote prebivalstva, večje vrzeli v ponudbi pa se pojavljajo na območjih suburbanizacije, ki so nastala zunaj koridorjev JPP. Med letoma 2004 in 2020 so avtorji na območjih z najboljšo dostopnostjo JPP prepoznali trend nižje demografske rasti od slovenskega povprečja, na območjih največje rasti prebivalstva in intenzivne stanovanjske gradnje pa se je poselitev le delno umeščala v bližino omrežja JPP. To potrjuje domnevi o nedoslednem upoštevanju veljavnih prostorskih strateških aktov ter o nizki stopnji integracije prometnega in prostorskega načrtovanja.

Ključne besede: dostopnost, mobilnost, javni potniški promet, poselitev, prostorsko planiranje

1   Uvod

Javni potniški promet (JPP) je pomembna prvina prometnega sistema, saj omogoča mobilnost, ne da bi bilo zato treba uporabiti lastno prevozno sredstvo – zlasti, kjer so razdalje predolge za aktivno mobilnost. JPP je od konca 19. stoletja spodbudil rast mest, saj je povečal zmogljivost prometnih sistemov in s tem okrepil intenzivnost kroženja ljudi, dobrin in kapitala (Uršič, 2006), na podeželju pa je v obdobju pospešene modernizacije preprečeval socialno izključenost prebivalstva (Gabrovec idr., 2021). Zaradi razmaha prometa z osebnimi avtomobili je JPP v drugi polovici 20. stoletja v razvitem svetu (tudi v Sloveniji) začel postopoma izgubljati veljavo. Danes sta ustrezni kakovost in dostopnost JPP pomemben cilj trajnostnih prometnih, okoljskih in prostorskih politik, saj ima JPP številne družbene, gospodarske in okoljske koristi, kot so zmanjševanje socialne izključenosti, povečanje zaposlenosti in zmanjšanje izpustov toplogrednih plinov (glej na primer Nazari Adli in Donovan, 2018; Saif idr., 2018).

Dostopnost JPP je zelo širok pojem, soglasja o njegovi definiciji pa ni (Lei in Church, 2010). Pogosto se obravnava kot ena od temeljnih razsežnosti kakovosti JPP, na primer v standardih dostopnosti (Gabrovec idr., 2009). Doslej je bilo razvitih veliko mer dostopnosti, ki se uporabljajo za analizo stanja v načrtovalske namene ali za preveritev učinkovitosti ukrepov. Med najpogosteje obravnavanimi prvinami dostopnosti zasledimo oddaljenost postajališč od raznih izhodišč (Saghapour idr., 2016), saj dobra dostopnost JPP pozitivno vpliva na njegovo uporabo (glej na primer Chowdhury idr., 2016; Curtis idr., 2019). Na izbiro potovalnega načina vplivajo številni dejavniki, med drugim individualni (psihološki in situacijski), prostorski (gostota prebivalstva in dejavnosti), infrastrukturni (omrežje cest, poti ali postajališč), časovni (potovalna hitrost in čas) in politični (prometne politike) (glej na primer Collins in Chambers, 2005; Buehler, 2011). Podobno velja za JPP (Beirão in Sarsfield Cabral, 2007). Malekzadeh in Chung (2020) sta v obsežnem pregledu pristope merjenja dostopnosti (z) JPP razvrstila v tri skupine, te so:

1. modeli dostopa do sistema JPP (ang. *system accessibility models*). Ti se večinoma omejujejo na merjenje dostopnosti postajališč JPP, večinoma v oddaljenosti, sprejemljivi za hojo. Takšen pristop ima številne omejitve, saj meri predvsem razpoložljivost sistema, ne nujno dostopnost z njim, a je razmeroma preprost za uporabo in zato precej priljubljen. Kompleksnejši tovrstni modeli poleg ponudbe upoštevajo tudi povpraševanje (npr. razporeditev prebivalstva in delovnih mest), z vidika ponudbe pa poleg oddaljenosti postajališč upoštevajo še čakalni čas in pogostnost vožnji, nemalokrat tudi različne oblike JPP (Wu in Hine, 2003) Naprednejši, gravitacijski modeli namesto določenega pol-

mera upoštevajo funkcijo upada z razdaljo (Gutiérrez idr., 2011), saj privlačnost posameznih lokacij s povečevanjem oddaljenosti ne upada linearno (Taylor, 1975). V to skupino avtorja uvrščata še modele po načelu koristi, ki jih imajo različne skupine uporabnikov zaradi bližine posameznih postajališč (glej na primer Rastogi in Krishna Rao, 2003);

2. modeli ciljne dostopnosti (ang. *system-facilitated accessibility*), ki upoštevajo tako dostopnost sistema JPP kot možnosti potnika, da doseže želeni cilj, in sicer z upoštevanjem potovalnega časa ali stroška za izbrano pot. Naprednejši tovrstni modeli uporabljajo kumulativni pristop, npr. z ugotavljanjem števila prebivalcev z dostopom do zadevne lokacije v opredeljenem času ali v okviru nekega stroška (Liu in Zhu, 2004). Njihova pomanjkljivost je, da ne upoštevajo pomena možnosti z vidika posameznih prebivalcev ali potnikov;

3. modeli integralne dostopnosti (ang. *integral accessibility* ali *access to destinations*), v sklopu katerih se meri splošen dostop do možnih ciljev, kar kaže, kako preprosto potniki potujejo z JPP. Razvoj geografskih informacijskih sistemov je privedel do nastanka številnih tovrstnih modelov ali orodij, te lahko po njihovih značilnostih razvrstimo v modele na podlagi razdalje, gravitacije in koristi. Ta pristop najbolje osvetljuje težave, ki jih imajo potniki z dostopanjem do raznih ciljev (Fransen idr., 2015), vendar je najzahtevnejši za uporabo in razlago, obenem pa se z agregiranjem rezultatov zmanjša njegova natančnost.

V Sloveniji izrazito prevladujejo študije iz prve skupine, torej študije dostopnosti sistema JPP. Takšen je na primer izračun indeksa PTAL (ang. *Public Transport Accessibility Level*) na primeru Ljubljane, ki je upošteval oddaljenost avtobusnih postajališč od bivališč, povprečni čas čakanja in pogostnost vožnji (Tiran idr., 2014, 2015). V to skupino lahko uvrstimo tudi študiji dostopnosti avtobusnih postajališč v Sloveniji (Gabrovec in Bole, 2006) in dostopnosti JPP v ljubljanski urbani regiji (Gabrovec in Razpotnik Visković, 2012, 2018), analizo dostopnosti javnih dejavnosti z medkrajevnim avtobusnim prometom (Zavodnik Lamovšek idr., 2010), primerjavo dostopnosti postajališč mestnega potniškega prometa v Ljubljani z uporabo različnih metod (Kozina, 2010) in večstopenjski model za določanje uniformnih storitvenih območij avtobusnih postajališč (Paliska idr., 2006). Kazalnik dostopnosti JPP se uporablja tudi za vrednotenje regionalnega razvoja (Pečar, 2020). Omeniti je treba še raziskavo Tirana in sodelavcev (2019), ki so modelirali peš dostopnost mestnih dobrin v Ljubljani s konceptom upada z razdaljo na podlagi anketiranja prebivalcev Ljubljane in njihovega dojemanja primerne oddaljenosti za hojo, vključno s postajališči mestnega potniškega prometa. Študije, ki so upoštevale druga dva pristopa, so redkejše. Ker proučujejo dostopnost za izbrane lokacije z JPP, jih uvrščamo v kategorijo modelov ciljne dostopnosti (Koblar idr., 2019; Koblar in Mladenovič, 2020; Koblar, 2021a, 2021b; Tiran idr., 2021).

Prvo celovitejšo analizo dostopnosti JPP na ravni Slovenije, ki je upoštevala tako oddaljenost postajališč kot pogostnost voženj, sta opravila Gabrovec in Bole (2006). Analizirala sta medkrajevni avtobusni promet, dostopnost pa izračunala za različne referenčne datume za 500- in 1000-metrski polmer. Ugotovila sta, da je omrežje avtobusnih linij v državi ustrezno razvejano: več kot tri četrtine prebivalcev ima v 1000-metrskem pasu od postajališč zadovoljive povezave v dneh šolskega pouka, v preostalih dneh pa je ponudba precej slabša ali celo nezadostna. V eni od drugih študij, opravljenih v podobnem času, je bilo ugotovljeno, da medkrajevni avtobusni promet ponuja razmeroma solidno dostopnost do javnih dejavnosti, ki pa je slabša od tiste z avtomobilom (Zavodnik Lamovšek idr., 2010). Omeniti je treba še raziskavo ustreznosti omrežja JPP glede na vzorec poselitve na primeru ljubljanske urbane regije, ki je razkrila nekatere vrzeli v tamkajšnji ponudbi JPP (Gabrovec in Razpotnik Visković, 2012).

Razmeščanje poselitve glede na omrežje JPP v Sloveniji podrobneje določajo Splošne smernice s področja razvoja poselitve (2013). Te pri načrtovanju in urejanju širšega mestnega območja določajo, da se upošteva možnost navezave na JPP, poselitev pa naj se usmerja v zgostitvena območja, kjer je mogoče zagotoviti učinkovit in udoben javni promet. V usmeritvah za racionalno rabo zemljišč v naseljih pa naj se največ pozornosti usmerja na tista območja, ki so dobro dostopna in imajo organiziran javni potniški promet. Smernice v tem delu povzemajo še vedno veljavno Strategijo prostorskega razvoja Slovenije (2004), ki kot eno od prednostnih nalog izpostavlja povezan in usklajen razvoj prometnega in poselitvenega omrežja ter izgradnjo gospodarske javne infrastrukture. Dostopnost JPP obravnavajo tudi Splošne smernice za področje trajnostne mobilnosti (Demšar Mitrovič, 2018), v katerih je navedeno, da v praksi večji generatorji prometa nimajo alternative dostopanja z osebnim avtomobilom, to neskladje je mogoče preseči s standardi dostopnosti. Noben dokument ne opredeljuje primerne oddaljenosti stanovanjskih območij od postajališč JPP. Poročilo o prostorskem razvoju (Fonda idr., 2016) in najnovejši osnutek Strategije prostorskega razvoja (2020) med drugim poudarjata, da razvoja poselitve in omrežja JPP nista potekala usklajeno. To ugotavljajo tudi nekatere raziskave, ki opozarjajo na prostorsko dekoncentracijo dejavnosti v slovenskih mestih in obmestjih, rast dnevnih migracij in prometnih tokov in vedno večjo razpršenost potovanj, ki slabšajo konkurenčnost JPP (Rebernik, 2010), sodobne blokovske soseske pa se, na primer v Ljubljani, ne navezujejo več na omrežje JPP, kot so se v preteklosti (Bole, 2004).

Dostopnost JPP v državi, zlasti v navezavi na poselitvene trende, še ni bila podrobneje raziskana. Glede na navedena poročila in raziskave je mogoče domnevati, da se veljavni prostorski akti nedosledno upoštevajo, stopnja integracije prometnega in pro-

storskega načrtovanja pa je nizka. Namen članka je analizirati dostopnost JPP v Sloveniji glede na oddaljenost do postajališč in pogostnost voženj. V analizi se avtorji osredotočajo na dostopnost postajališč JPP od bivališč, saj so ta najpomembnejši izvor potovanj. Pri tem so si zastavili naslednje cilje:

- analizirati dostopnost JPP po državi,
- ugotoviti ustreznost omrežja JPP glede na vzorec poselitve in izpostaviti glavne vrzeli v ponudbi JPP ter
- analizirati sodobne poselitvene spremembe v bližini postajališč JPP.

2 Metodologija

Avtorji so analizo napravili z orodji geografskih informacijskih sistemov ter pri analizi uporabili podatke o prebivalstvu po hišnih številkah in voznoredne podatke vseh vrst JPP v Sloveniji.

2.1 Priprava vhodnih podatkov

Avtorji so podatke o prebivalstvu po hišnih številkah pridobili za leti 2004 in 2020 (Centralni register prebivalstva, 2005 in 2021), za izračun števila prebivalcev v stavbi z zadevno hišno številko pa so upoštevali zadevno statistično definicijo običajnega prebivališča. Za izračun dostopnosti za leto 2020 je to pomenilo, da so v primeru začasnega in stalnega bivališča za posamezno osebo upoštevali začasno bivališče (poglavje 3.1), pri analizi poselitvenih sprememb (poglavje 3.2) pa so zaradi časovne primerljivosti upoštevali le stalno prebivališče, ne pa tudi začasnega. Centralni register prebivalcev so povezali z evidenco hišnih številk za ustrezno leto, ki vsebuje geografske koordinate stavb, opremljene s hišnimi številkami (Geodetska uprava Republike Slovenije, 2005 in 2021).

V analizi so se osredotočili na dneve z največjim prometnim povpraševanjem, zato se voznoredni podatki z lokacijami postajališč JPP nanašajo na značilen delovnik zunaj šolskih počitnic v letu 2021. Pridobili so jih iz več virov: prvi vir podatkov je bilo Ministrstvo za infrastrukturo, ki z aplikacijo za integrirani javni potniški promet (IJPP) vodi podatke o medkrajevnih avtobusnih in železniških voznih redih (IJPP aplikacija, 2022). Podatkovna baza vsebuje tudi podatke o nekaterih mestnih voznih redih, vendar se ti podatki ne posodabljajo redno, zato so avtorji iz te baze uporabili le še podatke o novomeškem in murskosoboškem mestnem prometu, voznoredne podatke o prometu v preostalih mestih pa so pridobili pri prevoznikih. Nekateri prevozniki niso predložili koordinat postajališč, v teh primerih so avtorji koordinate pridobili s terenskim ogledom. Nekatere občine, predvsem alpske, organizirajo tudi turistične prevoze v poletni in/ali zimski sezoni, vendar ti ne obratujejo na značilen delovnik, kakor je bil določen v analizi. V analizi poselitvenih sprememb glede na omrežje JPP med letoma 2004

in 2020 so upoštevali postajališča s primerno ali zadovoljivo dostopnostjo (glej poglavje 2.2), za njihovo določitev pa uporabili voznoredne podatke za leto 2021.

2.2 Določitev razdalje do postajališč in pogostnosti voženj

V študijah o dostopnosti JPP se navadno uporablja razdalja, ki je še sprejemljiva za vsakodnevno hojo do postajališč: najpogosteje uporabljeni in splošno sprejeti razdalji sta 400 m za oddaljenost avtobusnih postajališč in 800 m za oddaljenost postajališč tirnega prometa, ki ustrezata petim oziroma desetim minutam hoje (Saghapour idr., 2016). Raziskave potovalnih navad kažejo različno velika odstopanja od teh razdalj: ponekod, na primer zunaj urbanih območij, so dejanske poti tudi daljše (El-Geneidy idr., 2010). Avtorji so zato za svojo analizo izbrali 500-metrsko in 1000-metrsko oddaljenost: prvo so večinoma uporabili za vrednotenje dostopnosti na urbanih območjih, drugo pa na podeželju; ista polmera so uporabili tudi pri določanju vrzeli v ponudbi glede na gostoto prebivalstva (glej poglavje 2.3).

Pri vrednotenju pogostnosti voženj so po vzoru študije Gabrovca in Boleta (2006) ločili med neprimerno, zadovoljivo in primerno pogostnostjo. Postajališča z zadovoljivo pogostnostjo so tista z najmanj osmimi pari voženj na dan. To pomeni, da ima potencialni potnik na voljo vsaj dve ali tri vožnje v vsako smer tako v jutranji kot v popoldanski konici, poleg tega mu je na voljo po vsaj ena vožnja zunaj konic dopoldne, popoldne in zvečer. Taka ponudba omogoča potovanje na delo in v šolo ter deloma za druge namene, ni pa konkurenčna osebnemu prevozu. Kot primerno ponudbo so določili vsaj 23 parov dnevnih voženj, kar pomeni polurni interval v času dnevnih konic in enourni zunaj njih. Pri analizi so sešteli odhode z vseh postajnih točk posameznih postajališč. Če so bila postajališča različnih prevoznih sredstev (medkrajevni avtobus, vlak, mestni avtobus) na isti lokaciji ali so bile vstopne točke med seboj oddaljene manj kot 200 metrov zračne razdalje, so jih avtorji obravnavali kot eno postajališče in sešteli odhode vseh prevoznih sredstev z vseh postajnih točk.

Oddaljenost od bivališč (stavb s hišno številko) do postajališč je bila izračunana po zračni (evklidski) razdalji. Okoli vsake točke, ki jo predstavlja stavba s hišno številko, so ustvarili vplivno območje (ang. *buffer*) v polmeru 500 m in ugotavljali, ali je na tem območju postajališče s posamezno kategorijo pogostnosti voženj. Če je bilo tovrstnih postajališč več, so upoštevali postajališče z boljšo pogostnostjo. Podatek o postajališču s pogostnostjo voženj so pripisali posamezni stavbi s hišno številko. Postopek so ponovili še za vplivno območje v polmeru 1000 m.

2.3 Ugotavljanje vrzeli v ponudbi

S križanjem podatkov o postajališčih JPP in izračunom gostote prebivalstva so avtorji prepoznali vrzeli v ponudbi. Najprej so določili gosto in zelo gosto poseljena območja. Gosto poseljena območja so opredelili kot tiste poseljene stavbe s hišno številko, ki imajo v svoji 500-metrski okolici več kot 200 prebivalcev, zelo gosto poseljena območja pa kot tista, na katerih v 500-metrskem polmeru okrog poseljenih stavb s hišno številko živi več kot tisoč ljudi. Pri gosto poseljenih območjih so vrzeli v ponudbi JPP opredelili tam, kjer so stavbe od postajališča JPP oddaljene več kot 1000 metrov, pri zelo gosto poseljenih območjih pa stavbe, ki so od postajališča oddaljene več kot 500 metrov (Gabrovec in Razpotnik Visković, 2012). Vrzeli so izračunali z vidika oddaljenosti tako najbližjega postajališča kot postajališča z zadovoljivo pogostnostjo voženj (vsaj osem parov voženj na dan). Gre za podatek o gostoti, ki je neposredno uporaben za načrtovanje JPP: po nemških priporočilih naj bi s kakovostnim JPP povezali vse površine, kjer na vplivnem območju postajališča živi vsaj 200 prebivalcev (Heußner idr., 2001, str. 12).

3 Rezultati

3.1 Dostopnost JPP v Sloveniji

Rezultati izračuna za 1000-metrsko oddaljenost postajališč JPP od prebivališč so razmeroma spodbudni. Zunaj teh območij živi le manj kot desetina ljudi, več kot tri petine prebivalcev pa imajo v tej oddaljenosti postajališče JPP s primerno dostopnostjo. Rezultati izračuna za 500-metrsko oddaljenost so pričakovano nekoliko slabši: največje razlike so pri deležu prebivalstva, ki mu na tej oddaljenosti ni na voljo postajališče JPP – ta z manj kot desetine (8,3 %) naraste na manj kot četrtino (23,2 %) – ter pri deležu prebivalstva s primerno dostopnostjo, ki z manj kot dveh tretjin (61,8 %) pade pod polovico (49,4 %) (slika 1).

3.1.1 Prostorske razlike v dostopnosti

Po državi so v dostopnosti JPP precejšnje razlike, zlasti pri manjšem, 500-metrskem polmeru (slika 2). Nekatere občine imajo zelo dobro dostopnost tako po merilu oddaljenosti postajališč kot po merilu pogostnosti voženj: to so v glavnem gosteje poseljene občine z večjimi urbanimi središči in nekatere občine v njihovem bližnjem zaledju, od katerih imajo nekatere tudi svoj mestni avtobusni promet. Pri tem prednjačita dve največji mestni občini: Ljubljana in Maribor, sledijo Jesenice, kjer več kot 90 % prebivalcev prebiva v 500-metrskem pasu od postajališča s primerno dostopnostjo. Malce slabšo, a še vedno zelo dobro dostopnost imajo tudi prebivalci občin Kranj,
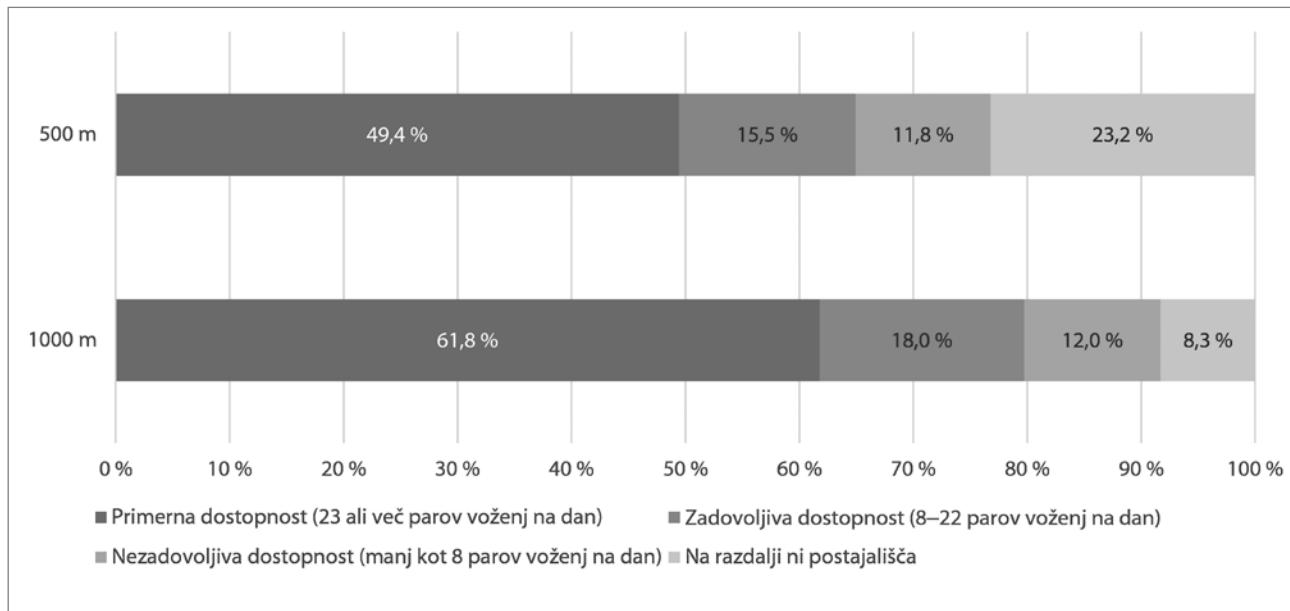
Slika 1: Dostopnost JPP v Sloveniji leta 2020 v 500- in 1000-metrskem polmeru glede na pogostnost voženj (ilustracija: Jernej Tiran)
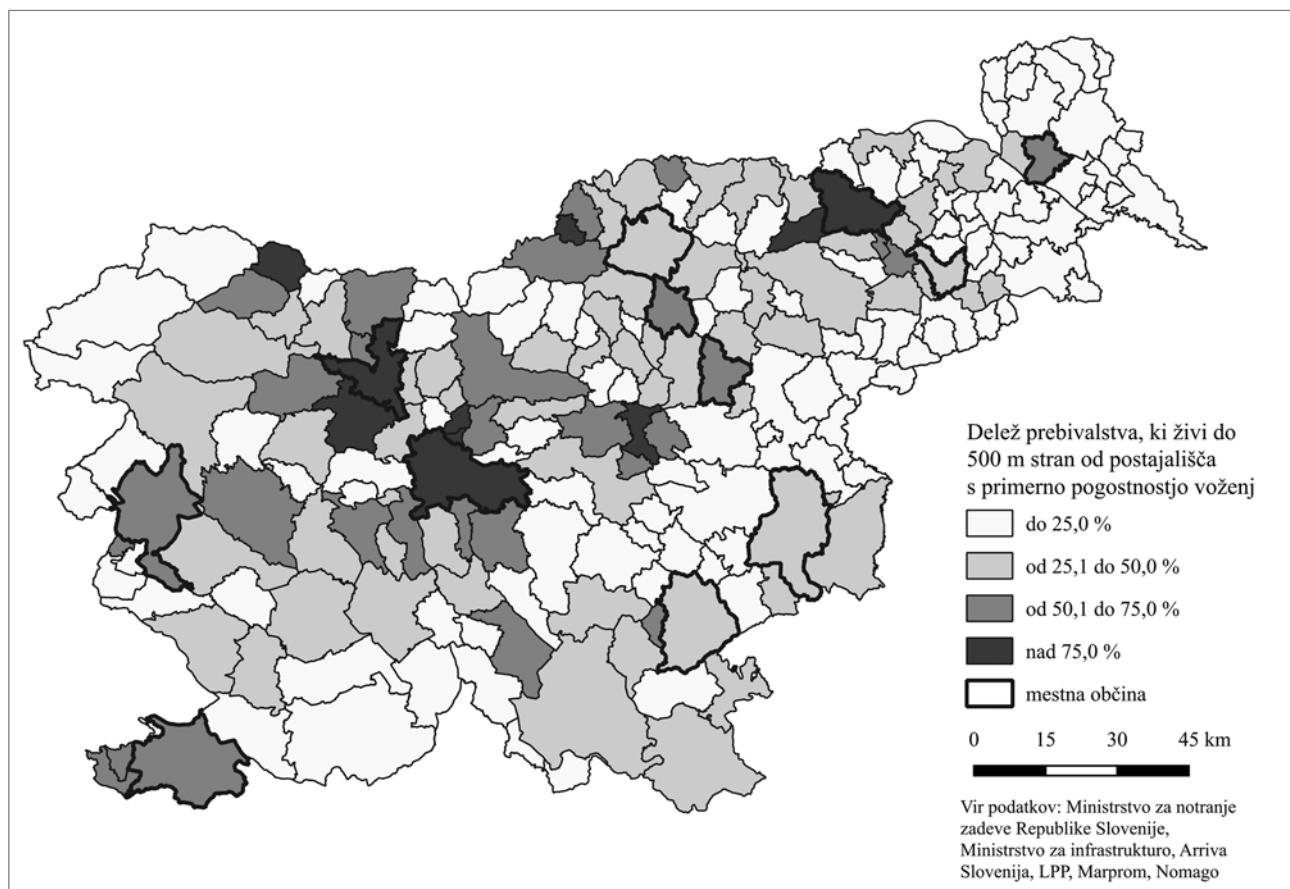
Slika 2: Delež prebivalstva po občinah, ki živi od postajališča JPP s primerno pogostnostjo voženj oddaljen do 500 m (vsaj 23 parov voženj na dan) (ilustracija: Nika Razpotnik Visković)

Velenje, Škofja Loka, Murska Sobota, Trbovlje in Izola ter manjših občin Ruše, Mežica, Mengeš, Miklavž na Dravskem polju, Naklo in Šempeter - Vrtojba. Izmed mestnih občin zaradi razpršene poselitve zunaj mestnih središč negativno izstopajo zlasti Krško in Ptuj, kjer le 27 % oziroma 36 % prebivalcev živi na območjih s primerno pogostnostjo vožnej v 500-metrski oddaljenosti, ter Slovenj Gradec, kjer je problematičen predvsem velik, 44-odstotni delež prebivalstva, ki mu v tej oddaljenosti postajališče JPP sploh ni na voljo.

Če upoštevamo merilo 1000-metrske oddaljenosti, ki je primernejši za občine z manjšim številom urbanega prebivalstva, so razlike po državi nekoliko manjše. Izmed teh občin je mogoče razlikovati med tistimi, kjer je veliki večini prebivalcev na voljo postajališče JPP z zadovoljivo pogostnostjo vožnej (med 8 in 22 pari vožnej na dan) – takšne občine so Ankaran, Odranci, Destrnik, Preddvor, Dobrovnik in Središče ob Dravi, ter med občinami, kjer ima velika večina prebivalcev zagotovljeno povezavo na tej razdalji, a z nezadovoljivo pogostnostjo vožnej (manj kot osem parov vožnej na dan) – te so zlasti na obrobju države, na primer v Prekmurju: Kobilje, Razkrižje, Šalovci in Gornji Petrovci ter občini Brda in Kostel. Prepoznati je mogoče tudi skupino občin, ki imajo zaradi lege občinskih središč v glavnih koridorjih JPP razmeroma velik delež prebivalstva s primerno dostopnostjo (več kot dve tretjini), zaradi razpršene poselitve v zaledju teh središč pa imajo tudi velik delež prebivalstva, ki živi zunaj ustrezne oddaljenosti od postajališč (več kot petina). V tej skupini so med drugim večina koroških občin, nekatere občine v Zgornji Savinjski dolini: Mozirje in Rečica ob Savinji ter občina Ribnica.

V razmeroma veliki skupini občin velik delež prebivalstva živi na razdalji od postajališč JPP, ki je zunaj 1000-metrskega polmera in s tem še sprejemljivega za hojo (slika 3). Takšne so bolj oddaljene občine južno od Ljubljane, v Škofjeloškem hribovju, na večjem delu Dolenjske, v Posavskem hribovju, na Kozjanskem, v Halozah in na večjem delu Koroške, kjer se ta delež giblje med 30 % in 47 %. Če se upošteva še merilo pogostnosti vožnej, izmed teh negativno izstopajo občine Sodražica, Osilnica in Bloke, kjer niti enemu prebivalcu ni na voljo vsaj zadovoljiva pogostnost JPP.

3.1.2 Vrzeli v ponudbi

To, da ni postajališča JPP v ustrezni oddaljenosti, je značilno predvsem za redko poseljena območja, kjer je težko organizirati učinkovit JPP. Manj pa to velja za gosteje poseljena območja, kjer je mogoče pričakovati boljšo ponudbo JPP. V Sloveniji na zelo gosto poseljenih območjih, ki so od najbližjega postajališča JPP oddaljena več kot 500 m, živi 33.556 ljudi, kar je 6,7 % vseh prebivalcev, ki jim v 500-metrski oddaljenosti postajališče ni na voljo. Kar nekaj takšnih območij je severno od Ljublja-

ne: v občinah Domžale, Mengeš, Komenda in Trzin, kjer gre večinoma za sklenjena območja novejših enodružinskih hiš, zgrajenih zunaj koridorjev JPP (slika 4). Če se pri izračunu upoštevajo postajališča z vsaj zadovoljivo dostopnostjo (osem ali več parov vožnej na dan), se število prebivalcev na zelo gosto poseljenih območjih brez ustrezne dostopnosti poveča na 51.256. Nekatere vrzeli v ponudbi so tudi v mestnih občinah.

Na gosto poseljenih območjih, ki so od najbližjega postajališča JPP oddaljena več kot 1000 m, živi 20.858 ljudi, kar je 11,8 % vseh prebivalcev, ki jim v tej oddaljenosti postajališče ni na voljo. Veliko teh območij obsega strnjena vaška naselja, npr. Bevke na Ljubljanskem barju, Dolenjo vas in Dolenje Jezero pri Cerknici ali niz naselij vzhodno od Ajdovščine ob vznožju Trnovskega gozda: Gojače, Kamnje, Skrilje in Lokavec ali območja periurbanizacije v ljubljanski urbani regiji: Golo Brdo in Kamnica. Če se upoštevajo le postajališča z vsaj zadovoljivo dostopnostjo, se število teh prebivalcev močno poveča, in sicer na 92.168. V nekaterih občinah, ki ležijo zunaj glavnih koridorjev JPP, je delež prebivalstva večji od 50 %: Bovec, Velika Polana in Loški Potok ali zajema celo 80 % vseh prebivalcev v občini, npr. v občini Kobilje.

3.2 Analiza poselitvenih sprememb v okolici postajališč JPP

Na dostopnost JPP ne vplivata le razporeditev postajališč in ustrezna pogostnost vožnej, ampak tudi usmerjanje poselitve v bližino infrastrukture JPP. Med letoma 2004 in 2020 se je število prebivalcev Slovenije povečalo za 43.304 oseb ali za 2,2 %, pri čemer je 100 slovenskih občin zaznalo rast, 112 pa jih je zaznalo upad števila prebivalcev (v večini gre za obmejne in gorske občine).

Rezultati kažejo, da poselitev med letoma 2004 in 2020 v povprečju ni sledila infrastrukturi JPP. V opazovanem obdobju je absolutno število prebivalcev v 500-metrskem pasu od postajališč JPP s primerno ali zadovoljivo dostopnostjo leta 2020 (v nadaljevanju: postajališča) naraslo za 0,4 % (razlika: 5.183 prebivalcev), relativno pa se je delež prebivalstva na teh območjih zmanjšal za 1,1 odstotno točko (s 64,8 % na 63,7 %). V primeru povečanja razdalje na 1 km od postajališča je leta 2020 na teh območjih živelo 1,9 % prebivalcev več kot leta 2004 (razlika: 29.351 prebivalcev), relativno pa je delež prebivalstva upadel za 0,2 odstotne točke, z 79,0 % na 78,8 %. Hkrati je mogoče opaziti, da se je v tem obdobju za 6,3 % povečal delež prebivalstva, ki od najbližjega postajališča JPP živijo dlje od 500 m (razlika: 29.064 prebivalcev), za 4,7 % pa tistih, ki živijo dlje kot 1000 m (razlika: 8.020 prebivalcev). Naseljevanje v bližini postajališč JPP se je na državni ravni v proučevanem obdobju torej zmanjševalo, vendar so opazne precejšnje lokalne razlike, te so skupaj z razlogi zanje predstavljene v nadaljevanju.
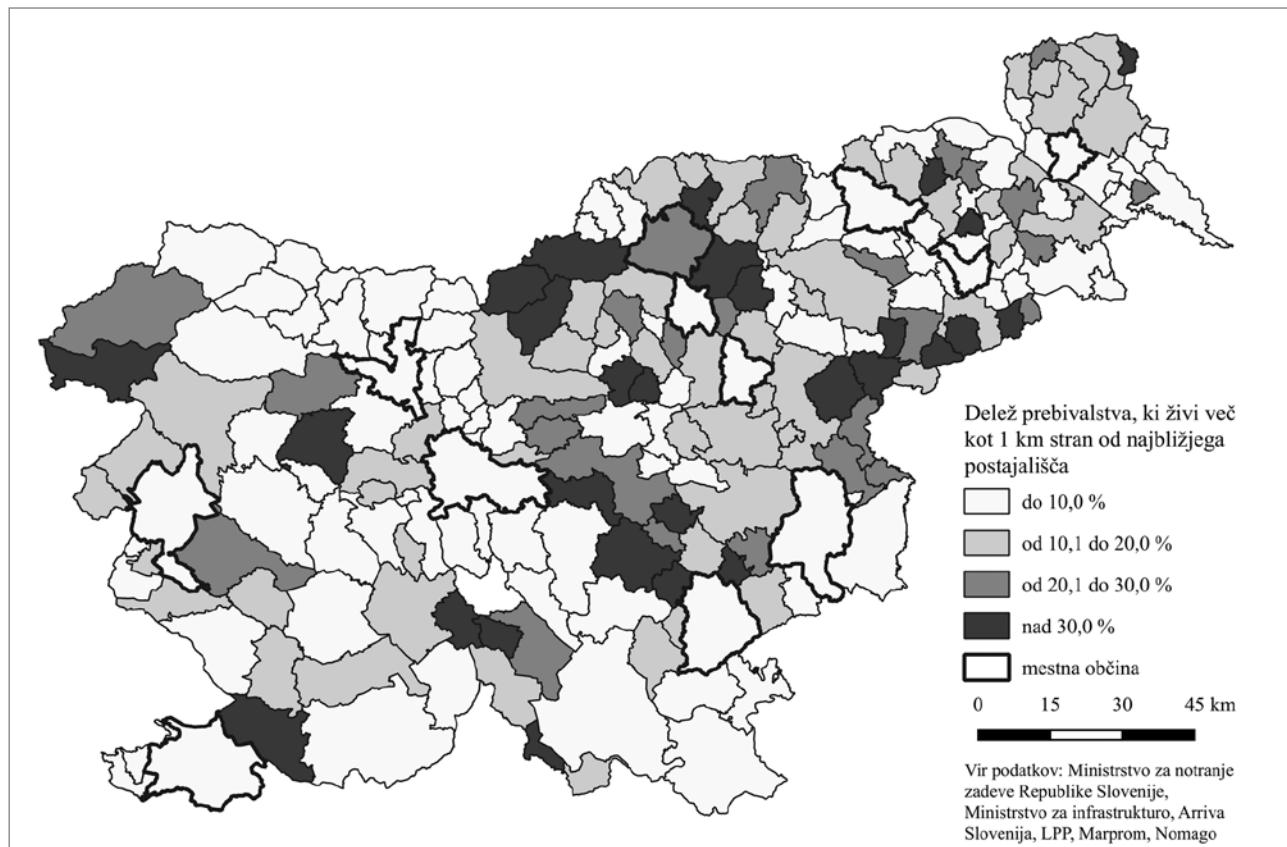
Slika 3: Delež prebivalstva po občinah, ki živi od najbližjega postajališča JPP oddaljen več kot 1 km (ilustracija: Nika Razpotnik Visković)
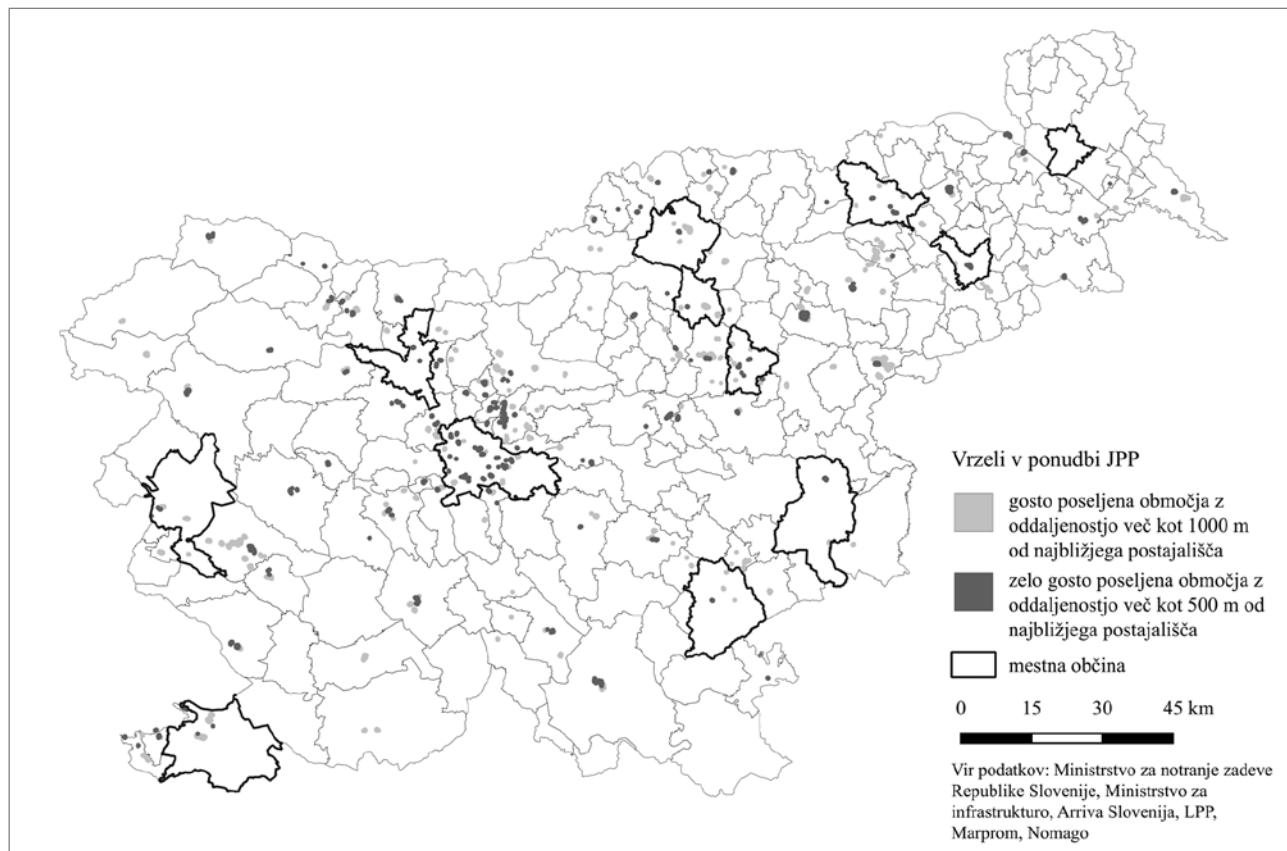
Slika 4: Vrzeli v ponudbi JPP v Sloveniji glede na gostoto prebivalstva (ilustracija: Nika Razpotnik Visković)
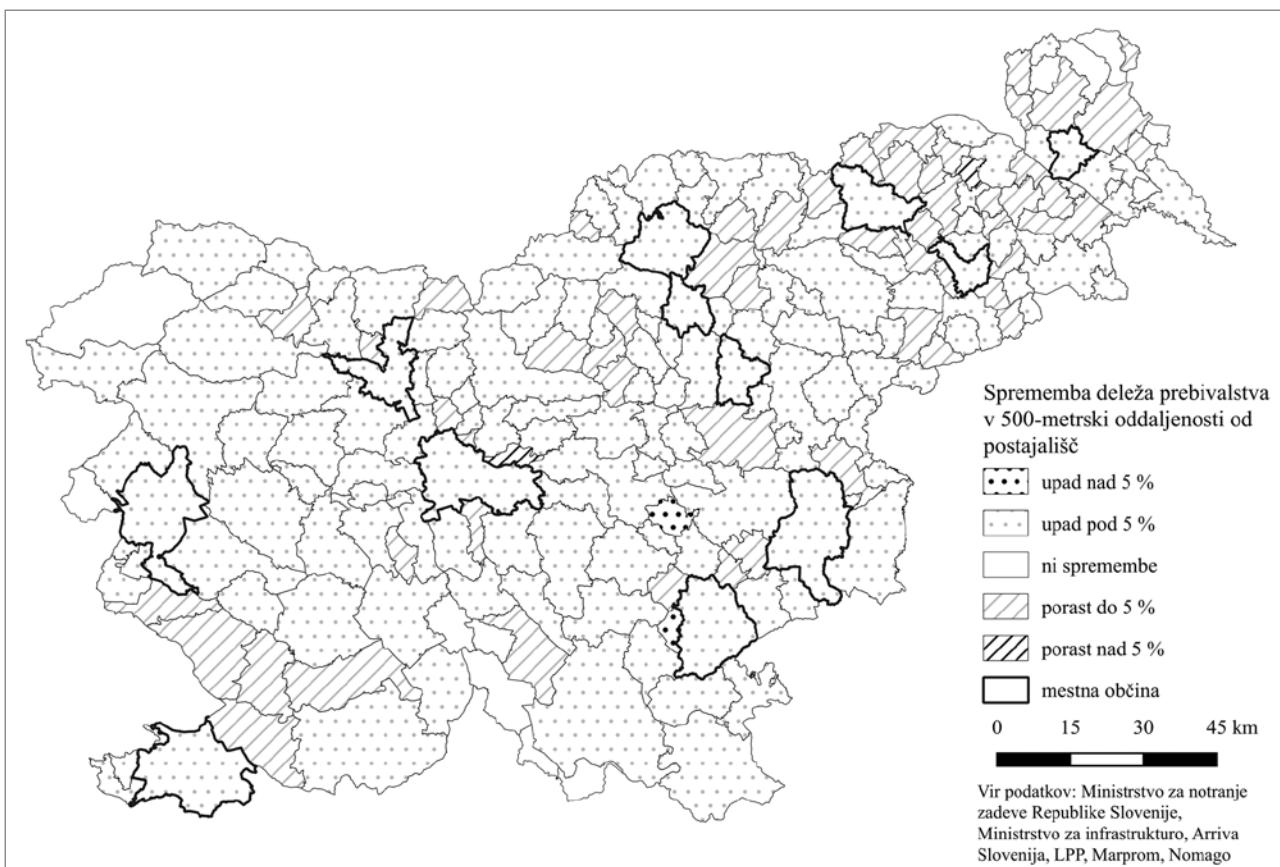
Slika 5: Sprememba deleža prebivalstva, ki živi od postajališč JPP oddaljen do 500 m, 2004–2020 (ilustracija: Nika Razpotnik Visković)
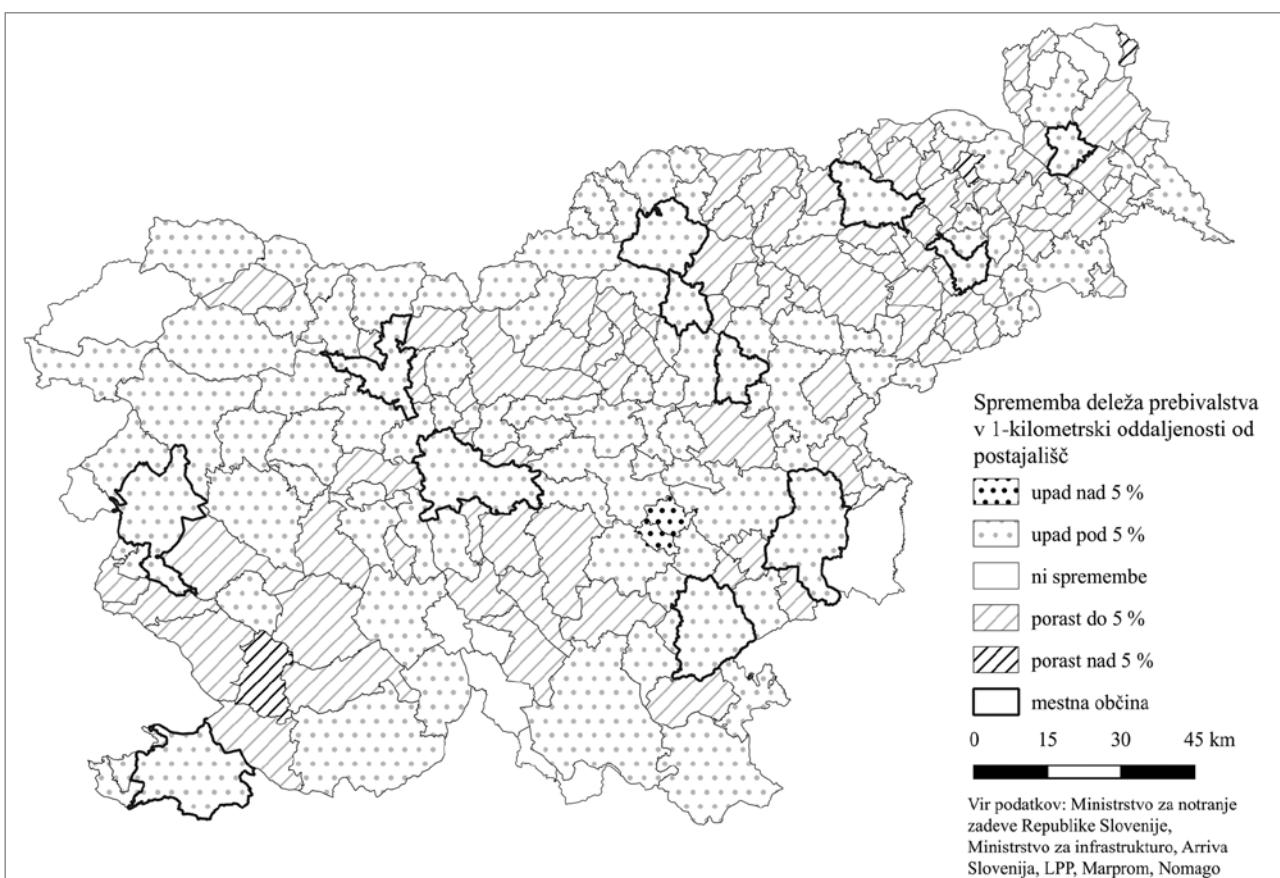
Slika 6: Sprememba deleža prebivalstva, ki živi od postajališč JPP oddaljen do 1 km, 2004–2020 (ilustracija: Nika Razpotnik Visković)

Primerjava deleža prebivalstva v razdalji do 500 m od postajališč za leti 2004 in 2020 kaže, da se je ta delež zmanjšal v 141 občinah (med njimi so tudi vse mestne občine), povečal v 58 občinah, v 13 pa spremembe ni bilo, a gre za občine, kjer poselitve v bližini teh postajališč sploh ni. Deleža nad 5 % sta bila opazna v občinah Benedikt (11 %) in Dol pri Ljubljani (5,8 %) (slika 5).

Primerjava za razdaljo največ 1 km od postajališča kaže, da se je delež prebivalstva, ki živi v tem pasu, povečal v 91 občinah, zmanjšal v 105 občinah (vključno z vsemi mestnimi občinami), v 16 pa je ostal nespremenjen. Tudi v tem primeru je največji delež pridobila občina Benedikt (7,7 %), sledita Hodoš (6,6 %) in Divača (5,1 %) (slika 6).

3.2.1 Trendi v občinah s pozitivnim demografskim prirastom

Ob upoštevanju 500-metrske razdalje je mogoče ugotoviti, da je pet občin: Trzin, Vransko, Pivka, Benedikt in Cirkulane priselitveni prirast usmerilo na območja v bližini postajališč JPP. Za vse je značilno, da se je število prebivalcev na območjih v bližini postajališč povečalo za vsaj toliko, za kolikor se je povečalo skupno absolutno število občanov (preglednica 1). Vse omenjene občine so zaznale nadpovprečno rast prebivalstva v primerjavi z državnim povprečjem, pri čemer še posebej izstopa Benedikt, ki je med letoma 2004 in 2020 zaznal 18-odstotno demografsko rast. Ob povečanju razdalje do postajališča na 1 km se število občin s takim trendom skoraj potroji (slika 7). V teh primerih gre za rast prebivalstva na območjih poselitve, ali za ustrezno umeščanje nove stanovanjske gradnje v okolici postajališč, ali kombinacijo obojega.

Preglednica 1: Spremembe števila prebivalcev v izbranih občinah med letoma 2004 in 2020

Občina	Absolutni prirast števila vseh prebivalcev v občini	Absolutni prirast števila prebivalcev v bližini postajališč (razdalja do 500 m)
Pivka	235	247
Benedikt	396	407
Trzin	168	231
Vransko	84	91
Cirkulane	6	15

Vir: Centralni register prebivalstva, 2005 in 2021
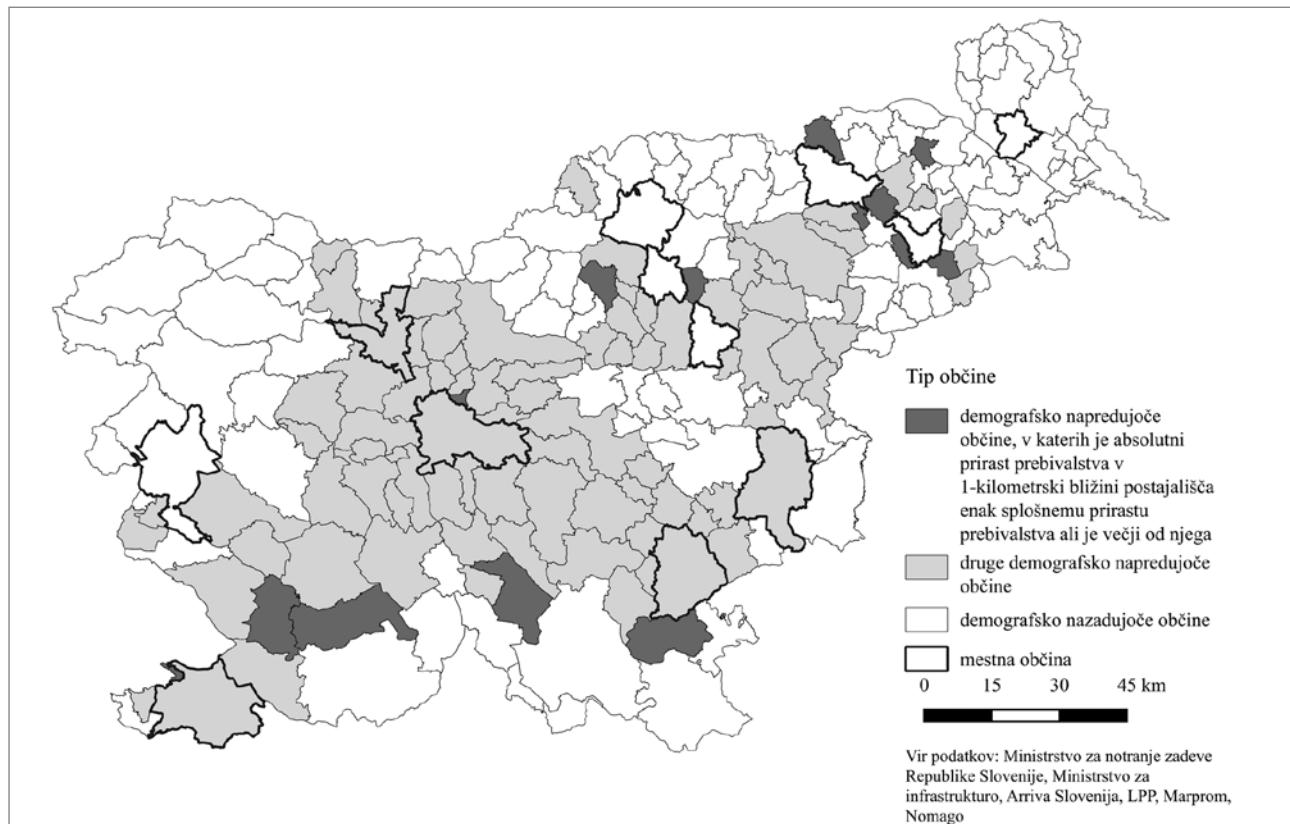
Slika 7: Občine z ugodnim umeščanjem poselitve v oddaljenosti do 1 km od postajališč JPP, 2004–2020 (ilustracija: Nika Razpotnik Visković)

Preglednica 2: Usmerjanje prebivalstvenega prirasta v občinah z največjo stopnjo rasti, 2004 in 2020

Občina	Relativna rast prebivalstva (v %)	Absolutni prebivalstveni prirast (št. oseb)	Delež prebivalstvenega prirasta v oddaljenosti do 500 m od postajališča (v %)	Delež prebivalstvenega prirasta v oddaljenosti do 1 km od postajališča (v %)
Škofljica	47,2	3572	79,6	93,7
Komenda	38,3	1766	52,8	96,5
Dol pri Ljubljani	36,2	1663	85,4	92,7
Ig	27,9	1590	77,2	91,1
Brezovica	27,9	2727	76,9	91,5
Vodice	23,4	958	81,1	93,3
Grosuplje	23,2	3834	68,1	88,9
Logatec	21,2	2486	43,2	83,2
Ivančna Gorica	20,5	2880	41,8	70,3
Rače – Fram	19,9	1277	13,6	55,9

Vir: Centralni register prebivalstva, 2005 in 2021

Preglednica 3: Slovenske občine z najbolj intenzivno stanovanjsko gradnjo

Občina	Št. prebivalcev leta 2020	Rast prebivalstva v obdobju 2004–2020 (v %)	Št. izdanih gradbenih dovoljenj v obdobju 2007–2020/1000 prebivalcev	Sprememba deleža prebivalstva			
				v največ 500-m razdalji do postajališča (v %)	ki živi od postajališča oddaljen več kot 500 m (v %)	v največ 1-km razdalji do postajališča (v %)	ki živi od postajališča oddaljen več kot 1 km (v %)
Komenda	6383	38,2	134,3	−2,3	2,3	1,2	−0,6
Benedikt	2584	18,1	126,1	11,1	−9,9	7,7	−4,8
Vransko	2627	3,3	105,4	2,0	−2,2	1,3	−1,2
Hrpelje - Kozina	4572	11,8	100,5	4,9	−1,9	4,2	−2,0

Vir: Statistični urad Republike Slovenije, 2021

Od desetih občin z najvišjo stopnjo prebivalstvene rasti jih je prvih devet iz osrednjeslovenske regije. V nekaterih je večina prebivalstvenega prirasta značilna za območja v 500-metrski oddaljenosti od postajališča JPP, v nekaterih občinah: Logatec, Ivančna Gorica in Rače - Fram pa je ta delež zelo skromen in kaže na to, da se težišče poselitve premika od postajališč navzven. Pri oddaljenosti do 1 km od postajališča je trend usmerjanja preseženega števila prebivalcev nekoliko ugodnejši. V šestih občinah je na območjih, ki so od postajališč JPP oddaljena največ 1 km, živelo več kot 90 % prebivalstvenega prirasta (preglednica 2).

3.2.2 Območja demografskega praznjenja

Pri analizi občin, ki so zaznale demografski upad, so avtorji preverili, ali je ta osredotočen na območja z večjo oddaljenostjo od postajališč JPP. Rezultati analize tega ne potrjujejo.

V teh občinah se je absolutno število prebivalcev, ki živijo na območjih, ki so od najbližjega postajališča oddaljena več kot 500 m, od leta 2004 do leta 2020 zmanjšalo za 3.830 oseb ali za 1,8 %, to so pretežno podeželske in obmejne občine, kjer je na splošno slabša dostopnost do JPP: Ormož, Radenci, Laško, Pesnica in Rogaševci. Število prebivalcev na območjih v 500-metrski bližini postajališč pa se je v obravnavanem obdobju zmanjšalo za kar 37.485 ali za 6,9 %, največ na urbanih območjih, kot so Maribor, Trbovlje, Velenje, Jesenice, Celje, Ptuj, Murska Sobota in Hrastnik. Ob mejni razdalji 1 km je stanje podobno. Število prebivalcev, ki živijo od postajališč oddaljeni več kot 1 km, se je glede na leto 2004 zmanjšalo za 2.312 ali za 3,1 %, na območjih z razdaljo do 1 km pa za 38.057 ali za 5,7 %. Geografski vzorec ostaja podoben kot pri 500-metrski oddaljenosti.
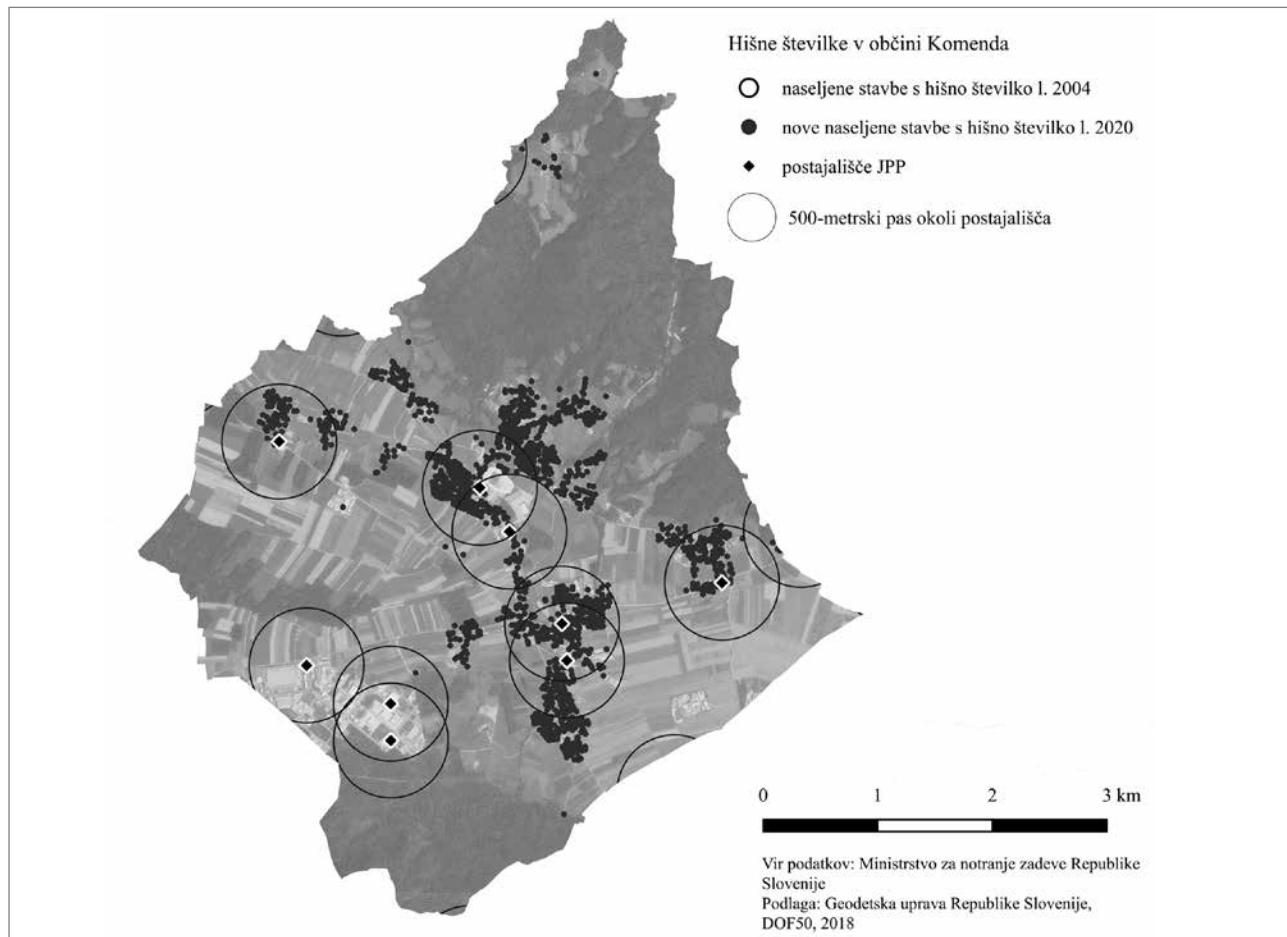
Slika 8: Lokacije stavb s hišnimi številkami s stalnim prebivalstvom v občini Komenda (ilustracija: Nika Razpotnik Visković)

3.2.3 Izbrana območja intenzivne stanovanjske gradnje

Z vidika ustreznosti usmerjanja poselitve na primeru štirih proučevanih slovenskih občin, ki so v zadnjih letih zaznale intenzivno poselitveno dinamiko, na kar kaže število izdanih gradbenih dovoljenj za stanovanjsko gradnjo v obdobju 2007–2020, je treba omeniti občine Komenda (osrednjeslovenska regija), Benedikt (podravska regija), Vransko (savinjska regija) in Hrpelje - Kozina (obalno-kraška regija) (preglednica 3).

Občina Komenda pri umeščanju poselitve v bližino postajališč JPP v obdobju 2004–2020 ni bila najbolj učinkovita. Poselitev se je širila predvsem zaradi individualne gradnje družinskih hiš na robovih naselij, ki pa so preveč oddaljena od postajališč JPP. Občutno prebivalstveno rast sta omogočili gradnji sosesk Šmidov log in Sončna aleja v naselju Gmajnica, ki sta od najbližjega postajališča JPP oddaljeni več kot 500 m (slika 8).

Občina Benedikt je imela v proučevanem obdobju progresivno stanovanjsko politiko, ki je bila osredotočena na središče na-

selja Benedikt v Slovenskih goricah in na bližino postajališča ter je zgled ustrezne skrbi za dostopnost do postajališč JPP (slika 9).

Občina Vransko je za poselitev zanimiva zaradi bližine avtocestnega priključka. V proučevanem obdobju je rast temeljila na razpršeni individualni gradnji na območjih, ki so od postajališč oddaljena več kot 500 oziroma 1000 m (slika 10). Leta 2022 se končuje tudi gradnja soseske Grofice v neposredni bližini avtocestnega priključka, ki je hkrati tudi v bližini postajališča JPP.

Tudi občina Hrpelje - Kozina je za naselitev privlačna predvsem zaradi neposredne bližine avtocestnega priključka, zato je bilo je v obdobju 2004–2020 zgrajenih več stanovanjskih sosesk: Brinje in na Sončni poti v Kozini, v gradnji je soseska pod Slavnikom, vključno z razpršeno gradnjo na preostalem ozemlju občine (slika 11). Pri tem se je delež prebivalstva, ki živi v bližini postajališč JPP, povečal.
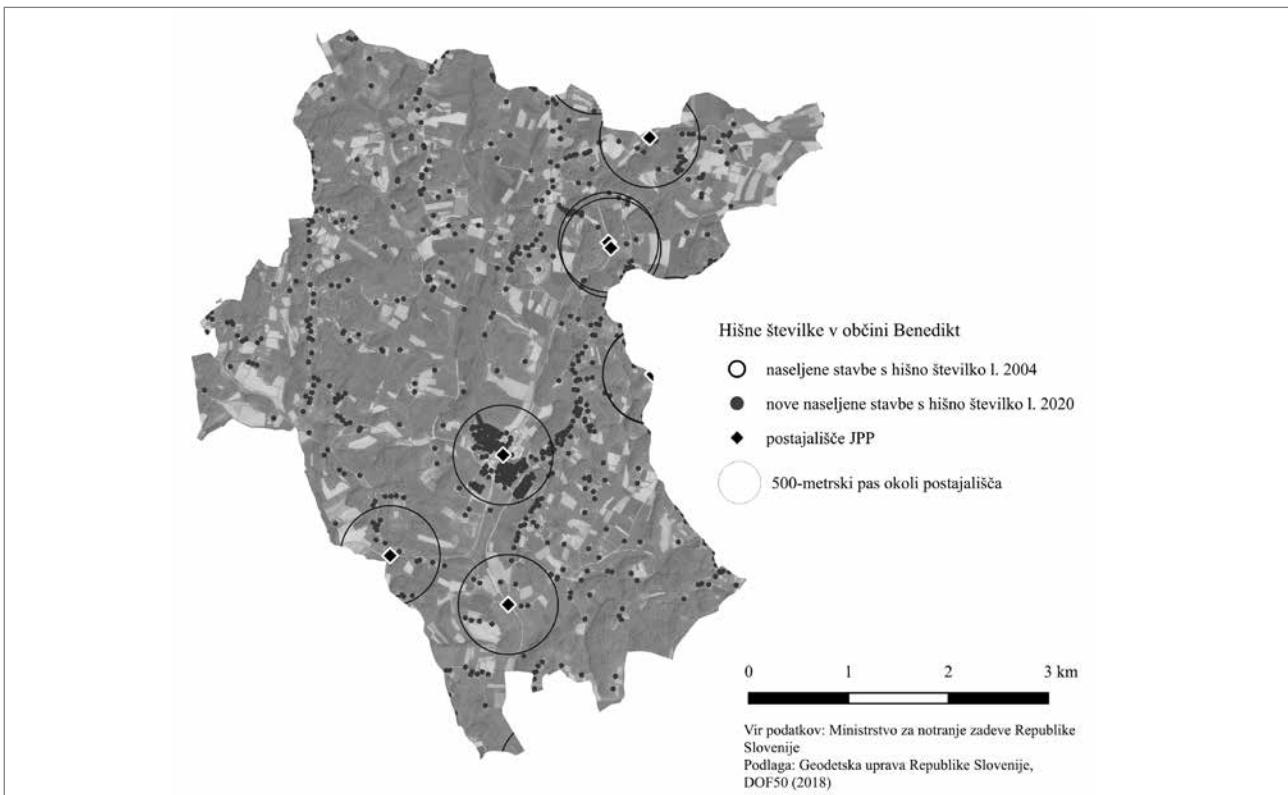
Slika 9: Lokacije stavb s hišnimi številkami s stalnim prebivalstvom v občini Benedikt (ilustracija: Nika Razpotnik Visković)
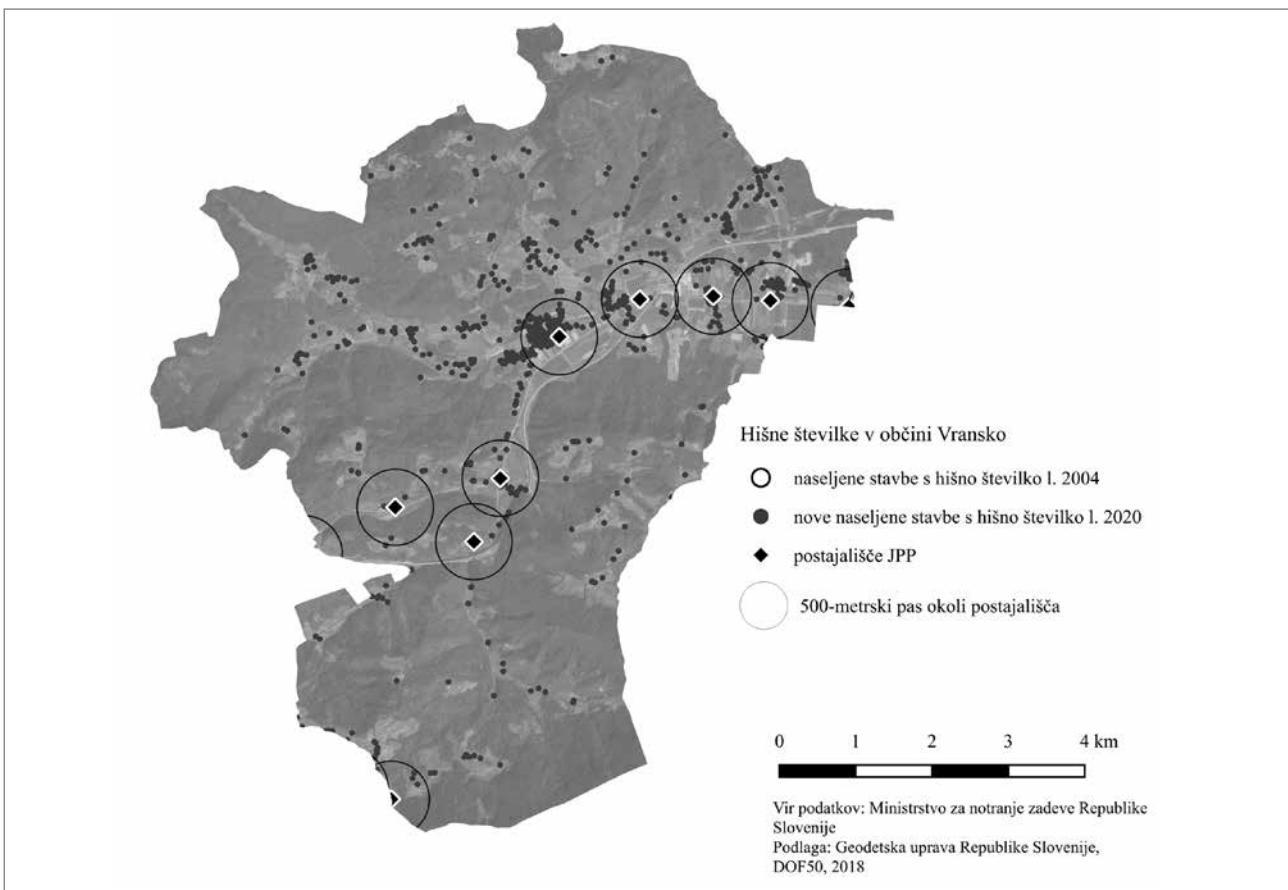
Slika 10: Lokacije stavb s hišnimi številkami s stalnim prebivalstvom v občini Vransko (ilustracija: Nika Razpotnik Visković)
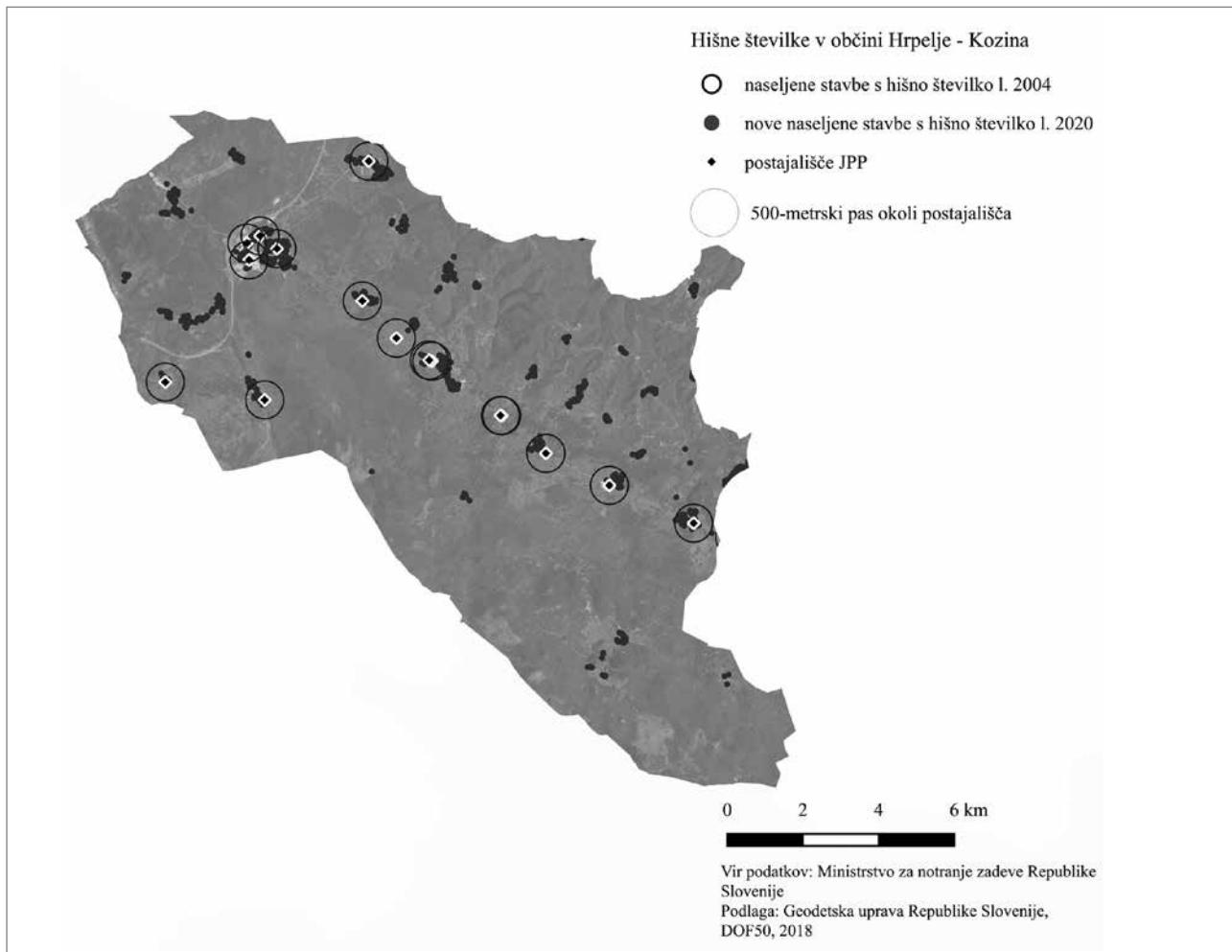
Slika 11: Lokacije stavb s hišnimi številkami s stalnim prebivalstvom v občini Hrpelje - Kozina (ilustracija: Nika Razpotnik Visković)

4 Razprava

Rezultati analize dostopnosti postajališč JPP so koristni za načrtovanje dosegljivih ciljev na področju spreminjanja potovalnih navad, za ovrednotenje usmerjanja poselitve in za načrtovanje ukrepov, kot so spremembe omrežja in voznih redov JPP. Glede na to, da ni jasnih meril, je nekatere rezultate težko ovrednotiti. Tako se na primer avtorji težko nedvoumno opredelijo, ali je skoraj polovičen delež prebivalstva Slovenije, ki jim v 500-metrski oddaljenosti od doma ni na voljo postajališče JPP s primerno pogostnostjo voženj, še sprejemljiv ali ne oziroma ali to pomembno zavira večjo uporabo JPP. Raziskava o vplivu oddaljenosti postajališč JPP na uporabo JPP je bila v Sloveniji opravljena samo za Ljubljano (Tiran idr., 2019) in Koper (Paliska idr., 2006), pri čemer pripravljenost za uporabo JPP z razdaljo upada nelinearno (Zhao idr., 2003), izsledki tovrstnih raziskav z območij v tujini pa so zaradi drugačnega konteksta uporabni le delno. Obenem je potek omrežja JPP odvisen od številnih dejavnikov in omejitev, kot so finančna sredstva, gostota prebivalstva, infrastrukturne možnosti, de-

janska uporaba JPP in podobno. Ne glede na to je mogoče ugotoviti, da precejšen delež prebivalstva živi na območjih, na katerih je JPP preslabo dostopen, da bi ga ljudje bolj množično uporabljali, pri čemer je dostopnost zgolj ena od prvin kakovosti JPP (Gabrovec idr., 2009).

Rezultate dostopnosti JPP je mogoče lažje ovrednotiti s prepoznavanjem vrzeli v ponudbi JPP na podlagi gostote prebivalstva, saj ta pomembno pogojuje potek omrežja JPP. Ti rezultati imajo veliko aplikativno vrednost, saj jih je mogoče uporabiti kot podlago za širitev ali optimizacijo omrežja JPP, potencialni ukrepi pa obsegajo spremembo poteka linij in postajališč ter dodajanje novih ali povečanje pogostnosti voženj na že vzpostavljenih linijah. Glede na razmeroma majhen delež prebivalstva, ki živi na (zelo) gosto poseljenih območjih brez ustrezne dostopnosti JPP, je mogoče ugotoviti, da je omrežje JPP v državi razmeroma ustrezno glede na poselitveni vzorec, kar bolj velja za zelo gosto poseljena kot za gosto poseljena območja. Marsikje pa so potrebne nekatere izboljšave, tako je v Ajdovščini brez primernega dostopa do postajališča JPP

skoraj celotni severovzhodni del mesta, in to kljub razmeroma gosti poselitvi, pri čemer je potencialna rešitev prestavitev zdajšnjega ali postavitev dodatnega postajališča bliže območju zgostitve prebivalstva, kar ne zahteva velikih finančnih vložkov. Podoben primer je na jugovzhodu Cerknice. Na območjih brez mestnega potniškega prometa je treba pri postavitvi dodatnih postajališč paziti na časovno konkurenčnost, ki jo pregosto omrežje postajališč lahko zmanjša. Na tistih gosteje poseljenih območjih, kjer uvedba novih linij ni mogoča ali smiselna, pa velja razmisliti o bolj prilagodljivih oblikah JPP, kot so prevozi na klic, podeželski taksiji, izgradnja manjših parkirišč P + R ob najbližjem postajališču z ustrezno dostopnostjo in podobno (Mees, 2009; Prinčič idr., 2016; Gabrovec idr., 2021). Prilagodljive oblike JPP so seveda potrebne tudi na redkeje poseljenih območjih, ki so prostorsko precej obsežnejša.

Rezultati analize sodobnih poselitvenih sprememb glede na današnje omrežje JPP niso najbolj spodbudni. Število prebivalcev se je najbolj zmanjšalo na območjih v bližini postajališč JPP, iz česar je mogoče sklepati, da JPP ni pomemben dejavnik pri odločanju o lokaciji bivanja. Ugotovitev je skladna z rezultati nekaterih drugih raziskav (Aslam idr., 2019). V občinah z najbolj intenzivno poselitveno dinamiko se novejša poselitev deloma umešča v bližino postajališč JPP, vendar je podrobnejša analiza pokazala, da nekatera do stanovanjskih območij nimajo ustreznega dostopa po omrežju pešpoti (npr. Sončna pot v Kozini) ali je bližina postajališč JPP drugotnega pomena v primerjavi z bližino avtocestnega priključka (npr. soseska Grofice v Vranskem, v izgradnji), če sklepamo po odsotnosti omembe JPP na predstavitveni spletni strani soseske. Poselitev v sodobnosti tako le deloma sledi omrežju JPP in tako potrjuje neskladje med državnimi strateškimi dokumenti in načrtovalsko prakso, ki ga prepoznavata tudi Poročilo o prostorskem razvoju (Fonda idr., 2016) in osnutek Strategije prostorskega razvoja Slovenije 2050 (2020). Vse to se kaže v skromni uporabi JPP v Sloveniji, ki se je med epidemijo covida-19 in po njej še dodatno zmanjšala (Brezina idr., 2021).

Na tem mestu velja izpostaviti nekatere slabosti in omejitve uporabljenega metodološkega pristopa. Prvič, pri izračunu dostopnosti so avtorji upoštevali zračno oddaljenost, ne oddaljenosti po cestnem omrežju. Takšni izračuni precenijo dejansko dostopnost, a s pomembnimi odstopanji med območji zaradi razlik v gostoti cestnega omrežja, naravnimi in umetnimi ovirami in podobno (Kozina, 2010; Tiran idr., 2015). Drugič, dostopnost je bila analizirana v 500- in 1000-metrskih polmerih, ki ne odsevata nujno razdalje do postajališča, ki so jo ljudje pripravljeni prehoditi. Zaradi večje ponudbe potovalnih možnosti na urbanih območjih je 1000 metrov najbrž prevelika oddaljenost, da bi tamkajšnji prebivalci vsakodnevno uporabljali JPP, razen če nimajo alternative. Glede na nekatere raziskave, ki nakazujejo na majhno pripravljenost ljudi za hojo

do postajališč, na primer v Ljubljani (Tiran idr., 2019), to deloma velja tudi za 500-metrski polmer. Uporabljena polmera se navezujeta na (sprejemljivo) oddaljenost za hojo, ki je najbolj univerzalen potovalni način, a je do postajališč JPP mogoče dostopati tudi drugače. Vsekakor so za določitev zaželene in sprejemljive (peš) dostopnosti postajališč JPP v Sloveniji potrebne dodatne raziskave, ki bi bile podlaga za določitev natančnejših standardov dostopnosti.

Avtorji so v raziskavi upoštevali le razdaljo od izvora potovanja (doma) do vstopnega postajališča, ne pa tudi dostop od postajališč do potencialnih ciljev potovanja (npr. delovna mesta), ki tudi vpliva na izbiro potovalnega načina. Z vidika ponudbe JPP so upoštevali zgolj podatek o številu voženj na dan. Ta ne odseva nujno primernosti voznih redov za uporabnike, a ocenjujejo, da gre za dovolj dober približek in pomemben korak naprej v primerjavi s preprostejšimi izračuni dostopnosti. Z vidika povpraševanja po JPP pa so upoštevali le razporeditev prebivalstva, ne pa tudi njegovih dejanskih potreb po mobilnosti ali socio-ekonomskih značilnosti. Uporabljena metodologija ne upošteva niti preostalih pomembnih prvin dostopnosti in kakovosti JPP, ki vplivajo na dejansko uporabo sistema, npr. potovalno hitrost ali potovalni čas. Za bolj celovito sliko bi bilo analizo smiselno nadgraditi še z drugimi potovalnimi načini (npr. skiro, kolo, avtomobil), za kar pa bi potrebovali kakovostne vhodne podatke.

5 Sklep

Avtorji so v raziskavi z geografskimi informacijskimi sistemi analizirali dostopnost JPP v Sloveniji glede na oddaljenost postajališč od prebivališč in pogostnost voženj avtobusom JPP. Ugotovili so, da je dostopnost postajališč JPP v državi glede na 1000-metrsko oddaljenost od postajališč razmeroma zadovoljiva, tudi če se upošteva pogostnost voženj, manj pa glede na 500-metrsko oddaljenost, ta je zadovoljiva zgolj na večini urbanih območij. Obsežna območja v državi, tudi v nekaterih mestnih občinah, nimajo ustrezne dostopnosti JPP, kar je zlasti na podeželju posledica majhne gostote prebivalstva, večje vrzeli v ponudbi pa se pojavljajo na območjih suburbanizacije, ki so nastala zunaj koridorjev JPP. Analiza sprememb poselitve v bližini postajališč med letoma 2004 in 2020 nakazuje na to, da ponudba JPP ni pomemben lokacijski dejavnik. Na območjih največje prebivalstvene rasti in intenzivne stanovanjske gradnje se je poselitev le delno umeščala v bližino omrežja JPP. To potrjuje domneve o nedoslednem upoštevanju veljavnih prostorskih strateških aktov, nizki stopnji integracije prometnega in prostorskega načrtovanja ter nadaljevanju prostorskih trendov, ki pomenijo odmik od učinkovitega, racionalnega in kakovostnega prostorskega razvoja.

Za izboljšanje dostopnosti JPP v Sloveniji v prihodnje ni treba pomembno spreminjati omrežja JPP, ampak je treba novo poselitev dosledno umeščati na območja z ustrezno dostopnostjo JPP, na redkeje poseljenih območjih brez ustrezne dostopnosti JPP, ki so v Sloveniji izjemno obsežna, pa je treba izboljšati ponudbo alternativnih oblik mobilnosti.

Raziskava ponuja dodaten, bolj celovit vpogled v dostopnost postajališč JPP v državi in vpeljuje nekatera nova merila za vrednotenje te dostopnosti, uporabna tudi za druge države. Prihodnje raziskave naj poskušajo ugotoviti, koliko dostopnost z vidika tako oddaljenosti postajališč kot pogostnosti voženj vpliva na pogostnost uporabe JPP, tudi v primerjavi z drugimi značilnostmi prostora (parkirna politika, raba prostora) in drugimi prvinami kakovosti JPP. Za celovitejšo sliko o dostopnosti JPP v državi bi bilo treba analizo nadgraditi tudi s socio-ekonomskimi značilnostmi prebivalstva, raznovrstnostjo potovalnih možnosti na dani lokaciji, dostopnostjo do cilja potovanja in podobno.

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Vizije prihodnosti mest: Primerjalna analiza strateškega urbanističnega načrtovanja v slovenskih in hrvaških mestih

Mesta se zaradi prenaseljenosti, onesnaževanja, hrupa ter drugih ekoloških in družbenih problemov spoprijemajo s čedalje slabšo kakovostjo urbanega življenja, kar zahteva učinkovito načrtovanje njihove prihodnosti. Urbane vizije kot vidik strateškega načrtovanja so lahko izhodišče za radikalno preobrazbo načina, na katerega se kraji razvijajo v mesta prihodnosti, ki uspešno rešujejo trenutne izzive. Članek, ki izhaja iz antropologije prihodnosti in načrtovanja, analizira, kako si mesta zamišljajo svojo prihodnost in kako jo upovedujejo. Primerja vizije osmih slovenskih in hrvaških mest – Ljubljane, Maribora, Kopra, Nove Gorice in Zagreba, Reke, Kutine in Hvara – ter ugotavlja, kako ta razumejo koncept trajnostnega razvoja in upoštevajo njegova načela (gospodarska, okoljska, družbena in kulturna trajnostnost). Diskurzivna analiza razkriva, da vizije pogosto ostajajo deklarativne, z nedefiniranimi elementi trajnostnosti in vrednotami ter da pogosto uporabljajo urbane danosti oziroma naravne in kulturne vire za svoje cilje. Da bi mesta dosegla boljše sodelovanje prebivalcev v soustvarjanju mest prihodnosti, bi vizije morale biti predvsem dolgoročnejše in bolj navdihujoče.

Ključne besede: antropologija prihodnosti, urbano načrtovanje, vizije mest, Slovenija, Hrvaška

1 Uvod

Na svetu že od leta 2010 več ljudi živi v urbanih središčih kot na podeželju, leta 2020 je bilo takih 56,2 odstotka (Buchholz, 2020). Naraščajoče prebivalstvo negativno vpliva na življenje v mestih, ta pa se spoprijemajo s prenaseljenostjo, onesnaževanjem, hrupom ter drugimi ekološkimi in družbenimi problemi. To zahteva strateško načrtovanje razvoja, ureditve oz. *prihodnosti mest* na več ravneh, od globalne do lokalne. Tako sta v zadnjem desetletju Organizacija združenih narodov in Evropska unija sprejeli agende za boljše urbane prihodnosti, med aktualnimi sta *Nova urbana agenda* (ang. *New urban agenda*) (Organizacija združenih narodov, 2017) in *Prihodnost mest* (ang. *The future of cities*) (Evropska komisija, 2019), ki temeljita na *Agendi za trajnostni razvoj do leta 2030* (ang. *2030 Agenda for Sustainable Development*) (Organizacija združenih narodov, 2015). Evropska unija vpliva tudi na načrtovanje individualnega razvoja evropskih mest, to je razvidno tako iz skupnih poudarkov razvojnih strategij kot v njihovem dokaj enotnem trajanju (v glavnem obravnavajo sedemletno obdobje posameznih finančnih okvirov Evropske unije).

Načrtovanje je izraz, ki povsod po svetu označuje različne prakse in se nanaša na več ravni. Vsako načrtovanje je strateško, vendar iz njega izhajajo tudi konkretnejši zemljevidi in projekti prostorskega, družbenega, kulturnega in drugega razvoja. V najsplošnejšem smislu zamišljanja prihodnosti in vnaprejšnje priprave nanjo načrtovanje zajema *širok nabor taktik, tehnologij in institucij za nadzor prehoda v prihodnost, vključno s praksami in idejami, ki so se razširile med zasebnimi in javnimi organizacijami* (Abram in Weszkalnys, 2013a: 2) oz. ga lahko razumemo kot *skupek dejavnosti, instrumentov, ideologij, modelov in predpisov, ki je usmerjen v ureditev družbe z nizom družbenih in prostorskih tehnik* (prav tam: 3).

Čeprav se je antropologija, iz katere izhaja članek, pogosto ukvarjala z (abstraktnimi) koncepti, ki so ključni za (strateško) načrtovanje, kot so država, politika, razvoj in tvornost (ang. *agency*), oz. s konkretnimi praksami kolonialnega in pokolonialnega (zelo redko pa demokratičnega) upravljanja prostora in prebivalcev (prim. Abram in Weszkalnys, 2013b), je bila ta dejavnost šele v zadnjem desetletju deležna večje znanstvene pozornosti (obratno velja za aplikativno antropologijo, ki se je z načrtovanjem intenzivno ukvarjala v praksi). Eden od razlogov za uveljavitev načrtovanja kot antropološkega predmeta raziskovanja je vsekakor potreba po vse večjem sodelovanju prebivalcev (prim. Poljak Istenič, 2019a, 2019b; Svirčić Gotovac idr., 2021), pri čemer etnografija lahko zelo uspešno pojasni pogosto nasprotujoče si poglede na to, kaj si ljudje želijo in kaj se jim zdi mogoče. Drugi razlog je teoretični, in sicer se je antropologija, ki je bila utemeljena kot sinhrona/diahrona

disciplina, končno soočila s svojim *tempocentrizmom* (Textor, 2005; prim. Munn, 1992) in se začela ukvarjati s prihodnostjo, ki pa je po mnenju nekaterih urbanih teoretikov edinstvena za identiteto (prostorskega) načrtovanja (prim. Myers in Kitsuse, 2000: 221). Urbano načrtovanje tako nekateri avtorji opredeljujejo s *pripovedovanjem zgodb o prihodnosti* (prim. Throgmorton, 1992) in poudarjajo, da branje urbanističnega načrtovanja kot enega od slogov pripovedovanja zgodb o prihodnosti mest pomaga izpostaviti posebno vrsto diskurza in pripovednih strategij, ki jih urbano načrtovanje uporablja za osmišljanje svoje vloge v družbi in urbanem razvoju (Collie, 2011: 425). V skladu s tem članek temelji na diskurzivni analizi vizij izbranih slovenskih in hrvaških mest. Izhaja iz projekta *Urbane prihodnosti: Zamišljanje in spodbujanje možnosti v nemirnih časih*, njegov namen pa je prikazati, kako si mesta zamišljajo svojo prihodnost in kako jo upovedujejo glede na koncept trajnostnega razvoja, ki je bil v Evropski uniji ključen v času nastajanja slovenskih in hrvaških urbanih strategij. S tem članek sledi okrepljenemu antropološkemu zanimanju za študije zamišljanja prihodnosti (Appadurai, 2013; Salazar idr., 2017; Petrović-Šteger, 2018a; Bryant in Knight, 2019; Gulin Zrnić in Poljak Istenič, 2022).

2 Metodologija in struktura članka

Cilj raziskave je bil analizirati diskurz s kulturološkega vidika (prim. Foucault, 1972). Avtorici je zanimal pooblaščeni diskurz (Smith, 2006) urbane politike – način pisanja vizij, vizije kot zbirke vsebin znanja ter kot postopki ustrezne komunikacije in uporabe znanja. Predmet analize so bile vizije, ki so del aktualnih razvojnih strategij osmih slovenskih in hrvaških mest. Če ta mesta na svojih spletiščih še niso objavila dokumentov za trenutno obdobje finančnega okvira Evropske unije (2021–2027), sta upoštevali strategije za prejšnje obdobje (2014–2020), veljavnost nekaterih od teh je podaljšana do leta 2030. Obravnavani so bili naslednji dokumenti: *Trajnostna urbana strategija Mestne občine Ljubljana 2014–2030* (v nadaljevanju: TUS MOL), *Razvojna strategija mesta Zagreb za obdobje do leta 2020* (hrv. *Razvojna strategija Grada Zagreba za razdoblje do 2020. godine*, v nadaljevanju: RS Zagreba), *Trajnostna urbana strategija mesta Koper 2030* (v nadaljevanju: TUS Kopra), *Načrt razvoja mesta Reka 2021–2027* (hrv. *Plan razvoja grada Rijeke 2021.–2027.*, v nadaljevanju: PR Reke), *Maribor ima priložnosti: Trajnostna urbana strategija Mestne občine Maribor* (v nadaljevanju: TUS MOM), *Strategija razvoja mesta Kutina za programsko obdobje 2014–2020* (hrv. *Strategija razvoja Grada Kutine za programsko razdoblje 2014.–2020.*, v nadaljevanju: SR Kutine), *Mlado in zeleno središče ustvarjalnih energij: Trajnostna urbana strategija Nova Gorica 2020* (v nadaljevanju: TUS Nove Gorice) in *Strategija razvoja mesta Hvar do leta 2020* (hrv. *Strategija razvoja*

Grada Hvara do 2020. godine, v nadaljevanju: SR Hvara). Za kontekstualizacijo vizij sta avtorici po potrebi analizirali tudi strateške cilje in prednostne naloge, objavljene v navedenih dokumentih.

Mesta, katerih vizije avtorici obravnavata, so bila izbrana glede na medsebojne podobnosti, ki omogočajo primerjavo. Ljubljana in Zagreb sta glavni mesti, najpomembnejši politični, gospodarski, izobraževalni, zdravstveni, upravni in kulturni središči ter najprivlačnejši lokaciji za nacionalno in mednarodno priseljevanje in naložbe, vendar se med seboj razlikujeta po svojem umeščanju na evropsko ali svetovno raven. Ljubljana je nosilka več nazivov Unesca in Evropske komisije: bila je svetovna prestolnica knjige (2010), Unescovo mesto literature (od 2015), zelena prestolnica Evrope (2016) in kandidatka za evropsko prestolnico kulture 2025 (v drugem krogu jo je premagala Nova Gorica), medtem ko Zagreb takšnih nazivov še nima. Koper in Reka sta glavni nacionalni pristanišči in sta večetnični in večkulturni mesti. Maribor in Kutina sta celinski mesti, regionalni središči in industrijski mesti ter sta se razcveteli v socialističnem obdobju in se po razpadu Jugoslavije spoprijeli s tranzicijsko krizo zaradi brezposelnosti in urbanega prestrukturiranja. Hvar in Nova Gorica sta geografsko obrobni mesti z zelo različnima izkušnjama urbanosti. Prvi je otoško mesto, katerega urbanost izhaja iz antike, bil je zgodovinsko pomembno sredozemsko pristanišče in je zdaj privlačna turistična destinacija. Druga pa je zgrajena po konceptu vrtnega mesta in po modernističnih načelih, nastala je po drugi svetovni vojni zaradi izgube (italijanske) Gorice kot upravnega, gospodarskega in kulturnega središča.

Pri analizi sta se avtorici zgledovali po pristopu antropologije javnih politik, ki zagovarja *sledenje viru politike – njenim diskurzom, predpisom in programom – do tistih, na katere politike vplivajo* (Wedel in Feldman, 2005: 2). Tako sta analizirali, kako Evropska unija s svojimi programi in zahtevami v raznih nacionalnih okvirih vpliva na načrtovanje prihodnosti mest v skladu s trajnostnim razvojem. Trajnostni razvoj je najbolj konkretno opredeljen v *Agendi za trajnostni razvoj do leta 2030*, ki določa 17 splošnih in 169 konkretnih ciljev tovrstnega razvoja – med njimi je 11. splošni cilj posebej posvečen urbanemu razvoju (ustvariti odprta, varna, odporna in trajnostna mesta in naselja) –, vendar ta v času oblikovanja strategij prejšnjega obdobja še ni bila sprejeta. Zato se avtorici v članku opirata na koncept trajnostnega razvoja, ki je bil – predvsem v akademskih krogih, povezanih s proučevanjem kulture – uveljavljen v tistem času in je bil tudi podlaga omenjeni *Agendi* (Wiktor-Mach, 2020). Temelji na štirih stebrih: na gospodarstvu, okolju, družbi in kulturi. V vizijah sta analizirali, ali oziroma kako mesta upoštevajo te stebre, s katerimi izrazi jih označujejo, kakšno vlogo ima posamezen steber v viziji in kaj mesta izpostavljajo kot vredno razvoja v sklopu posameznega stebra (npr. podjetništvo, turi-

zem, mobilnost, energija, zelene površine, sodelovanje, ustvarjalnost, dediščina ipd.). Zasledovali sta kontekste, v katerih se pojavlja ideja ali element trajnostnega razvoja, jih primerjali, iskali podobnosti in razlike ter si prizadevali pokazati raznolikost razumevanj v posameznih mestih. Vizije sta brali kot pripovedi o možnih razumevanjih tega koncepta, ki politične razprave usmerjajo na izbrane elemente trajnostnosti, vplivajo na način prepoznavanja političnih problemov ter legitimirajo ali marginalizirajo določene politične rešitve. S tem sta postavili podlago za prihodnje etnografske raziskave o tem, kako se politike z deklarativne ravni prenašajo v prakso.

V članku sta najprej začrtali teoretični okvir, iz katerega izhaja analiza, nato pa sta predstavili vizije izbranih mest. Posebej sta se posvetili njihovemu oblikovanju, največ pozornosti pa sta namenili analizi, kako mesta v vizijah razumejo in uporabljajo koncept trajnostnega razvoja. Nazadnje sta povzeli, kako vizionarske so pravzaprav urbane vizije.

3 Zamišljanje prihodnosti v načrtovanju

Načrtovanje združuje dva ključna koncepta, ki že od začetka zaposlujeta znanstvenike različnih disciplin: čas in prostor. *Načrtovanje je oblika konceptualizacije prostora in časa ter možnosti, ki jih čas ponuja prostoru* (Abram in Weszkalnys, 2013a: 2). A čeprav je bilo eksplicitno opredeljeno z zamišljanjem prihodnosti, so urbani teoretiki že konec prejšnjega stoletja opozarjali, da je vizija življenja v 21. stoletju, kot se je izrisovala v prostorskem načrtovanju, relativno nespremenljiva. Temeljila je zgolj na tradicionalnih metodah projektiranja in modeliranja, ki pa so neučinkovite tehnike za predvidevanje hitrih, kvalitativnih in nelinearnih sprememb (Warren idr., 1998: 49; prim. Myers in Kitsuse, 2000). Načrtovalci so pod pritiskom proračunskih rezov in drugih (neoliberalnih) okoliščin prenehali biti vizionarji in idealisti, zato naj bi bilo nujno, da načrtovanje *znova potrdi svojo edinstveno pravico do prihodnosti in spet sprejme odgovornost za poosebljanje vira idej, znanja in navdiha o tem, kaj bi lahko bilo in kaj bi moralo biti* (Isserman, 1984: 219). Vrstili so se pozivi k uporabi domišljije, tudi literarnih pristopov (Warren idr., 1998, Collie, 2011; Sjöberg, 2017), predvsem pri oblikovanju scenarijev (Textor, 1995; Ratcliffe in Krawczyk, 2011; Stojanović idr., 2014). Pod vplivom teh pozivov so se za učinkovito (tj. navdihujočo) predstavitev prihodnosti kot produktivne pokazale predvsem tri tehnike: oblikovanje vizij in scenarijev ter pripovedovanje zgodb. Te tehnike naj bi kot hevristična ali retorična vodila za delovanje spodbujale razpravo o želenih prihodnostih, pripravile načrtovalce k obravnavanju izzivov prihodnosti z avtoriteto in prepričale druge k sprejetju načrta za prihodnost (Myers in Kitsuse, 2000: 227).

Pripovedovanje zgodb je tehnika, ki jo proučuje predvsem folkloristika (gl. MacDonald, 1999; Marković, 2015; Kropej Telban, 2021), v načrtovanju pa se uporablja za pripravo občinstva na prihodnost in prepričevanje ljudi, naj sprejmejo to, kar se pripovedovalcu zdi najboljši potek dejanja ali delovanja (glej Throgmorton, 1992). Pisanje scenarijev je že v sedemdesetih letih 20. stoletja kot metodo raziskovanja prihodnosti spodbujal ameriški antropolog Robert Textor (1995), urbani načrtovalci pa scenarij razumejo kot pripovedi o potencialnih dogodkih, ki bi lahko vplivali na načrtovalske odločitve (glej Myers in Kitsuse, 2000). Ker analize kažejo, da ti dve tehniki v slovenskem in hrvaškem (urbanem) načrtovanju nista uveljavljeni, avtorici v članku obravnavata zgolj oblikovanje vizij. Vizije so namreč obvezen element (trajnostnih) urbanih strategij in jih zahtevajo nacionalne zakonodaje, so tudi pogoj za črpanje evropskih kohezijskih sredstev. Čeprav gradita na izkušnjah nekaterih slovenskih antropologov, ki so se ukvarjali z oblikovanjem vizij ali vizionarji in se spraševali, kaj ti lahko s svojimi idejami o prihodnosti dosežejo (Gregorič Bon, 2018; Kozorog, 2018; Petrović-Šteger, 2018b, 2020; Vodopivec, 2018), se tokrat ne ukvarjata z ljudmi, ki ustvarjajo vizije, ampak z mesti, ki s temi vizijami poskušajo vplivati na svoje prebivalce. Vizije so se namreč pokazale kot izhodišče za radikalno preobrazbo načina, na katerega se mesta razvijajo v mesta prihodnosti, ki obravnavajo trenutne izzive in spodbujajo dolgoročno blaginjo družbe in planeta. Glede na izkušnje iz tujine so uspešne predvsem tiste vizije, ki jih politične oblasti oblikujejo na podlagi močnih sodelovalnih procesov. Imaginariji, ki jih oblikujejo, navadno opredeljujejo glavne mestne funkcije ter kratkoročno in dolgoročno podpirajo vse mestne projekte in politike (Ortegon-Sanchez in Tyler, 2016: 6). Oblikovanje urbanih vizij so spodbudile prav zahteve po participativnem načrtovanju. Vizija se je pokazala kot dobro orodje motiviranja državljanov za sodelovanje ter razjasnitev ključnih skrbi in interesov skupnosti. Kot ugotavljata Myers in Kitsuse, vizija ni fantazija, ampak optimistična podoba o tem, kaj bi lahko dosegli v mestu (občini, regiji ipd.) glede na razpoložljive zmogljivosti in sredstva. Učinkovite so tiste vizije, ki dosegajo ravnovesje med ustvarjalnimi in sodelovalnimi vidiki oblikovanja vizij ter projekcijami izvedljivosti in utemeljenostjo v scenarijih ukrepanja. Kadar vizijam ne sledijo strategije za doseganje ciljev in ni avtoritete, s katero bi se doseglo, da se vizije uresničijo, lahko te postanejo *nepomembni in dragi seznami želja za prihodnost* (Myers in Kitsuse, 2000: 227–228). V idealnem primeru je namreč vizija prvi korak, s katerim mesta načrtujejo svojo prihodnost. V njej utemeljijo temeljne vrednote in zaznane konkurenčne prednosti mesta. Viziji sledi strategija (ob splošni urbani so strategije lahko tudi področne, npr. kulturna, turistična, socialnovarstvena ipd.), ki določi, kako in v kakšnem zaporedju naj se uresničujejo z vizijo začrtani cilji. Naslednja stopnja so prostorski načrti, ki

opredelijo, kje in kako naj se razvoj odvija v prostoru, zadnja stopnja pa so razvojni projekti, na podlagi katerih se načrti tudi izvedejo (prim. Šumi, 2007: 4).

4 Vizije izbranih mest

Slovenija in Hrvaška sta po razpadu Jugoslavije v devetdesetih letih 20. stoletja različno doživljali prehod v postsocializem/kapitalizem ter posledični vstop v Evropsko unijo. Danes je zanju značilen zelo neenakomeren urbani razvoj. Za Slovenijo je značilna suburbanizacija – najbolj izrazito v ljubljanski in mariborski urbani regiji, ki imata visoko gostoto prebivalstva in zaposlitev. Po podatkih iz leta 2020 (Statistični urad Republike Slovenije, 2021) 14 odstotkov prebivalcev Slovenije živi v Ljubljani, ki je tudi gospodarsko najmočnejša, Maribor je edino drugo naselje v državi, ki ga Eurostat prepoznava kot mesto (ang. *city*). Po drugi strani državni statistični urad navaja 156 mestnih naselij v Sloveniji na podlagi števila prebivalcev, presežka delovnih mest ali/in vloge kraja na območju. Devet se jih šteje za srednje velika mesta (Ministrstvo za okolje in prostor, 2016), a z izjemo Kopra s pristaniščem nobeno od njih ni mednarodno pomembno. Vsa mestna naselja se soočajo z demografsko stagnacijo in kar pet jih je odvisnih od državnih subvencij (Ministrstvo za okolje in prostor, 2020), kar postavlja pod vprašaj sposobnost teh mest za samostojno načrtovanje razvoja. Na Hrvaškem 20 odstotkov prebivalstva živi v Zagrebu, ki ustvari skoraj 35 odstotkov nacionalnega bruto domačega proizvoda (glede na podatke za leto 2019, gl. Gradski ured za gospodarstvo, ekološku održivost i strategijsko planiranje, 2022). Ministrstvo za pravosodje in javno upravo navaja 127 mest (Ministarstvo pravosuđa i uprave, b. n. l.), 25 jih ima status velikega mesta bodisi zaradi števila prebivalcev (več kot 35.000) bodisi zaradi vloge središča regionalne uprave (Škunca, 2015). Poleg glavnega mesta in treh regionalnih urbanih središč (Reke, Splita in Osijeka) so hrvaška mesta neenakomerno razvita in se krčijo, saj mnoga ne morejo pritegniti novih prebivalcev in zadržati svojega prebivalstva (gl. Državni zavod za statistiku Republike Hrvatske, b. n. l.). Po mnenju demografov je to eden od razlogov za hitro depopulacijo nekaterih regij in mednarodne migracije (Wertheimer-Baletić in Akrap, 2014). V obeh državah se kažejo gospodarski, politični, družbeni in kulturni urbani trendi, kot so deindustrializacija mest, postfordizem, krepitev ustvarjalnega gospodarstva in turizma, neoliberalno upravljanje in deregulacija, ukinjanje javnih storitev in zmanjševanje socialne varnosti, negotovost in staranje družbe, ki močno učinkujejo na mesta v njihovih prostorskih, družbenih in zamišljenih razsežnostih. Z navedenimi izzivi, ki vplivajo na načrtovanje urbane prihodnosti, se vsako mesto spoprijema po svoje. To sta avtorici prikazali na primeru Ljubljane, Maribora, Kopra, Nove Gorice, Zagreba, Kutine, Reke in Hvara.

4.1 Oblikovanje vizij

Prvo mesto med navedenimi, ki je oblikovalo svojo vizijo, je bila Ljubljana, in to leta 2007. Vizija naj bi imela »značaj resolucije, ki zavezuje mestno upravo, da jo dolgoročno uresničuje« in naj bi bila naslednji dve desetletji in pol »aktualna kot instrument spremljanja in preverjanja učinkovitosti razvojne politike mesta« (Oddelek za urbanizem Mestne občine Ljubljana in Šumi, 2007: 9). Njen namen je (bil) spodbuditi k »oblikovanju samopodobe mesta, ki kaže, kaj prebivalcem mesto pomeni in kakšna so dejanska pričakovanja o njegovi prihodnosti. Pozitivna podoba o mestu, ki izhaja predvsem iz njegove zgodovine, kulturnih tradicij in prostorskih posebnosti, ima zato velik vpliv na življenje v mestu in pomeni tudi močan dejavnik za njegov gospodarski in socialni razvoj. Pomaga odkrivati prednosti in nove priložnosti razvoja in je še posebej pomembna pri sprejemanju osnovnih strateških odločitev, ki mesto spreminjajo« (TUS MOL, 2015: 24). Med proučevanimi je bil Maribor edino mesto poleg Ljubljane, ki je svojo vizijo oblikovalo pred letom 2014 (2012 za leto 2030). Vizije naj bi bile osnova za nadaljnje mestne strateške dokumente in vsa slovenska mesta so jih vključila v strategije razvoja do leta 2020, bile so namreč obvezen element t. i. trajnostnih urbanih strategij, ki so bile glavni pogoj za pridobitev evropskih kohezijskih sredstev v obdobju 2014–2020. Vizije so praviloma zapisane po analizah stanja ter analizi prednosti, slabosti, priložnosti in nevarnosti (analiza PSPN ali SWOT), sledijo jim opisani cilji, prednostne naloge in ukrepi. Te strategije so nastajale do začetka leta 2016 z vizijo do leta 2020, v Novi Gorici do leta 2020 in dlje, Ljubljana in Koper sta pozneje z malenkostnimi prilagoditvami veljavnost strategij podaljšala do leta 2030.

Na Hrvaškem je bil postopek oblikovanja razvojnih strategij, v katere so integrirane vizije, podoben kot v Sloveniji. Zagreb jo je začel pripravljati leta 2009, sprejeta pa je bila leta 2012 z načrtom razvoja do konca leta 2013. Pozneje je bila razširjena, revidirana in jeseni 2017 sprejeta kot razvojna strategija do leta 2020, njena veljavnost je bila podaljšana do leta 2021. Vizija Zagreba, opredeljena v prvem dokumentu, je ostala enaka v vseh poznejših različicah razvojne strategije. Trenutno je v pripravi načrt razvoja mesta za obdobje 2021–2027. Kutina je leta 2015 pripravila razvojno strategijo do leta 2020. Enako velja za Hvar, ki doslej še ni objavil nove. Reka je svojo strategijo za obdobje 2014–2020 sprejela leta 2013 in je trenutno edina z že objavljenim načrtom razvoja za obdobje 2021–2027, v katerem je oblikovala svojo vizijo do leta 2030.

Na kratko, vizije proučevanih slovenskih in hrvaških mest so praviloma del širših dokumentov, tj. razvojnih strategij, ki vključujejo tudi oceno trenutnega stanja (analizo PSPN ali SWOT) ter strateške cilje in akcijske načrte. Čeprav so objavljene na občinskih spletnih straneh (pri tem pa niso vedno

lahko dostopne), vizije niso posebej izpostavljene ali izdvojene iz besedila. Tako je mogoče sklepati, da se mestom (z izjemo Ljubljane in Reke) ne zdijo pomembne za nagovarjanje prebivalcev. V nadaljevanju so povzete s ključnimi besedami ali povedmi, ki so izrecno označene ali izpostavljene kot vizija:

- Ljubljana bo vseslovenska metropola, sonaravno in idealno mesto (TUS MOL, 2015: 24–25; gl. Mestna občina Ljubljana, b. n. l.);
- Mesto Zagreb – urbani inkubator trajnostnih konceptov, podjetništva in novih vrednot (RS Zagreba, 2017: 111);
- Koper – mesto po meri človeka, mesto morja, sonca in zelenja, mesto tradicije, sodobnosti in prihodnosti (TUS Kopra, 2020: 70);
- Reka 2030 – pametno, odprto in odporno mesto (PR Reke, 2021: 81; gl. Grad Rijeka, b. n. l.);
- Maribor bo samozadostno mesto zadovoljnih prebivalcev, ki bodo soustvarjali dinamični prostorski razvoj, socialno vpeto gospodarstvo in pravično družbeno okolje (TUS MOM, 2015: 61–62);
- Mesto Kutina je privlačno in vitalno globalno mesto z gospodarstvom, zasnovanim na inovativnem pristopu trajnostnega razvoja, s prepoznano identiteto, zasnovano na naravnih in kulturnih virih, z visoko kakovostjo življenja prebivalcev, utemeljeno na skupnosti in občutku doma (SR Kutine, b. n. l.: 85);
- Nova Gorica 2020+ – Mlado in zeleno središče ustvarjalnih energij (TUS Nove Gorice, 2016: 20–21);
- Vizija Hvara je turistična prepoznavnost in privlačnost zaradi naravnih lepot, zgodovinskih vrednosti in sodobnih trendov (SR Hvara, 2016: 176).

Najbolj jasne so vizije, izražene s ključnimi besedami (sloganom), kakršno imajo na primer Ljubljana, Zagreb, Reka, Koper in Nova Gorica. Navadno jim sledi še podrobnejša razlaga, kakšno naj bi bilo mesto v prihodnosti. Vendar nekatera mesta niso oblikovala jasne vizije, iz katere bi si prebivalci lahko dobro predstavljali, kako se bo razvijalo njihovo mesto. Nejasne ostajajo zaradi preveč poudarkov (ključnih besed je preveč ali je vizija zelo gostobesedna), splošnosti (ista vizija bi lahko veljala za več mest), tehnokratskega jezika (vizije ali njene pojasnitve konceptualno in terminološko sledijo ključnim poudarkom evropskih strategij) ali ker ne povežejo jasno besedila vizije s sloganom (ali s posameznimi cilji razvoja, ki jih navajajo v nadaljevanju). Primer tega je mariborska vizija, ki naj bi jo povzemal slogan *Maribor samozadostno vključujoče mesto*, za trajnostno strategijo pa je izbran slogan: *Maribor iMa priložnost*. Hkrati se pri razlagi koncepta trajnostnosti, na kateri temelji strategija, navaja še en poudarek, in sicer *Maribor bo krožno mesto*. Ti poudarki ovirajo jasno, nedvoumno razumevanje vizije in slabijo njeno sporočilo o tem, h kakšnemu mestu naj prebivalci stremijo in delujejo. Nekatere vizije ostajajo zgolj deklarativne, tako Zagreb napoveduje *nove vrednote*, na katerih

naj bi bilo zgrajeno mesto prihodnosti, a ker ne opredeli jasno, katere naj bi te bile, se je z njimi težko poistovetiti. Hvar pa svoje prihodnosti ne načrtuje po meri svojih prebivalcev, ampak predvsem turistov. Vizije se torej razlikujejo po afektivnosti, saj nekatera mesta že z izborom besed ne spodbujajo prebivalcev, da bi se ti poistovetili z mestom in sprejeli vizijo urbanega življenja v prihodnosti. Druga so pri tem uspešnejša in prebivalce nagovarjajo s pozitivnimi idejami za življenje v *mestu po meri človeka* (Koper) ali *središču ustvarjalnih energij* (Nova Gorica). Maribor celo neposredno nagovarja prebivalce k sodelovanju pri ustvarjanju mesta prihodnosti: »Mesto ima priložnost, da uspe in obenem meščanom ponuja, da vizijo in upanje delijo z njim. Postanimo del rešitve problema« (TUS MOM, 2015: 61). Povedno je tudi, da le ena vizija izrecno predvideva *mesto prihodnosti* (Koper) in da sta le dve zapisani v prihodnjiku, tj. navajata, kaj bo mesto šele postalo (Ljubljana in Maribor), pri dveh (Nova Gorica in Reka) pa prihodnost označuje letnica.

Vizije so najbolj uspešne, kadar se oblikujejo s sodelovanjem državljanov. Tudi slovenska in hrvaška mesta so bila pri pripravi strategij zavezana vključevanju javnosti – občanov, mestnih organizacij in raznih oddelkov mestne uprave. Vsaka strategija zato pojasnjuje postopke sodelovanja javnosti, bodisi v samem dokumentu bodisi v njegovih prilogah. Z izjemo Hvara, ki je nalogo zaupal zagrebški Ekonomski fakulteti (kar se kaže tudi v njenem diskurzu), so izdelavo strategij vodile mestne službe ali lokalne organizacije (npr. razvojne agencije). Organizirale so strateški svet ali delovne skupine za posamezna področja, izvajale so delavnice, npr. s fokusnimi skupinami ali organizacijami, sestanke s strokovnjaki, srečanja z meščani, ankete ipd. Vendar se je sodelovanje prebivalcev po mestih razlikovalo, nekatera so se potrudila v živo komunicirati z meščani, druga pa so sprejemala samo pisne pobude, kar ustreza najnižjim stopnjam lestvice sodelovanja državljanov (Arnstein, 1969).

4.2 Kako trajnostna bo urbana prihodnost?

Ko je nastala večina strategij, se je pri izvajanju evropske kohezijske politike posebej poudarjal pomen trajnostnega razvoja, zato vse strategije vsaj deklarativno temeljijo na tem konceptu. Ta izhaja iz skrbi za naravo, vendar se brez izjeme navezuje na gospodarstvo, ki se razume kot glavna sila razvoja. Kritiki zato opozarjajo na ekonomsko logiko koncepta, narava in v novejšem času tudi kultura se obravnavata kot vira razvoja, ne kot vrednoti sami po sebi. Razvoj, ki *zadovoljuje sedanje potrebe, ne da bi pri tem ogrožal zadovoljevanje potreb prihodnjih generacij* (Svetovna komisija za okolje in razvoj, 1987: 16), se je sprva konceptualiziral kot trije stebri, po sprejetju *Agende 21 za kulturo* (ang. *Agenda 21 for culture*) leta 2002 pa temelji na štirih: gospodarstvu, okolju in družbi, ki se vežejo na kulturo kot osrednji steber (prim. Nurse, 2006; Labadi

in Gould, 2015; Poljak Istenič, 2016; Fakin Bajec, 2020). A kot je že pred skoraj dvema desetletjema opozarjal slovenski sociolog Drago Kos (2004: 332), poenostavljanje razumevanja trajnostnega razvoja vzbuja dvom o resnosti pristopov, s tem pa tudi razprav, »ki se navkljub deklariranemu koncu zgodovine [po vzoru Fukuyame, op. a.] še ukvarjajo s prihodnostjo«. To dokazujejo tudi John idr. (2015), ki so pri analizi trajnostnih vizij devetih mest globalnega severa ugotavljali, da te koncepta trajnostnosti ne vključujejo celovito in dosledno, ampak se osredinjajo na izboljšanje posameznih vidikov urbanega življenja, npr. grajenega okolja, ekosistemskih storitev, gospodarstva, upravljanja ipd.

4.2.1 Gospodarska trajnostnost

Gospodarska trajnostnost je steber trajnostnega razvoja, ki se mu drugi stebri pogosto podrejajo. V zadnjem desetletju se označuje tudi z drugimi izrazi ali koncepti, kot so zelena rast (Jänicke, 2012), odrast (D'Alisa idr., 2014) in krožno gospodarstvo (Geissdoerfer idr., 2017). Trajnostnost v gospodarstvu navadno pomeni, da ta ne škoduje okolju in ne izkorišča ljudi ter ne izničuje naravnega, družbenega in človeškega kapitala (Spangenberg, 2005: 49). Vizija *Ljubljana 2025* je bila prva, ki je predvidevala bolj trajnostno prihodnost tega mesta. Bila naj bi močan dejavnik za gospodarski (in družbeni) razvoj mesta, čeprav ima gospodarstvo v viziji bolj ali manj obrobno vlogo in je tudi dvoumno trajnostno zasnovano: po eni strani spodbuja rast in razvoj območja (vizija vseslovenske metropole), po drugi strani pa naj bi si mesto prizadevalo »usklajevati interese trga z družbenimi koristmi« (vizija idealnega mesta) in naj bi – v kontekstu sonaravnega mesta – trajnostno izkoriščalo (ne predvsem varovalo) naravne vire, npr. za energijo (TUS MOL, 2015: 25). V podoben kontekst gospodarstvo postavlja tudi vizija Kopra, kjer so »morje in morska obala, sončna submediteranska klima ter zelene površine […] pomembni nosilci specializiranih gospodarskih dejavnosti urbanega območja Koper« (TUS Kopra, 2020: 70). Gospodarska trajnostnost torej temelji (tudi) na izkoriščanju narave, čeprav naj bi jo prav s preoblikovanjem gospodarstva zaščitila. Reka pa trajnostnost opredeljuje kot *pametno gospodarjenje z lastnimi viri in kapacitetami*, a virov ne omeji na naravo (PR Reke, 2021: 81).

V nasprotju z zgoraj omenjenimi mesti Zagreb, Maribor, Kutina, Nova Gorica in Hvar postavljajo gospodarstvo v središče svojih vizij. Najbolj eksplicitno trajnostno ga opredeli Maribor v viziji krožnega mesta: gospodarski steber trajnostnega razvoja sloni na uvajanju krožnega gospodarstva. Krožne sisteme delovanja mesto razume kot tiste, »ki izrabljajo notranje prostorske potenciale, skušajo vključevati vse sloje prebivalcev in vzpodbuditi gospodarske cikle, ki bodo dobrobit enakomerno porazdeljevali« (TUS MOM, 2015: 61). Posebnost Maribora kot postindustrijskega mesta je tudi to, da ima nekdanja obli-

ka gospodarstva v njegovi prihodnosti še vedno pomembno simbolno vrednost. Mesto tako (vizualno) shemo vizije samozadostnega vključujočega mesta utemeljuje na logotipu nekdanje tovarne TAM, ki je »deloval kot eno osnovnih gonil ekonomskega, socialnega in kulturnega življenja v mestu« in brez katerega je »mesto [...] nemogoče misliti« (prav tam: 62).

Če je mariborska vizija utemeljena na specifičnem razumevanju gospodarstva kot trajnostnega, pa Zagreb svoj prihodnost – glede na izraze inkubator, podjetništvo, podjetniški pristop, ustvarjalni proces – upoveduje izrazito neoliberalno. Konkurenčnost gospodarstva se navaja kot prvi strateški cilj. Za prihodnost Zagreba naj bi bila nujna razvoj spodbudnega podjetniškega okolja ter na znanju, inovacijah ter kakovostnih izdelkih in storitvah temelječe gospodarstvo. Trajnostnost je eksplicitno povezana le s kmetijstvom in gozdarstvom, ki pa v utemeljitvi cilja niti v kazalnikih učinka nista niti omenjena. Vizija Zagreba kot *urbanega inkubatorja trajnostnih konceptov* (RS Zagreba, 2017: 111) tako ostaja zgolj deklarativna in za prebivalce, ki naj bi jih navdihnila v soustvarjanje mesta prihodnosti, še bolj izmuzljiva.

Podjetništvo kot ključno za svojo prihodnost obravnavata tudi viziji Nove Gorice in Kutine. Prva se želi uveljaviti kot »inovativno gospodarsko središče« in »odlična poslovna lokacija za prodorna podjetja iz širšega obmejnega prostora« (TUS Nove Gorice, 2016: 20). Kot univerzitetno mesto podjetništvo povezuje z znanjem in raziskavami, kar je blizu ideji ustvarjalnih mest (Landry in Bianchini, 1995), ki se zanašajo na t. i. ustvarjalne industrije, torej tiste gospodarske dejavnosti, ki so usmerjene v ustvarjanje in izkoriščanje znanja in informacij. Ustvarjalna mesta kot blagovno znamko promovira tudi Unesco s svojo Mrežo ustvarjalnih mest (glej Poljak Istenič, 2017). Podobno razumevanje mest se kaže še v vizijah in strateških ciljih Ljubljane, Zagreba in Reke, ki so prav tako univerzitetna središča. Vendar Nova Gorica pri navajanju perspektivnih panog ne omenja dejavnosti, ki so značilna za ta sektor – pogojno bi lahko k njim prištevali zgolj turizem, informacijsko-komunikacijske tehnologije in igralništvo –, kar slabi pomen vizije »zelenega središča ustvarjalnih energij«. Novogoriška vizija tudi ne opredeli trajnostnosti ali zelenega gospodarstva, z izjemo »aktiviranja degradiranih območij« ni razvidno, kako bi se tako okolje ali panoge trajnostno razvijale (TUS Nove Gorice, 2016: 20). Nasprotno pa Kutina, ki prav tako stavi na konkurenčno podjetništvo in bi ga v nasprotju z Novo Gorico razvijala tudi v neurbanih sektorjih gospodarstva, trajnostnost v gospodarskem stebru razume tako v navezavi na okolje kot družbo – kot *celostno skrb za okolje ob spodbujanju in krepitvi družbeno odgovornega poslovanja* (SR Kutine, b. n. l.: 87). Vizija Kutine je, vsaj za gospodarstvo, sicer izrazito neurbana, svojo prihodnost občina vidi v razvoju ekološkega kmetijstva, trajnostnega turizma na podeželju, ki temelji na ohranjeni dediščini, in socialnega podjetništva.

Vizija Hvara je v gospodarskem smislu najbolj specifična, osredinja se na razvoj turizma, a ne izrecno trajnostnega, ampak *avanturističnega, zdravstvenega in kulturnega* (SR Hvara, 2016: 176). Trajnostnost je temeljno razvojno načelo, ne pa tudi bistvo gospodarskih dejavnosti.

4.2.2 Okoljska trajnostnost

Koncept trajnostnega razvoja, ki se je razvil iz skrbi za naravo ali okolje, je sam po sebi paradoksalen: s poseganjem v naravo in izčrpavanjem naravnih virov zaradi razvoja namreč spreminjamo okolje (Jabareen, 2008: 181). Okolje so zato nekateri razumeli kot glavno oviro za človekov napredek (Goodland, 1995: 2). Čeprav sta se razvila dva pristopa k razumevanju okoljske trajnostnosti – prvi jo razume kot prevlado nad naravo ali okoljsko razsežnost trajnostnosti družbenih institucij in praks, drugi pa se zavzema za njene pravice ali trajnostnost naravnega okolja (prim. Meadowcroft, 1999: 14) –, je danes poudarek na prvem pristopu. Ne prizadevamo si za varovanje narave same po sebi, ampak za zadovoljevanje človeških potreb na način, da ne bi ogrozili zdravja ekosistemov (prim. Morelli, 2011).

Mesta niso ambiciozna pri načrtovanju okoljsko trajnostne prihodnosti, čeprav ima ta v vizijah razmeroma pomembno vlogo. Z njo se na deklarativni ravni identificirajo predvsem slovenska mesta, ki bodo postala sonaravno mesto (Ljubljana), zeleno nizkoogljično mesto (Nova Gorica), priZemljeni Maribor (Maribor) ter mesto morja, sonca in zelenja (Koper), medtem ko hrvaška mesta skrb za okolje in trajnostno ravnanje z naravnimi viri opredeljujejo predvsem v strateških ciljih. Še najbolj afektivna pri tem je Reka, ki poziva: *Ohraniti Reko do leta 2030: Pametno, zeleno in čisto mesto, prilagojeno potrebam vseh občanov* (PR Reke, 2021: 82). Zagreb poudarja pomen zaščite okolja in gospodarjenja z naravnimi viri in energijo, Hvar razvoj infrastrukture, varstvo narave in okolja, Kutina pa prepoznavanje in ohranjanje kulturne in naravne dediščine ter razvoj kakovosti življenja in zaščite okolja.

Izpostavljene zelene teme so predvsem trajnostna mobilnost (urejanje javne prometne infrastrukture, predvsem za krepitev javnega prevoza in kolesarjenja), energijska učinkovitost (zmanjševanje porabe energije, uporaba obnovljivih virov), izboljšanje dostopnosti do zelenih površin, povezovanje z zaledjem mest in varovanje naravne dediščine. Na okoljska vprašanja se v vizijah pogosto navezuje tudi koncept pametnega mesta, ki predvideva pametno in učinkovito upravljanje energije ter najsodobnejšo mestno oskrbo (TUS Nove Gorice, 2016: 21) ter optimiziranje svojega delovanja, minimaliziranje okoljskih učinkov in zagotavljanje najvišje kakovosti bivanja (TUS Kopra, 2020: 70). Po drugi strani Reka, ki izrecno navaja vizijo razvoja v pametno mesto, ta koncept razume precej širše – kot

uporabo sodobnih tehnologij na vseh področjih, da bi izboljšala kakovost življenja svojih prebivalcev (PR Reke, 2021: 81).

4.2.3 Družbena trajnostnost

Družbeni steber trajnostnega razvoja ni le pogosto zanemarjen vidik tega koncepta (Vallance idr., 2011; Eizenberg in Jabareen, 2017; Poljak Istenič idr., v tisku), večkrat tudi ni jasno, katere procese, pojave in ukrepe obravnava (Murphy, 2012). Magnus Boström (2012: 7) tako našteva širok nabor dejavnikov kakovosti življenja, ki opredeljujejo ta steber, kot so socialno varstvo, družbena pravičnost, družbena kohezija, kulturna raznolikost, demokratične pravice, spolna in druga enakost, delavske pravice, široko sodelovanje ter razvoj socialnega kapitala in individualnih sposobnosti.

V viziji Maribora je najbolj eksplicitno pojasnjeno, kako mesto razume socialni steber trajnostnega razvoja – kot uvajanje »principov krožnega sistema socialne integracije in vključevanja prebivalstva v procese delovanja mesta« (TUS MOM, 2015: 61). To je poudarjeno v izrazu vključujoče mesto, ki sestavlja slogan vizije. Tudi nekatera druga mesta povzemajo družbeno trajnostnost z afektivnimi besednimi zvezami, kot so idealno mesto (Ljubljana), odprto mesto (Reka), mesto po meri človeka (Koper), mesto veselja do življenja za vse generacije (Nova Gorica) in mesto visoke kakovosti življenja prebivalcev, utemeljene na skupnosti in občutku doma (Kutina). V družbenem smislu sta še najmanj navdihujoči viziji Zagreba in Hvara. Prvi družbeni steber obravnava v strateškem cilju Izboljšanje kakovosti življenja in kot prednostne naloge navaja izboljšanje kakovosti stanovanj, družbeno integracijo lokalnih skupnosti, varnost, kakovostno preživljanje prostega časa in izboljšanje družbene infrastrukture (RS Zagreba, 2017: 117), vendar kazalnika kakovost javnih šol in število višje izobraženega zdravstvenega kadra nista povezana s prvima dvema prednostnima nalogama. Ob uporabi tehnokratskega jezika tako zagrebška strategija ne ponudi vizije družbene trajnostnosti, ki naj bi bila pomembna sestavina kakovosti urbanega življenja. Hvar se na ta vidik trajnostnosti v viziji ne navezuje, jo pa obravnava v poslanstvu (hrv. *misiji*). Leta 2020 naj bi imel razvito blagovno znamko mesta kot *kraja prijetnega in srečnega življenja, ki ponuja visoko kakovost življenja prebivalcem* (SR Hvara, 2016: 177).

Eden od pomembnejših elementov družbene trajnostnosti je sodelovanje prebivalcev pri odločanju. Reka tako eksplicitno izpostavlja svojo vizijo, da *skrbi za vse svoje prebivalce ter spodbuja njihovo vključevanje in državljansko aktivnost na vseh področjih življenja*. Leta 2030 bo *mesto, ki je odprto za vse, mesto, ki proaktivno vključuje in išče sodelovanje sodržavljanov, ter mesto, ki načrtuje razvoj s prebivalci in za prebivalce* (PR Reke,

2021: 81). Podobni, a skromnejši sta tudi viziji Kopra in Maribora. Zagreb in Kutina bi sodelovanje državljanov razvijala prek društev in drugih civilnih združenj, za Novo Gorico in Hvar pa ta vidik ni ključen za prihodnost. Ljubljana je poseben primer, saj sodelovanje meščanov (samoorganizacijo civilne družbe pri urejanju javnih zadev, sodelovalno upravljanje mesta, vključevanje nevladnih organizacij v reševanje problemov upravljanja mesta) v viziji, ki je objavljena na občinskem spletišču, izpostavlja kot ključno na poti do idealnega mesta, vendar teh poudarkov v posodobljeni viziji v TUS MOL ni več zaslediti.

4.2.4 Kultura – osrednji steber trajnostnega razvoja

V 21. stoletju so že prej izražene kritike treh stebrov trajnostnega razvoja postajale vse glasnejše. Raziskovalci so opozarjali, da je tako zamišljen koncept v krizi, saj ne integrira ključne sestavine: kulturnih vidikov družbe. Ne samo, da kultura ni bila priznana kot bistveni dejavnik razvoja, ampak je koncept spregledal tudi vpliv kulture kot načina življenja na to, kako ljudje razumejo izraz razvoj in dojemajo svet okrog sebe (Duxbury idr., 2012: 73). Raziskovalci, ki so proučevali predvsem države v razvoju, so zato predlagali drugačen koncept trajnostnega razvoja, v katerem ima kultura osrednje mesto. Oblikovali so nov model, po katerem se stebri socialne pravičnosti, ekološkega ravnovesja in gospodarske samozadostnosti vežejo na kulturno identiteto. Ob njej kulturni steber sestavljajo še snovna in nesnovna dediščina, kulturne industrije, kulturni pluralizem in geokulture (Nurse, 2006: 40).

Iz obravnavanih vizij je mogoče izluščiti tri poudarke kulturnega stebra trajnostnega razvoja, ključne za prihodnost mest: kultura kot način življenja, kulturna dediščina in ustvarjalnost (tudi kot sestavina kulturnih in ustvarjalnih sektorjev, ki pa se pogosteje navezujejo na gospodarstvo). Za nekatera mesta je razvijanje ali omogočanje urbanega načina življenja pomembno za njihovo prihodnost. Tako se Ljubljana leta 2025 vidi kot »prostor uresničenih idealov sodobnega mestnega življenja in bivanja« (TUS MOL, 2015: 25), za Koper pa je »[v]sakdanje življenje ljudi [...] zagotovilo živahnosti mesta; prijetnost urbanega prostora in pestrost vsebin pa za krepitev mediteranske urbane kulture« (TUS Kopra, 2020: 70). Druga mesta poudarjajo svojo identiteto kot ključno za prihodnost, tako naj bi Hvar postal *mesto prepoznavne kulturne identitete in urbano-kozmopolitske naravnanosti* (SR Hvara, 2016: 177), Kutina mesto *prepoznavne identitete, zasnovane na naravnih in kulturnih virih, in visoke kakovosti življenja prebivalcev, ki temelji na skupnosti in občutku doma* (SR Kutine, b. n. l.: 85), Nova Gorica pa stavi na multikulturnost kot dejavnik razvoja urbane kulture, ki naj bi bila »gradnik identitete mesta« (TUS Nove Gorice, 2016: 21). Gre torej za specifične vizije

mestnega življenja, ki pa gradijo tudi na kulturni ponudbi, kar je blizu drugima dvema poudarkoma kulturnega stebra trajnostnega razvoja.

Ustvarjalnost – kot kulturna produkcija v najširšem smislu – je postala pomembna v devetdeset letih 20. stoletja, s potrebo po prestrukturiranju industrijskega gospodarstva na globalnem severu, ko so področjem kulture začeli pripisovati potencial za ustvarjanje bogastva in povečevanje gospodarske učinkovitosti (Poljak Istenič, 2017). Ustvarjalni ljudje so postali tudi temelj trajnostnega razvoja, kot je na primer razvidno iz vizije Ljubljane kot »zgodovinskega mesta ustvarjalnih ljudi«, v katerem naj bi ustvarjalna kultura soustvarjala »značaj evropskega glavnega mesta« (TUS MOL, 2015: 25). Druge vizije omenjajo kulturne vsebine, storitve ali vire, ustvarjalnost pa, če že, vežejo predvsem na podjetniške pobude in jo zato uvrščajo v gospodarski steber trajnostnega razvoja.

Med kulturnimi viri se kot najpomembnejša kaže dediščina, in sicer za mestno identiteto in razvoj turizma. Najbolj jo v svoji viziji poudarja Koper: »Kulturna dediščina historičnega mestnega jedra je temelj oživelega mesta« (TUS Kopra, 2020: 70). Kutina, ki v viziji omenja kulturne vire, prepoznavanje in ohranitev kulturne in naravne dediščine postavlja za enega od svojih strateških ciljev, enako velja za Hvar. V drugih vizijah kultura nima pomembnejše vloge, čeprav nekatera mesta v opisu prednostnih nalog, ciljev in ukrepov poudarjajo njen pomen za prostorski razvoj, turizem ali razvoj lokalnih skupnosti.

5 Sklep

Prizadevanja za boljšo prihodnost niso vezana na specifične lokacije, so pa najbolj opazna v mestih kot osrednjih žariščih moči, ki usmerjajo sodobni svet. Zaradi vse večjega števila mestnih prebivalcev in gospodarske odvisnosti podeželske okolice od mest ta postajajo vse bolj izpostavljena podnebnim spremembam, gospodarskim krizam in družbenim pretresom, zato jih je treba zaščititi pred prihodnostjo (Girardet, 2008). Po drugi strani mesta poskušajo svoje prebivalce, obiskovalce in investitorje prepričati z znamčenjem (prim. Poljak Istenič, 2016, 2018) in vizijami, ki pripovedujejo o lepi, boljši prihodnosti. Članek na podlagi analize vizij osmih slovenskih in hrvaških mest prikazuje, kako si ta zamišljajo svojo prihodnost in kako jo upovedujejo v uradnih razvojnih strategijah.

Ko je nastajala večina obravnavanih vizij, je bil v Evropski uniji ključen strateški poudarek na trajnostnem razvoju, ki je na splošno zasnovan s štirimi stebri: gospodarsko, okoljsko, družbeno in kulturno trajnostnostjo. Vizije naj bi bile močan dejavnik za gospodarski razvoj, ki pa si ga vsa mesta ne

zamišljajo trajnostno. Pozitivno izstopa mariborska vizija, ki predvideva krožno gospodarstvo, negativno pa izstopajo mesta, ki svojo prihodnost utemeljujejo na razvoju podjetništva in tako sledijo neoliberalnim razvojnim trendom. Večina mest gospodarstvo povezuje tudi z izkoriščanjem naravnih virov in tako instrumentalizira naravo za trajnostni razvoj, kar je svojevrsten, a v literaturi dobro znan paradoks tega koncepta. Mesta so tudi dokaj neambiciozna pri načrtovanju okoljsko trajnostne prihodnosti. Vizije sonaravnega, zelenega ali nizkoogljičnega mesta ostajajo bolj deklarativne kot afektivne in zato z majhnim potencialom za motivacijo prebivalcev k soustvarjanju mesta prihodnosti. V tem smislu so nekoliko bolj navdihujoče vizije družbene trajnostnosti, ki se izražajo v sloganih, kot so vključujoče in idealno mesto, mesto po meri človeka, mesto veselja do življenja za vse generacije in mesto visoke kakovosti življenja prebivalcev, utemeljene na skupnosti in občutku doma. Pomemben poudarek družbenega stebra trajnostnega razvoja je tudi sodelovanje prebivalcev pri odločanju, za katero se še najbolj zavzema Reka v svoji viziji odprtega mesta. Kot temelja kulturne trajnostnosti pa mesta izpostavljajo predvsem urbani način življenja in kulturno dediščino, ki sta pomembna za identiteto tako mesta kot njegovih prebivalcev. Pri tem Nova Gorica stavi na multikulturnost, ne pa tudi Reka, ki je na njej (in sloganu Luka različnosti) gradila svojo kandidaturo in program evropske prestolnice kulture 2020. Vizije torej niso vedno usklajene z urbanimi projekti in programi, kar pa ni nujno slabo.

Zakaj? Z vezavo na že odobrene investicije (projekte in programe) namreč strateško urbano načrtovanje postane vsakdanje, instrumentalizirano, skrči se na proces uporabe vladnih metodologij, utemeljenih na precej abstraktnih političnih imperativih (Abram, 2017), namesto da bi bilo navdihujoče in bi predpostavljalo optimistično, če že ne utopično urbano življenje v prihodnosti. Kot ugotavljajo antropologi in urbani načrtovalci, se ljudje namreč bolje odzivajo na načrtovanje prihodnosti, ki jim pušča več možnosti za (samo)interpretacijo. Zato najbolj vizionarska mesta – ob oblikovanju primernih vizij – uporabljajo različne tehnike, kot sta na primer oblikovanje scenarijev (pesimističnih, optimističnih in realnih) in pripovedovanje zgodb, s čimer bolje angažirajo svoje prebivalce pri (so)oblikovanju urbanih prihodnosti. Po drugi strani pa je za motiviranje prebivalcev ključno tudi to, da vizije niso kratkoročne, torej da – v nasprotju z večino obravnavanih primerov – presegajo veljavnost strategij, ki jih okvirja sedemletna finančna perspektiva Evropske unije. V tem smislu so bili mnogo bolj vizionarski splošni (generalni) urbanistični načrti iz časa socializma (npr. iz leta 1966 v Ljubljani in 1971 v Zagrebu), ki so vključevali vse segmente razvoja (prostorskega, družbenega in okoljskega) in so si zamišljali prihodnost do leta 2000. Dolgoročne vizije prihodnosti, ki ne opredeljujejo

vseh projektov in posegov, mestnim prebivalcem namreč puščajo več prostora za uporabo domišljije in ustvarjanje lastnih predstav o prihodnosti, ki lahko pomembno prispevajo tudi k svetlejši prihodnosti mest.

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Sanja CUKUT KRILIĆ

Kritični pristop k ekonomskim obravnavam migracij in neenakosti

Naslov: *Global Migration beyond Limits: Ecology, Economics, and Political Economy*
(Globalne migracije brez meja: ekologija, ekonomija in politična ekonomija)
Avtor: Franklin Obeng-Odoom
Založba: Oxford University Press
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V zadnjih letih se mednarodne migracije krepijo v absolutnih številkah, hkrati pa migranti prihajajo s čedalje bolj različnih geografskih območij. Poleg tega zdaj med njimi prevladujejo ženske in otroci. Čeprav je pandemija covida-19 vplivala na migracijske procese, pretekle izkušnje po svetu opozarjajo na to, da jih ni mogoče trajno zaustaviti. Zaradi čedalje močnejšega protimigrantskega ozračja v mnogih državah pa ni presenetljivo, da je pandemija migrante in migrantske skupnosti samo še bolj prizadela. Franklin Obeng-Odoom meni, da so navedene družbenopolitične razmere ravno pravšnje za analizo vprašanja množičnih migracij (str. 2), ki se v političnih in medijskih razpravah čedalje pogosteje opisujejo kot kriza. V opaznejših ekonomskih diskurzih se pomen notranjih migracij kot nasprotje mednarodnim migracijam skoraj ne omenja. Tovrstne teorije so kljub splošnim razlikam še vedno močno uveljavljene v modelih potiska in potega (ang. *push-and-pull models*), v skladu s katerimi je migracija racionalna (posameznikova) odločitev, ne proučujejo pa institucionalne dinamike niti povezav med izvornimi in ciljnimi državami na lokalni, regionalni, državni in globalni ravni. Poleg tega je glavni poudarek na globalnih migracijah v odnosu do (gospodarske) rasti, pri

tem pa raziskovalci manj pozornosti namenjajo procesom socialne neenakosti in elementom družbene stratifikacije, kot so spol, narodnost, rasa, družbeni razred in status migranta.

Navedene plasti so glavni predmet analize knjige *Global Migration beyond Limits*. V njej avtor na podlagi najrazličnejših študij primera z vsega sveta proučuje različne kategorije migrantov – priseljene kmete, priseljence, ki se na različne načine preživljajo na ulici, in druge delavce migrante, begunce, mednarodne študente in druge –, da bi predstavil podobnosti med njimi ter njihovo vpetost v politične in gospodarske sisteme. Posveti se zlasti analizi vpliva migracij na gospodarstvo, družbo in okolje. Predlaga pristop k migracijam, ki temelji na ekonomiji stratifikacije ter poleg delovne sile, kapitala in države upošteva zemljišča, kar zagotavlja bolj raznovrstno analizo globalnih neenakosti, ki temelji na zemljiščih (str. 9 in 11).

Obeng-Odoom tako proučuje različne zagovornike prevladujočih migracijskih tokov, kot so privrženci konservativnih, neoliberalnih in humanističnih pogledov, ki imajo po njegovem kljub svoji pluralnosti podoben konceptualni
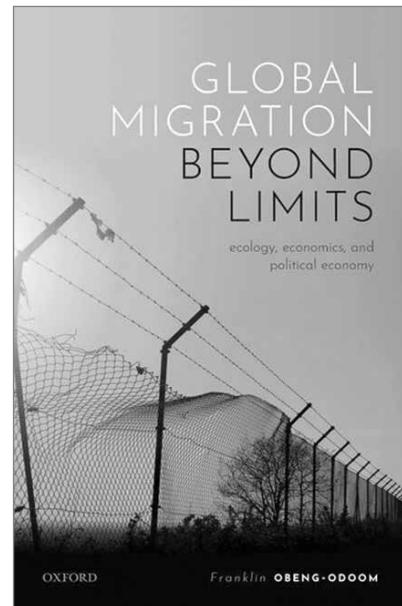
okvir. Navaja, da migracija ni avtonomna posameznikova odločitev, kot trdijo podporniki navedenih pogledov, ampak da nanjo vplivajo zlasti institucije ter kolonialna in druga zgodovina, v katerih se izražajo tudi razredne razlike. V tem okviru lahko na primer razumemo tudi vseprisotnost rasizma kot izraz zgodovinske obravnave nekaterih ras, ki izraža politično in ekonomsko strukturno diskriminacijo in stereotipiziranje, in ne kot težavo, ki naj bi sama po sebi nastala in se ohranjala zaradi preveč migracij. Čeprav je bila navedena problematika delno teoretično obravnavana v strukturalistično usmerjenih razpravah, ni dovolj podrobnejših teoretičnih razprav o povezavah med zemljišči, lastninskimi pravicami, raso, družbenim razredom, narodnostjo in migracijami na globalni ravni (str. 36).

Avtor zato v naslednjem poglavju na podlagi preoblikovane različice politične ekonomije Henryja Georgea, institucionalne ekonomije J. R. Commonsa in nastajajoče ekonomije stratifikacije oblikuje celovitejši pristop k proučevanju migracij. Omenjene tri teoretične smeri združi v metodologijo, ki jo predlaga kot alternativo uveljavljeni ekonomski teoriji in njenim drugim trenutnim alternativam. Politična ekonomija, ki jo je utemeljil George, se osredotoča na strukturna protislovja v najemninah, vrednosti in bogastvu (str. 51), ki pojasnjujejo ne samo strukturno neenakost in diskriminacijo, ampak tudi njune posledice, kot je globalna sistemska revščina. George je svojo teorijo migracij osnoval na izkušnji irskih priseljencev, pri čemer je proučil socialne, politične in gospodarske vzroke irske lakote in razmer v ZDA, kamor so se mnogi Irci preselili. Menil je, da so bili vzrok za priseljevanje z Irske zgoščanje in monopolizacija zemljišč ter zasužnjevanje delovne sile, s čimer je podcenil ključno vlogo rase v navedenem procesu. Institucionalna ekonomija analizira različne vidike državnega aparata in drugih podobnih institucij, kot so Cerkev, trg in univerza, ter njihova presečišča in medsebojne odnose, kar Obeng-Odoom vidi kot ključne ravni analize. S tega vidika posamezniki *so* pomembni, vendar na njihove odločitve neizogibno vplivajo druge družbene silnice in institucije. Ekonomija stratifikacije navedeno dopolnjuje s pomembnimi vidiki: stalno reprodukcijo in preobrazbo identitet v procesu migracije ter vlogo ekonomskih interesov pri razslojevanju glede na raso, spol, barvo kože, kasto, družbeni razred in drugo družbeno identiteto. Pristop, ki ga uporabi Obeng-Odoom, poudarja lastninske pravice, zemljišča in najemnino v razmerju do kapitala in delovne sile, hkrati pa vključuje presečni in večdimenzionalni pristop k proučevanju vzrokov, posledic in politik migracij (str. 64).

V naslednjih poglavjih so navedena teoretična izhodišča obravnavana empirično, in sicer avtor prouči številne empirične primere, med drugim notranje migracije med podeželjem in mesti v Afriki, zlasti v Gani, položaj mednarodnih študentov v Avstraliji in njihove izkušnje s stanovanji ter vlogo denarnih nakazil migrantov (tj. denarja, ki ga pošiljajo domov). Obeng-Odoom predstavi veliko empiričnih podatkov in dosedanjih raziskav na to temo, hkrati pa se skrbno drži teoretičnega pristopa, opisanega v prejšnjih poglavjih knjige. Izpostavi, da na procese notranje migracije bolj kot razlogi posameznikov in gospodinjstev vplivajo institucionalni in strukturni procesi (str. 67). Na tem ozadju proučuje izkušnje mestnih kmetov, prodajalcev in nosačev (tj. zlasti žensk, ki se preživljajo s prenašanjem tovora na glavi) v Gani in drugje v Afriki. Tako na primer obravnava privilegije, ki jih imajo kmetje v južni Gani pri dostopu do zemljišč in drugih kmetijskih virov, medtem ko je v severni Gani zlasti za ženske in notranje migrante dostop v zvezi z zemljo bolj negotov. Strukturne težave so razvidne tudi iz razmer, v katerih živijo migrantke in otroci migranti. Zlasti ženske, ki se preživljajo z nošenjem blaga na glavi, in otroci, ki se na različne načine preživljajo na ulici, se spopadajo z raznimi ekonomskimi in psihosocialnimi izzivi. Navedene razlike ponovno opozarjajo na vlogo spola, narodnosti, družbenega razreda, statusa migranta in drugih elementov, navedenih v prejšnjih poglavjih knjige, ki jih trenutne politike migracij večinoma ne obravnavajo.

Kompleksna zgodovina kolonializma, imperializma in neenakopravnega dostopa do zemlje in virov (str. 103) je pomembna tudi za umestitev in analizo politične ekonomije vojn. V raziskavah in medijih so begunci in druge skupine migrantov predstavljeni kot akterji, ki obremenjujejo gostiteljske skupnosti, zaradi česar se dojemajo kot nevredni pomoči in nekdo, ki ne prispeva

k socialni državi. Tovrstni pogledi prevladujejo zlasti v mestnih aglomeracijah. Obeng-Odoom na primeru sydneyjskega predmestja Lidcombe ponazori, kako zaradi gentrifikacije, ki jo vzbujajo zasebni interesi, naraščajo cene nepremičnin. Poleg tega gentrifikacija povzroča izključenost različnih skupin, tudi migrantov, ki so pogosto žrtve izkoriščevalskih delovnih razmer (str. 125), pri čemer imata pomembno vlogo tudi družbeni razred in rasa. Migranti so bili tudi med skupinami, ki so prispevale k preobrazbi socialnih in moralnih razmer v predmestju, njihova prisotnost pa je še naprej na različne načine vidna v grajenem okolju in sistemih preskrbe s hrano v predmestju. Avtor v naslednjem poglavju analizira dinamiko delovne migracije med Afriko in Kitajsko, pri čemer pojasni, da migranti pogosto prispevajo h gospodarski rasti na račun socialno-prostorske izključenosti, socialno-okoljske degradacije in življenja v negotovosti (str. 159 in 167). Obeng-Odoom trdi, da je treba gospodarski uspeh pojmovati z vidika delovnih razmer in neenakosti ter njihovih posledic za družbo na splošno, ne samo v smislu rasti.

V nasprotju s prisilno migracijo in nekaterimi oblikami delovne migracije mednarodne študentske migracije navadno tako v izvornih kot ciljnih državah veljajo za nekaj, kar je v obojestransko korist, čeprav se raziskave in prizadevanja politik redko osredotočajo na socialne pogoje tovrstnega izobraževanja. Obeng-Odoom meni, da lahko tudi izobraževanje institucionalizira stratifikacijo (str. 183), zato predstavi poglobljeno kvalitativno in kvantitativno analizo razmer na stanovanjskem trgu v Sydneyju, s katerimi se spopadajo mednarodni študenti. Izsledki analize kažejo, da zanje ni na voljo dovolj cenovno ugodnih stanovanj, večina njihovih težav v zvezi s stanovanji pa je povezana z najemodajalci, ki pogosto izkoriščajo njihovo ranljivost, zlasti v času gospodarskih, okoljskih in zdravstvenih kriz

(str. 198). Stanovanja so zato simptom in vzrok ekonomske prikrajšanosti, pri čemer niti izobraževalne niti stanovanjske politike ne obravnavajo razlik med mednarodnimi in domačimi študenti na eni strani ter med študenti nebelci, ki prihajajo z globalnega juga, in njihovimi bogatejšimi, večinoma belopoltimi vrstniki na drugi strani (str. 208 in 210).

Avtor v zadnjem, empiričnem poglavju, ki zaokroža tematiko migracij in vrnitve, na podlagi analize transnacionalnih družin razpravlja o tem, kako institucije, kot so država in lastninske pravice, spreminjajo značilnosti različnih družin (str. 213). Čeprav so denarna nakazila in njihove posledice pomembne tako za migrante kot njihove izvorne in ciljne države, njihove družbene stroške nosijo predvsem (nebeli) migranti, zaradi česar je njihova vrnitev domov zapletena in pogosto nemogoča. Z navedenega vidika lahko pošiljanje denarnih nakazil od migrantov terja visok davek in vpliva na njihovo kakovost življenja v državah gostiteljicah. Avtor na podlagi položaja ganskih delavcev v Avstraliji ugotavlja, da so navedeni delavci del svetovne ekonomije denarnih nakazil, zaradi katerih državam ni treba zagotavljati socialnega varstva ali pa ga zagotavljajo precej manj, kot bi bilo treba (str. 238).

V zvezi z vprašanjem, ali lahko globalne migracije obravnavamo kot migracije brez meja, ki se pojavi v naslovu knjige, Obeng-Odoom migracije jasno umesti v krog globalnih neenakosti in različnih osi družbene stratifikacije, pri čemer opozori na institucionalne vzroke socialne in ekološke krize. Navaja, da bi lahko s posvečanjem posebne pozornosti enakemu dostopu do zemlje in enakemu nadzoru nad zemljo ter hkratno preobrazbo drugih institucij, kot so sistemi socialnega varstva migrantov, dejansko zmanjšali dolgoročne globalne neenakosti. Še zlasti zanimiva so priporočila za politike, ki jih avtor oblikuje na koncu empiričnih poglavij. Pri tem se vseskozi drži glavnih teoretičnih izhodišč knjige, na primer da izboljšanje vključenosti brez hkratnega spreminjanja institucij ne zadostuje, da migracije ne morejo biti prostorska rešitev temeljnih socialnih težav in da denarna nakazila za najem stanovanja ali gradnjo hiše, ki jih migranti pošiljajo domov, še ne zagotavljajo, da se bodo vrnili v svoje izvorne države. Obeng-Odoom trdi, da je treba proučiti zgodovinske, družbenopolitične in gospodarske povezave in partnerstva med delovno silo in kapitalom v odnosu do zemlje (str. 253). Čeprav zagovarja politiko odprtih meja, vztraja, da ne zadostuje in da je potrebna večja ozaveščenost o težavah glede dostopa do zemlje, ki izhajajo iz družbenega razreda. Navedeno bi zagotovilo bolj enakovreden dostop do zemlje, olajšalo podeljevanje državljanstva in pravic ter povečalo obseg socialnega varstva za različne skupine priseljencev.

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Biografija

Franklin Obeng-Odoom je izredni profesor globalnih razvojnih študij na Inštitutu za trajnostne vede Univerze v Helsinkih. Prej je poučeval na univerzah v Avstraliji, med drugim tudi na Tehniški univerzi v Sydneyju. Pri svojem raziskovalnem in pedagoškem delu se osredotoča na politično ekonomijo razvoja, urbano in regionalno ekonomijo, naravne vire in okolje. Z navedenih področij je objavil šest samostojnih knjig, med drugim *Property, Institutions, and Social Stratification in Africa* (Cambridge, 2020) in *The Commons in an Age of Uncertainty: Decolonizing Nature, Economy, and Society* (University of Toronto Press, 2021).

Informacije o knjigi

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Sustainable urban development assessment: Large cities in Kazakhstan

Measuring the comparative level of urban sustainability is an important part of creating a sustainable urban future. This article assesses the sustainable development of the seventeen largest cities in Kazakhstan for 2007–2019 using a geodatabase on a GIS platform. The results show that none of the cities have reached a level of sustainability greater than or equal to a sustainable urban development index (SUDI) of 0.750, and no cities have an unsustainable level of development with a SUDI below 0.300. Therefore, all seventeen cities are classified as moderately sustainable. In future studies, the authors will look for ways to further improve the system for assessing the sustainability of cities in Kazakhstan.

Keywords: sustainable urban development, geodatabase, sustainable development indicators, sustainable urban development index, Kazakhstan

1 Introduction

Kazakhstan has committed itself to fulfilling the tasks set in Agenda 21 (United Nations, 1993) and the declarations of the Millennium Summit (New York, 2000) and the World Summit on Sustainable Development (Johannesburg, 2002). Kazakhstan has adopted a number of measures toward achieving sustainable development. It is a member of and active participant in the UN Commission on Sustainable Development, the Environment for Europe and Environment and Sustainable Development for Asia processes, and the regional Eurasian network of the World Business Council for Sustainable Development.

By adopting the Agenda for Sustainable Development for the period up to 2030, world leaders declared their determination to rid humanity of poverty, to preserve a prosperous planet for future generations, and to build a peaceful and open society for everyone, thereby ensuring decent living conditions for all people.

Kazakhstan also supported the Sustainable Development Goals (SDGs), guided by the fact that the guidelines of the UN document fully coincide with the country's priorities and objectives. These were identified in the strategy Kazakhstan-2050, the national plan 100 Concrete Steps to Implement Five Institutional Reforms, five social initiatives by Kazakhstan's head of state, and the program *Rukhani Zhangyru* (Spiritual Revival).

In 2016, the Committee on Construction, Housing, and Utilities of the Kazakh Ministry of National Economy published the *National Report of Kazakhstan on Housing and Sustainable Urban Development HABITAT III* (2016). The report considered issues related to the sustainable development of settlements, including demographic problems, urban planning, the environment and urbanization, legislation in territorial development management, and the urban economy. In addition, the main challenges, threats, and means for possible long-term sustainable development of settlements and housing were identified.

The total population of Kazakhstan as of 1 January 2022 was 19,125,600, of which 59.4% was urban. There are eighty-seven cities in Kazakhstan, and the share of urban population from 1991 to 2022 increased by 2.1%. This study analysed and evaluated sustainable development indicators for the seventeen largest cities in Kazakhstan. Three of these are cities of
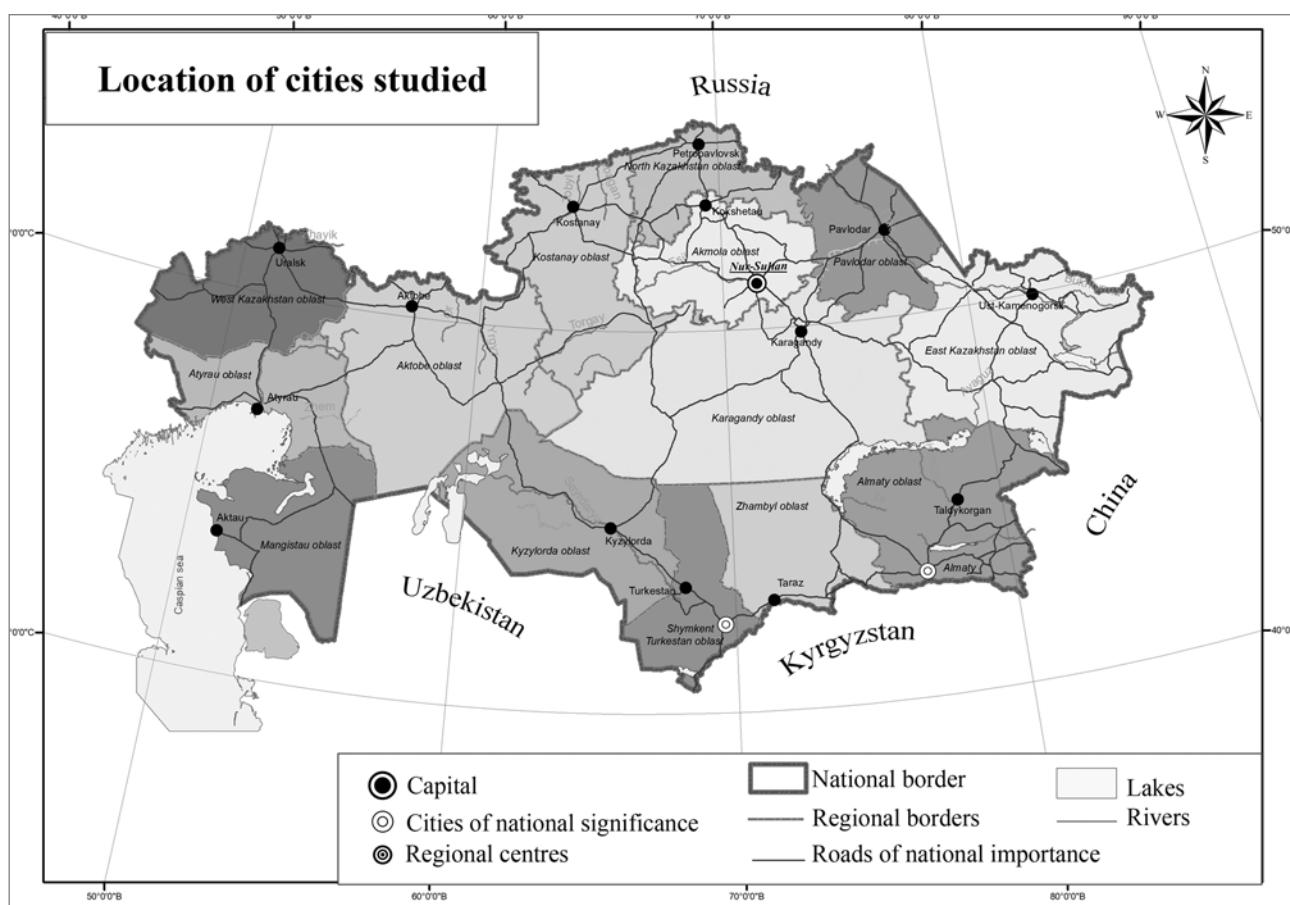
Figure 1: Location of cities studied (illustration: authors).

Table 1: Population of cities studied, 2019.

Up to 250,000	250,000 to 500,000	500,000 to 1 million	Over 1 million
Aktau	Aktobe	Shymkent	Almaty
Kokshetau	Atyrau	Karaganda	Nur Sultan
Kostanay	Kyzylorda		
Petropavl	Pavlodar		
Taldykorgan	Taraz		
	Oral		
	Oskemen		
	Turkistan		

Source: Bureau of National Statistics of Kazakhstan (2020).

national significance, and fourteen cities are regional administrative centres (Figure 1). In Kazakhstan, cities of national significance include settlements with special significance for the country or those with over one million people (see the law On the Administrative-Territorial Structure of Kazakhstan, as amended on 3 July 2017, Article 3). The official statistics in Kazakhstan provide the most complete data for the study period of 2007–2019, primarily for cities of national significance, as well as for regional administrative centres, which served as the basis for choosing only these seventeen cities. About 44.9% of the total population and 77.2% of the urban population of the country is concentrated in these seventeen cities (Table 1). From 1997 (when it became the capital) to 2022, the population of Nur-Sultan increased rapidly, by almost 950,000 people.

For the remaining seventy cities in Kazakhstan, the official statistics on the main socioeconomic, demographic, and environmental indicators of the cities do not make large-scale studies of sustainable development possible. There is growing interest in the sustainable development of Kazakhstan's leading cities among both city authorities and their residents, as well as in new approaches to urban planning, which focus not only on economic growth but also on improving the quality of life and social wellbeing. An important task in the development of cities is to increase their attractiveness not only for business, but also for residents' comfort and the economical use of the cities' resources.

This study was carried out by calculating integral indices based on twenty-seven indicators for economic, environmental, and social blocks. The authors examined how much sustainability was achieved in the largest cities in Kazakhstan from 2007 to 2019 through an economic and geographical analysis. The analysis is based on the hypothesis that implementing a national urban development policy in a country that supports the sustainability of cities should result in a positive trend in sustainable development indicators. The cities of Nur-Sultan

(the capital) and Almaty (the financial and research centre of the country) are expected to rank as highly sustainable compared to the other cities surveyed.

2   Urban sustainability concepts

This study examines the sustainable development of the largest cities in Kazakhstan based on a spatial geodatabase generated with the use of GIS. Its main objectives are to form an information base for socioeconomic and environmental indicators of the cities, to identify ways to achieve sustainable development, and to determine future prospects for their development. The term *sustainable development* dates back to 1987 and to the report Our Common Future, produced by the World Commission on Environment and Development (WCED). The report defines sustainable development as human actions that maintain the balance between human needs and the environment, as well as between current and future human needs (WCED, 1987).

When researching cities, to better understand the term *sustainability*, the importance of sustainable urban development must be taken into consideration (Dizdaroglu & Yigitcanlar, 2016). This can be seen as a process of change in which the exploitation of resources, the direction of investment, technological development, and institutional change are consistent with current and future needs (WCED, 1987). The term *sustainable city* as a concept became popular in the 1990s (Roy, 2009), denoting the relationship between aspects of economic, social, and environmental sustainability with a combination of indicators for each of these components (Ahvenniemi et al., 2017; Medeiros & Van der Zwet, 2020, Svirčić Gotovac et al., 2021). Considering all these aspects, Hiremath et al. (2013) defined sustainable urban development as achieving a balance between urban development and environmental protection, taking into account equality in income, employment, housing, basic services, social infrastructure, and transport in urban areas.

Sustainability assessment can be used to better conceptualize and define urban sustainability. There are countless resources for assessing sustainability across sectors and scales, as well as growing research on sustainability assessment for the urban context. On an urban scale, sustainability assessment usually comes down to determining and measuring the indicators and publishing documents with sets of hundreds of indicators (Xing et al., 2009; Boyko et al., 2012; Zhou et al., 2012; Ameen et al., 2015; Mudau et al., 2020). There are a number of types of potential sustainability assessment systems (Olalla-Tarraga, 2006). The definition and measurement of indicators is often the basis for assessing sustainability, and the choice of indicators for assessing the sustainability of cities often lacks a theoretical basis. Sustainability assessments in the literature often focus on the national and global scales (Sumner, 2004; Davidson, 2011; Davidson et al., 2012; Chesson, 2013; Moyer & Hedden, 2020).

Sustainable development is based on three main components: social, economic, and environmental. Each country has its own set of social and economic characteristics, and each region has a specific set of environmental tasks. The "trinity of the concept of sustainable development" does not only mean that at the present stage it is important to collect more data on the negative impact of the environment on human health. First, it is necessary to conduct a comprehensive analysis of the cause-and-effect processes occurring in the relationship between people and their environment. At international research institutes, many countries and groups of researchers are developing sets of indicators for assessing and monitoring sustainable development (Dizdaroglu, 2017).

To measure the quality and sustainability of the urban environment, a special project of the United Nations Environment Program (UNEP) and GRID-Arendal has been implemented. To prepare reports on the environmental protection of cities (Cities Environment Reports on the Internet, CEROI), as part of this project, a system of state-of-the-environment indicators was introduced that makes it possible to analyse individual urban problems in detail. The initial set of indicators was developed in 1998. The Swiss scorecard for sustainable development monitoring, called MONET (*Monitoring Nachhaltiger Entwicklung*), includes eighty indicators, structured around the following twelve topics: living conditions, health, social cohesion, international cooperation, education and culture, research and technology, work, economic system, production and consumption, mobility and transport, energy and climate, and natural resources. The system evaluates and comments on the current situation and development of Switzerland, taking into account the social, economic, and environmental aspects of sustainable development (SFSO, 2019). The Urban Sustainability Index (USI) of China, developed by the Urban Chi-

na Initiative (UCI) in 2010, consists of a set of indicators that provide a comprehensive assessment of urban sustainability in four categories: the economy, society, resources, and the environment. USI data not only provide a rich resource for academic research, but also serve as a guide for Chinese politicians as they evaluate the country's efforts in sustainable development and formulate urban development policies (UCI, 2019). The U.S. Cities SDG Index, compiled by a team of independent experts from the SDSN (Sustainable Development Solutions Network) Secretariat, is assessed by using forty-four indicators for fifteen of the seventeen sustainable development goals. The selected indicators are closely related to the indicators approved by the UN Statistical Commission (Espey et al., 2018).

The STAR (Sustainability Tools for Assessment and Rating) Community Index covers twenty-one indicators across eight target areas of the STAR rating system: natural systems; the built environment; climate and energy; the economy and jobs; education, arts, and community; equity and empowerment; innovation and process; and health and safety. The leading indicators are organized into an online platform in which US cities and districts can annually update the data on the key sustainability indicators (STAR Communities, 2019). The index, developed by Arcadis, a global design and consulting firm, and the Center for Economic and Business Research (CEBR), assesses cities' success based on social, environmental, and economic factors. CEBR rated the hundred leading cities in the world, using thirty-two different indicators to develop an indicative sustainability rating for each of them. The cities are rated for each of the three aspects of sustainability, and the total index for the city is equal to the average of the three sub-indices (Arcadis, 2018). Among the global international developments in building an integral index of sustainable development for cities, it is worth highlighting the UN Habitat City Prosperity Index (UN-Habitat, 2013). It aggregates five groups of indicators: productivity, quality of life, infrastructure development, environmental sustainability, and equality. In general, evaluating the constructiveness of the methodological approach, the well-known controversial nature of the results obtained, and the need for further development of the index should be noted (Cohen, 2017).

Because cities are complex systems embedded in and associated with unique ecological systems, and each city is determined by its own cultural and historical context, it is quite difficult to adequately select from numerous to apply a single assessment to all urban areas around the world (Gonzalez et al., 2011). Thus, it may be more useful to agree on a common assessment of the sustainability of cities with a common set of guidelines that determine the criteria and indicators that are unique to each city. The effectiveness of sustainability indicators can be

characterized by three features: reliability, legitimacy, and significance (Ciegis et al., 2009). Sustainable development is a multifaceted problem, which includes a large amount of complex information. There is some need to systematically reduce this information to a more concentrated form when building a pyramid of information aggregation, which is based on raw data and in which indices are at the top.

To analyse and assess the level of sustainable development of large cities, the rating experience of leading research groups and organizations such as PWC (Dolgikh, 2015), Ernst & Young, the Australian Conservation Foundation (ACF, 2010), Forum for the Future (2019), and the European Green Capital (European Commission, 2022) was considered.

Since 2012, the Sustainable Growth Management (SGM) Agency has annually held a rating of the sustainable development of Russian cities with more than 100,000 people. The agency uses its own integral index of urban sustainability, taking into account economic, social, and environmental factors (SGM Agency, 2016). The rating covers 185 cities in Russia with a total population of 78.4 million, or 78% of the total population of all 1,112 Russian cities. At the same time, an integral index is used: the cities' sustainable development index (SDI). It is calculated on the basis of forty-two statistical indicators characterizing the sustainable development of cities based on three main components: the economic, environmental, and social sphere. All components include indicators reflecting various aspects of urban development: the level and quality of the economic base of the city; the state of communal, engineering, and social infrastructure; the state of the population; the structure of labour resources; and the environmental situation.

Most of these sustainable development ratings cover only large cities, using the following indicators: meeting basic needs of the population, quality of life, environmental situation, environmental protection, efficient use of resources, infrastructure development, management efficiency, and potential for future sustainable development. In some of these ratings, along with statistics, the results of sociological studies and the results of other ratings are used.

In Kazakhstan, there is insufficient research on the sustainability of urbanized territories and cities. Studies by economists have been carried out for individual cities and regions of Kazakhstan. A scheme of sustainable development was developed for the city of Almaty (Zhumaeva, 2007), and the city's level of sustainability was investigated. Alibekova et al. (2018) determined that Almaty's sustainability index was increasing. In 2016, the development of Almaty became sustainable due

to the high level of sustainability of the economic and social subsystems, but the environmental subsystem showed signs of unsustainability. Individual studies by economists have covered the industrial regions of Kazakhstan. Thus, the socioeconomic sustainability of the oil-producing regions of Kazakhstan was assessed using the Lorenz method of calculating the coefficient of concentration, and the contribution of each indicator to sustainability was taken into account. The calculations used nine socioeconomic and five environmental indicators (Yeleusizova, 2008). Ignatyeva (2010) developed a conceptual model of sustainable development of the East Kazakhstan region. Using her own methodology for assessing natural resources, production, and labour potential, she calculated the integral index of sustainable development for this region. Karimbergenova (2014) assessed the sustainable development of the Pavlodar region in the context of industrial regions of Kazakhstan (the East Kazakhstan and Karagandy regions) using ten social, seven economic, and three environmental indicators of the three regions. Conducting comprehensive economic and geographical studies using international theoretical and methodological developments in strategic planning and sustainable innovative development of cities is relevant for Kazakhstan.

Kazakhstan's cities, on their way to sustainable development, have implemented projects such as EXPO-2017: Energy of the Future, Industrialization 4.0, and Digital Kazakhstan. In Kazakhstan, four interrelated tasks have been determined to achieve sustainable urban development: ensuring the sustainable long-term economic development of cities; maintaining a supportive environment and sustainable infrastructure; developing the social sphere and the quality of life of the urban population; and improving the system of urban governance. In accordance with international experience in planning sustainable urban development, several indicators have been identified for the sustainable development of cities and their target values for three blocks: economic, social, and environmental (CSDC, 2019).

3   Materials and methods

The information base for the research was the official data of the Statistics Committee of the Kazakh Ministry of National Economy, the statistics departments of the cities of Almaty and Nur-Sultan, and regional statistics departments. For the spatial analysis of indicators, we considered the statistical data of large cities in Kazakhstan for 2007 to 2019. For processing the data, we used the Taldau information and analytical system and ArcGIS 10.2 software. This article uses an integrative methodology to assess the sustainability of cities, covering the most comprehensive range of integral urban development indicators.

Stages of assessing the sustainability of cities:

- Reviewing international developments in building integral sustainable urban development indices;
- Selecting applicable indicators;
- Combining the selected twenty-seven indicators into five groups and three blocks;
- Collecting primary statistics for the seventeen cities studied;
- Calculating standardized values for each of the twenty-seven indicators using a linear scaling method;
- Determining the integral indicator (subindex) for each of the five groups of indicators by calculating the average of standardized values for the relevant indicators;
- Determining sustainable urban development indices (SUDIs) based on subindices for each group of indicators, taking into account weighting factors; and
- Creating a typology of cities based on their level of sustainability using SUDIs for 2007 and 2019.

3.1 Indicator-based urban sustainability assessment

To analyse and evaluate the level of sustainable development of large cities, an integral index was calculated: the SUDI. This index was calculated based on twenty-seven statistical indicators processed in the spatial geodatabase of Kazakh cities for 2007–2019. The geodatabase is divided into three main blocks: the economic, environmental, and social. The blocks include five groups of indicators describing urban development: the level and quality of the economic base of the city; the state of communal, engineering, and social infrastructure; the state of the population; the structure of labour resources; and the environmental situation.

Most international sustainability ratings rank data for individual countries or regions, considering the specifics of their development and the characteristics of national information collection systems. The data of several statistical indicators used in foreign ratings are not provided by the Statistics Committee of the Kazakh Ministry of National Economy. Therefore, the
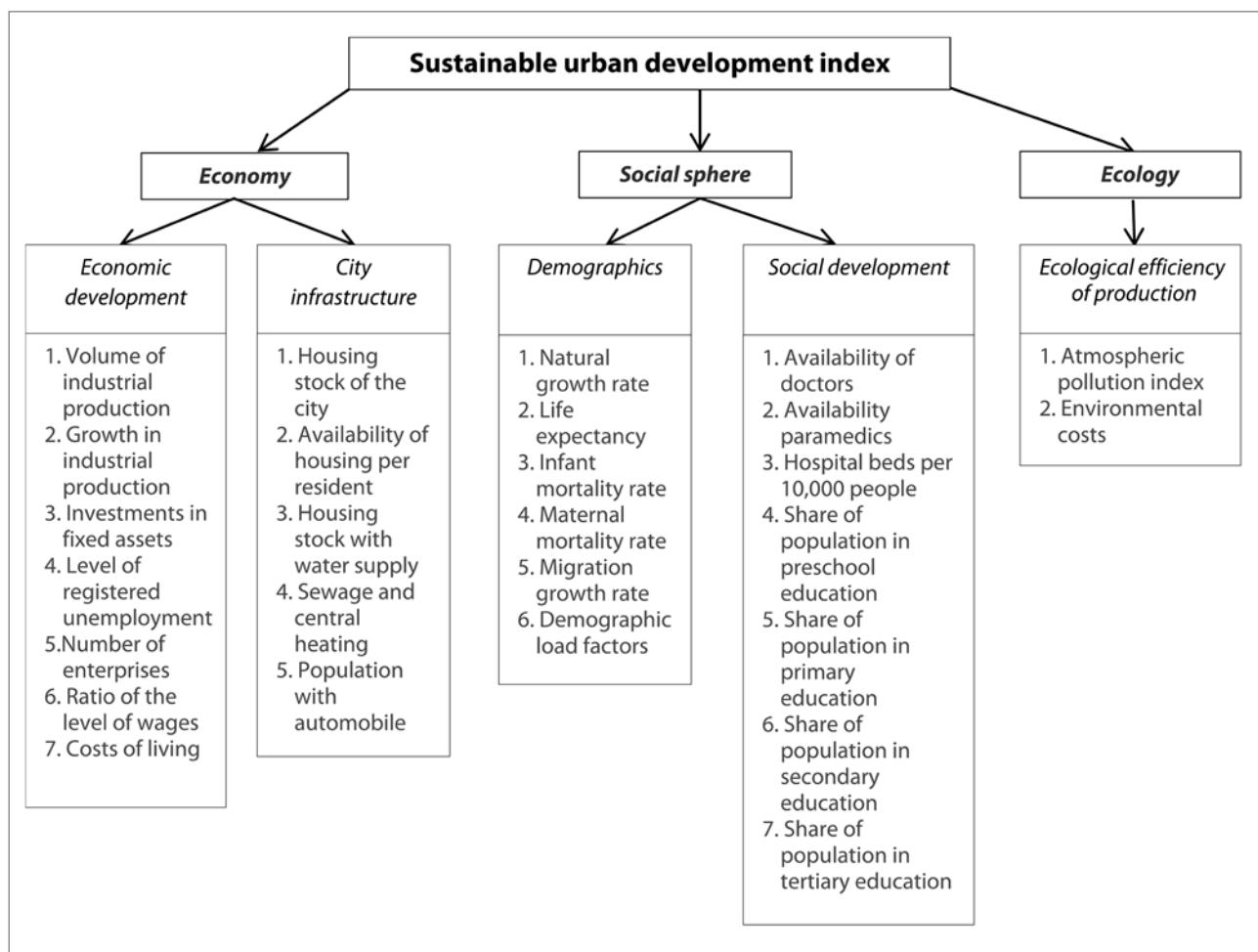

Figure 2: SUDI indicators (illustration: authors).

selection of indicators for assessing the sustainable development of cities was made by considering the existing system of statistical indicators of the country. The selection of indicators was carried out based on the list of SGM Agency indicators used to compile the sustainable development rating of cities in Russia. Due to the lack of statistical data on sustainability parameters for cities in Kazakhstan and the delay in their official publication, some indicators were excluded. The indicators are shown in Figure 2.

3.2 Index calculation

To calculate the integral index of each indicator, a linear scaling method was applied, as a result of which the indicators were measured on an *N*-point scale. The value of zero in this case corresponded to the lowest level of sustainable development, and the value of *N* corresponded to the highest one. In our case, $N = 1$.

The conversion was carried out using Equation 1 and Equation

$$I_j^i = \frac{x_j^i - x_{\min\,j}}{x_{maxj} - x_{minj}},$$
(1)

$$I_j^i = 1 - \frac{x_j^i - x_{\min\,j}}{x_{maxj} - x_{minj}},$$
(2)

where I_j^i is the standardized value of indicator *j* of city *i*,
x_j^i is indicator *j* of city *i*,
$x_{\min\,j}$ is the minimum value of indicator *j*, and
x_{maxj} is the maximum value of indicator *j*.

If the statistical indicator is associated with an integral indicator of increasing dependence, then the conversion is carried out using Equation 1; if on the contrary, the statistical indicator is associated with an integral indicator of decreasing dependence, the conversion is carried out using Equation 2. The sustainable development index of the city is determined by taking into account the weight of each group of indicators using Equation 3 (Denevizyuk, 2012):

$$I_{SUD} = w_1 I_1 + w_2 I_2 + w_3 I_3 + w_4 I_4 + w_5 I_5;$$
(3)

where I_n is an integral indicator of the corresponding group of indicators, and
w_n is the weight coefficient of the corresponding group of indicators satisfying the conditions $w_n \geq 0$, $\sum_{wn} = 1$.

In accordance with the comparative importance of indicators and the significance of each of the groups of indicators, they were assigned an appropriate weight: economic development = 0.3, urban infrastructure = 0.1, demographics = 0.1,

social infrastructure = 0.3, and environmental situation = 0.2 (Denevizyuk, 2012). The final SUDI was obtained from five sub-indices for the groups of indicators, taking into account the corrective weights selected based on established methods. The weight coefficients were assigned for each group of indicators based on assessments by Russian and Kazakh geographers and economists specializing in sustainable development.

4   Results: typology and ranking

Based on the calculated sub-indices for five groups of indicators, typologies were created for the cities studied. The cities were categorized under three types (sustainable, moderately sustainable, and unsustainable), and these were divided into seven subtypes based on the level of sustainability (Table 2).

The block of economic indicators consists of two groups of indicators: economic development and urban infrastructure (Figure 2). The economic development typology of cities was created based on the sub-indices calculated from six indicators for each city for 2007–2019. In general, there is an improvement in the economic development indicators. Based on the level of economic development, all the cities were assigned to different subtypes of a moderately sustainable type. Thus, for 2007–2019 only the city of Aktau, despite the decrease in the indicator (0.642 in 2007 and 0.613 in 2019), had a level of economic development close to sustainable. The cities of Pavlodar (from 0.446 to 0.521), Kokshetau (from 0.420 to 0.464), Kostanay (from 0.415 to 0.475), Karaganda (from 0.390 to 0.485), and Petropavl (from 0.382 to 0.460) with their corresponding index indicators were moved from the signs of unsustainability subtype in 2007 to the sustainable subtype in 2019. In the other cities, there was a slight improvement in the economic development index indicators.

The calculation of sub-indices based on the level of urban infrastructure development was carried out using five indicators of the cities studied for 2007–2019. The analysis of these indicators showed a significant improvement in the situation during the period analysed. Thus, from the subtype with the urban infrastructure development level close to sustainable in 2007, the cities of Pavlodar (from 0.704 to 0.762), Aktau (from 0.659 to 0.830), and Atyrau (from 0.602 to 0.766), moved to sustainable in 2019. The city of Oral moved from average sustainability to sustainable, with an increase of indicators from 0.582 in 2007 to 0.773 in 2019. There was a significant improvement in the situation in the city of Turkistan, which moved from signs of unsustainability to average sustainability, with an increase from 0.391 in 2007 to 0.531 in 2019.

The typology of the cities for the group of indicators "demographics" was compiled by using six indicators for 2007–2019. For the period considered, there was an improvement in the demographic development of the cities. Thus, the indicators of all the cities corresponded to the range of values of the average level of sustainability and the level of demographic development close to sustainable.

The typology of the cities based on the level of social development was created using the sub-indices calculated from seven indicators for 2007–2019. Thus, the indicators for the cities of Almaty (from 0.876 to 0.899) and Nur-Sultan (from 0.774 to 0.825) corresponded to the range of values of a sustainable level of social development. A significant improvement in indicators was observed in Taldykorgan, which moved from the subtype with signs of unsustainability to average sustainability with an increase from 0.358 in 2007 to 0.533 in 2019.

Based on the calculated sub-indices, an environmental situation typology was created using two indicators for the 2007–2019 dynamics. There was a significant deterioration in the environmental situation in Aktau, which moved from

Table 2: Classification by level of sustainability.

Types	Value range	Subtypes by sustainability level
Sustainable	≥ 0.900	High sustainability
	0.750–0.899	Sustainable
Moderately sustainable	0.600–0.759	Close to sustainable
	0.450–0.599	Average sustainability
	0.300–0.449	Signs of unsustainability
Unsustainable	0.150–0.299	Unsustainable
	< 0.150	Crisis level

Source: authors based on Gashu and Gebre-Egziabher (2019) and Golovanov (2015).

a sustainable environmental situation in 2007 with an index of 0.827 to signs of unsustainability in 2019 with an index of 0.411. The cities of Oral (from 0.506 to 0.443), Kokshetau (from 0.463 to 0.415), and Nur-Sultan (from 0.364 to 0.276) moved one level lower, with corresponding changes in the environmental indicators. Improvement was observed in Almaty, which moved from a crisis level for the environment in 2007 (0.086) to unsustainable development (0.247) in 2019. Based

Table 3: Typology of large cities in Kazakhstan in terms of sustainability, 2007–2019.

Types	Subtypes	2007	2019
Sustainable	High sustainability		
	Sustainable		
Moderately sustainable	Close to sustainable	Aktau (0.672)	Atyrau (0.667)
		Atyrau (0.613)	Almaty (0.635)
		Nur Sultan (0.621)	
		Pavlodar (0.612)	
	Average sustainability	Nur Sultan (0.593)	Oskemen (0.594)
		Almaty (0.559)	Aktau (0.585)
		Kostanay (0.534)	Oral (0.565)
		Pavlodar (0.526)	Aktobe (0.556)
		Kyzylorda (0.516)	Kyzylorda (0.538)
		Oral (0.507)	Karaganda (0.533)
		Aktobe (0.505)	Petropavl (0.532)
		Kokshetau (0.503)	Kostanay (0.527)
		Karaganda (0.487)	Kokshetau (0.521)
		Taraz (0.472)	Taraz (0.506)
		Oskemen (0.458)	Shymkent (0.490)
		Petropavl (0.451)	Taldykorgan (0.486)
	Signs of unsustainability	Turkistan (0.413)	Turkistan (0.449)
		Taldykorgan (0.407)	
		Shymkent (0.397)	
Unsustainable	Unsustainable		
	Crisis level		

Source: authors.
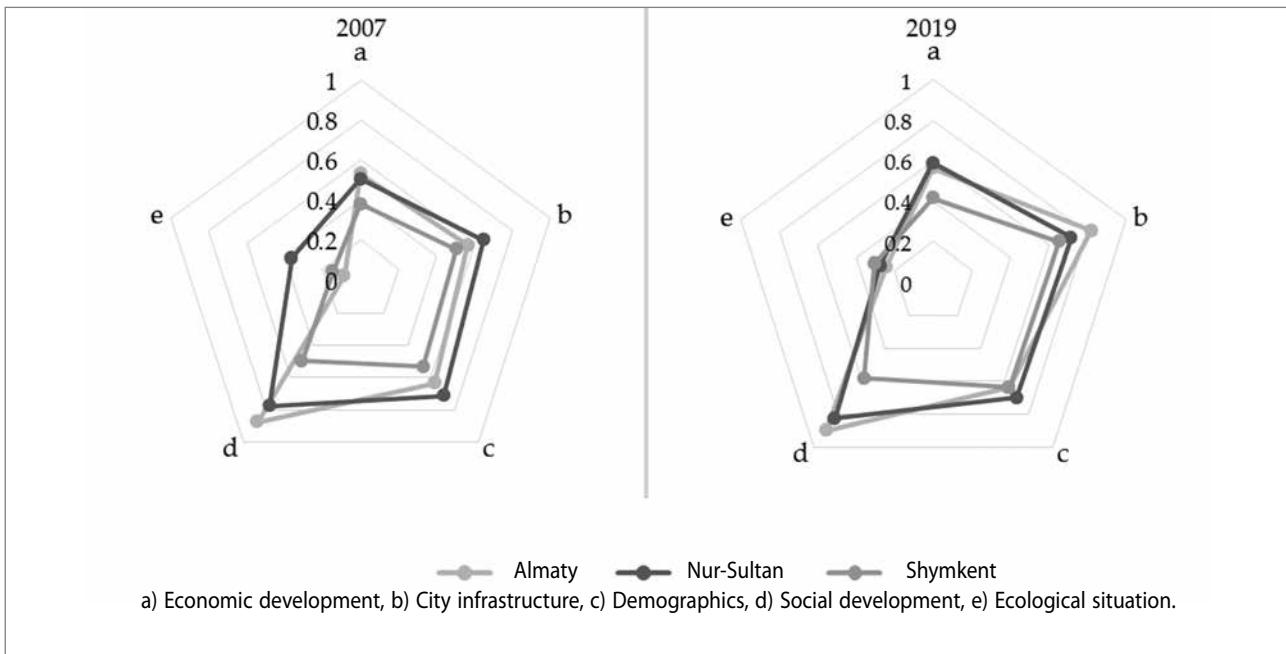
Figure 3: Changes in the groups of sustainable development indicators of cities of national significance (illustration: authors).

on the calculated SUDIs, an integral typology of the cities studied was created based on the level of sustainability for 2007–2019. The cities were classified as having sustainable, moderately sustainable, and unsustainable development (Table 3).

In general, there was an improvement in the sustainable development indicators in cities in Kazakhstan for the period analysed. Thus, the cities of Nur-Sultan (from 0.593 to 0.621), Almaty (from 0.559 to 0.635), and Pavlodar (from 0.526 to 0.612) moved from average sustainability to close to sustainable. It should be noted that the integral indices of all the cities studied for 2007–2019 were moderately sustainable.

5   Discussion

The transition to a new stage in the socioeconomic development of Kazakhstan involves the arrangement of all territories and the development of their infrastructure. In creating the prerequisites and foundations for innovative development, cities play an important role as the main centres for the reproduction of resources, including human potential. Cities are characterized by constant changes and development. Holistic economic, social, and demographic development and providing a favourable environment are the main prerequisites for sustainable development. This study helped identify weaknesses and strengths in the development of cities for five groups of sustainable development indicators. The results showed that all the cities analysed were moderately sustainable (Table 3). At

the same time, there is a difference in the level of sustainability among the cities; the cities are divided into three subtypes: signs of unsustainability, average sustainability, and close to sustainable.

There is an improvement in the sustainable development indicators in 2019 compared to 2007. In 2007, only two cities (Aktau and Atyrau) were close to sustainable, twelve had average sustainability, and three (Turkistan, Taldykorgan, and Shymkent) had signs of unsustainability. Most cities have seen an increase in sustainability over twelve years. Thus, in 2019, four cities (Atyrau, Nur-Sultan, Almaty, and Pavlodar) were close to sustainable, and the remaining cities had average sustainability. In Nur-Sultan, Almaty, and Pavlodar there was an increase in the level of sustainability due to significant improvement in urban infrastructure and social development. Nevertheless, the low environmental indicators in Nur-Sultan, Aktau, and Almaty, the relatively low social development indicators in Atyrau, and the low demographic development in Pavlodar do not allow them to be classified as cities with sustainable development.

Taldykorgan and Shymkent, which had signs of unsustainability in 2007, reached average sustainability by 2019 due to improvements in demography, social development, and urban infrastructure. However, in terms of economics and the environment, no significant improvements were observed in these cities. Turkistan, despite the increase in sustainable development indicators for the study period, remained in the subgroup with signs of unsustainability in 2019. Figure 3 shows the
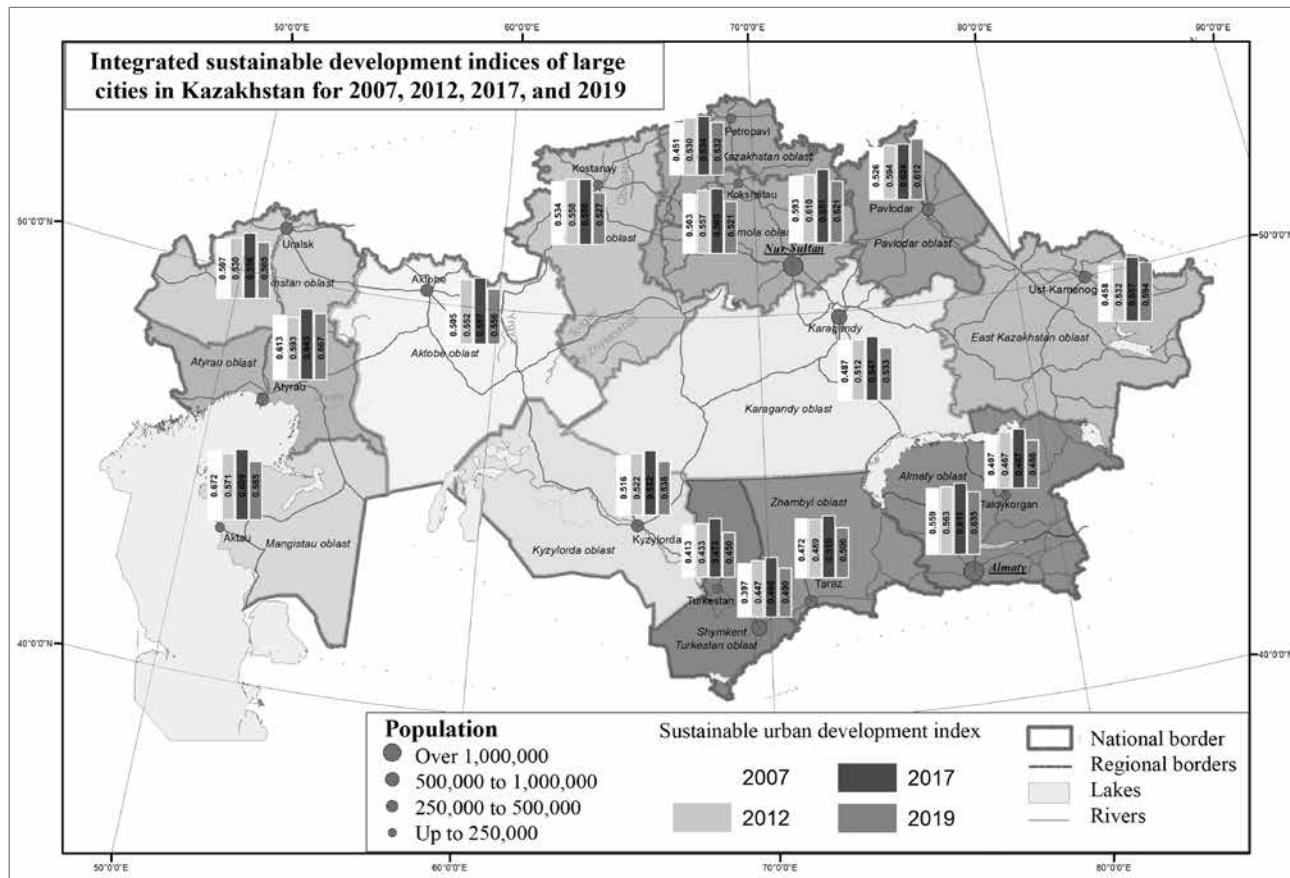
Figure 4: Integrated sustainable development indices of large cities in Kazakhstan for 2007, 2012, 2017, and 2019 (illustration: authors).

changes in the groups of sustainable development indicators of cities of national significance for the twelve years studied.

The relatively high indices in Nur-Sultan and Almaty are due to the high level of investment in developing urban infrastructure and the social sphere, a positive demographic situation, and steady economic development of cities of national significance. Köppen (2013) studied the project of building the new capital of Kazakhstan, Astana (Nur-Sultan); in his opinion, the city was not sufficiently different from the classic Soviet provincial city and was not sustainable. Based on our research, in 2007 Nur-Sultan had average sustainability, with a SUDI of 0.593. During the period studied, many sustainable development indicators for the city had positive dynamics (Figure 2) due to programs to improve socioeconomic development. In 2019, Nur Sultan was close to sustainable, with a SUDI of 0.621. The growth of the integral sustainability index was mainly due to improvement in the economic development indicators and city infrastructure groups. Shymkent attained the status of a city of national significance in 2018, reaching a population of more than one million, mainly through the gradual expansion of the city's borders by joining rural settlements. Based on the study, a digital map of the level

of sustainable development of large cities in Kazakhstan was developed, drawing from the spatial geodatabase created for sustainable development indicators (Figure 4).

Figure 4 shows that in all seventeen cities studied there is a positive trend in the SUDI for 2007–2019. The map presents additional information on the population of the cities studied, the population density of the regions (first-level administrative units), the major lakes and rivers in the country, and so on.

Although the study considered a wide range of factors, there are still some limitations and insufficient statistical data when choosing a set of sustainable urban development indicators. Therefore, in future studies, the authors will look for ways to further improve this system for assessing the sustainability of cities in Kazakhstan. The number of indicators for calculating the SUDI will be expanded by applying subjective assessment methods. The authors conclude that assessing sustainability using only objective indicators is not sufficient to show the full picture. By regularly updating the statistical information in the geodatabase, it is also possible to regularly monitor the sustainable development indicators of settlements in Kazakhstan.

6 Conclusion

This study examined the sustainability of seventeen large cities in Kazakhstan. The review of the literature and available methods from abroad for assessing sustainable development revealed the difficulties of their application for assessing the sustainability of cities in developing countries due to the limited available statistical information by city. The methodology for assessing urban sustainability proposed by SGM was studied to select key indicators for this study.

The calculated indices of sustainable urban development by groups of indicators make it possible to better assess the development trends for each indicator. The typology of the cities in terms of sustainability is based on the SUDIs of the cities studied. The study found that none of the cities attained a sustainability level exceeding or equal to a SUDI of 0.750, and there were no unsustainable cities with a SUDI below 0.300. Consequently, all seventeen cities are classified as moderately sustainable. Nevertheless, the cities leading in terms of sustainable development were identified, as well as cities with low rates of sustainable development. With SUDI indicators from 0.612 to 0.667 in 2019, the cities of Nur-Sultan, Atyrau, Pavlodar, and Almaty were the leaders, classified as close to sustainable. The remaining thirteen cities, with SUDI indicators from 0.449 to 0.594, had an average level of sustainability.

Based on this study, a spatial geodatabase was created for economic, socio-demographic, and environmental indicators for the seventeen cities for 2007–2019. This geodatabase was used to produce a digital sustainable development map for large cities in Kazakhstan (Fig. 4). The sustainability indicators of the cities studied can be used as a basis and guide for representatives of state and local government to achieve higher sustainable development for these cities, as well as for other cities and towns.

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The influence of green infrastructure on residents' connectedness with nature in Lagos, Nigeria

The high rate of loss of urban green spaces is reducing connectivity between people and nature, and the ability of the urban population to appreciate and enjoy the natural environment. However, not much is known about the extent to which ongoing efforts at planning green infrastructure are influencing residents' connectedness to nature, especially in cities in sub-Saharan Africa. This study investigates the influence of green infrastructure (GI) on residents' self-perceived connectedness with nature in selected residential neighbourhoods in Lagos, Nigeria. Through a multi-stage sampling technique, 1,560 residents were included in a survey and the data were analysed using descriptive and categorical regression analyses. The results showed that, although the residents were generally dissatisfied with the quality and quantity of GI in their neighbourhoods, they felt that the existing GI has a significant positive influence on their connection to nature. The regression analysis also revealed that the current state and availability of green areas for relaxation in the neighbourhoods were the two GI characteristics with the most influence on residents' sense of connectedness to nature. These findings are instructive in noting that, to improve the urban population's connectedness to nature using GI, city planners and managers should pay specific attention to providing and maintaining green areas for relaxation in residential neighbourhoods in the study area and beyond.

Keywords: connectedness to nature, neighbourhoods, green infrastructure, urban residents, Lagos

1   Introduction

As cities' populations grow with massive expansion of physical infrastructure to meet burgeoning needs, the green spaces in built-up areas are becoming smaller and more fragmented. This development is a serious threat to environmental sustainability and human connectedness with nature (Shwartz et al., 2014; Botzat et al., 2016), and it has greatly reduced the availability of the natural environment in cities (Matz et al., 2014; Soga & Gaston, 2016), leading to drastic impairment of the contribution of the natural environment to public health, the quality of urban life (Shwartz et al., 2014; Ives et al., 2016), and the liveability of urban areas (Forouhar & Forouhar, 2020). In the midst of these challenges, some researchers (Naumann et al., 2011; Soga et al., 2014; Richardson et al., 2020; Dipeolu et al., 2020, 2021a) have contended that the design of urban green infrastructure can be an effective tool for reconnecting people to nature and creating more liveable and sustainable urban neighbourhoods.

The term *green infrastructure* was first coined in Florida in 1994 in a report on land conservation strategies and the importance of natural systems (Benedict & McMahon, 2006). It is not entirely a new concept in environmental studies, but it is a new expression and a more ecologically-oriented focus for an older approach to the green space strategy of planning and urban design that originated in the nineteenth and twentieth centuries due to increasing environmental problems in American and European cities (Sandstrom, 2002; Fábos, 2004). These problems gave rise to Ebenezer Howard's garden city concept, leading to planning central parks in cities such as New York and urban parks in other cities in North America and Europe (Nabila, 2021), and the emergence of new professions such as landscape architecture and the greenway movement in the UK (Turner, 2006). Therefore, the term *green infrastructure*, as used here, refers to a collection of various green elements and natural features capable of reconnecting people to nature by providing essential ecosystem services in the built environment (Naumann et al., 2011; Adegun, 2018). It includes natural or semi-natural elements such as gardens and parks, sports fields, grass, community forests, green roofs, bodies of water, and other manmade systems that provide vital ecosystem services (Naumann et al., 2011; Adegun, 2018; Dipeolu et al., 2021b). Similarly, the concept of connection to nature is used to explain how people perceive nature and relate to it, and how they self-assess the extent of inclusiveness in nature (Soga & Gaston, 2016; Richardson et al., 2020). Briefly, it is a measure of an individual's tendency to feel emotionally attached to nature and its elements (Mayer & Frantz, 2004).

Green infrastructure serves various functions, including reconnecting fragmented urban spaces (Naumann et al., 2011),

enhancing the sense of community (Cramm & Nieboer, 2015; Dipeolu et al., 2020), improving physical and psychological health (Tzoulas et al., 2007), stimulating carbon sequestration, reducing urban temperature and wind velocity (Idiata, 2016; Dipeolu & Ibem, 2020), and enhancing the aesthetics of the built environment (Adegun, 2018). Based on these benefits, several authors (Hartig et al., 2014; Botzat et al., 2016; Nisbet et al., 2019, 2020; Zuniga-Teran et al., 2020; Dipeolu et al., 2021b) observed that studies on the role of GI in revitalizing the connectivity between people and nature in the rapidly urbanizing world have been on the increase. Research has shown that spending more time in and among gardens and parks, community forests, sport fields, street trees, woodlands, and water features can improve human health, wellbeing, and the quality of life (Ja-Choon et al., 2013; Allen & Balfour, 2014). Other studies also reported that residents that had access to green spaces in their neighbourhoods received care and support from neighbours (Park & Mattson, 2009), experienced less crime and violence (Cramm & Nieboer, 2015), and had a good sense of community (Dipeolu et al., 2020). In contrast, the absence or poor supply of GI has been reported to reduce people's connectivity with nature and to increase negative health outcomes in the urban population (Soga & Gaston, 2016).

In spite of the insights gained from previous studies, there is limited empirical evidence on how the availability of GI can influence residents' perceived connectedness to nature in cities in sub-Saharan Africa. Consequently, there is a limited understanding of the specific type(s) of GI that foster greater human connectedness to nature in a rapidly urbanizing country like Nigeria. This study therefore investigates the influence of GI on residents' perceived connectedness to nature in Lagos, Nigeria. The following objectives were pursued in this research. Specifically, it examines residents' perception of the general characteristics of GI in selected residential neighbourhoods in Lagos, investigates the extent to which available GI has influenced residents' perceived connectedness to nature, and identifies aspects of GI with the most significant influence on residents' perceived connectedness to nature in the study area.

This study extends the existing body of knowledge on sustainable urban design, planning, and management by improving understanding among stakeholders in urban design, planning, and management of the specific aspects of urban GI that contribute most to enhancing connectedness between people and nature in densely populated cities in sub-Saharan Africa. Hence, this study contributes to the ongoing efforts to identify potent strategies for reconnecting the large urban population to nature and to optimize the various socioeconomic and environmental benefits of GI in the developing countries.

1.1 The concept of connectedness with nature and its importance

Connectedness with nature (or nature connectedness) is one of three main structural components of Schultz's (2002) human–nature relationship framework (i.e., connectedness, commitment, and caring), which has been defined in various ways in the literature. For example, it has been described as the extent to which individuals permit nature within their understanding and especially how individuals gain access to the natural environment (Schultz, 2002) as well as the affective individual experience with nature (Mayer & Frantz, 2004). Navarro et al. (2017) have also defined connectedness to nature as the relationship one has with the natural environment as perceived by the individual. Based on these definitions, connectedness with nature as used in this current study refers to the extent to which people have physical access the natural environment, and are mentally and emotionally attached to it and its elements in the urban environment.

Studies on connectedness between people and nature are based on the notion that what people perceive, hear, and experience at any moment has the capacity to influence their emotional attachment and response or behaviour (Hartig et al., 2003). Hence, connectedness between people and nature has been viewed as a sign of the human affinity for natural elements, such as rich and flourishing green vegetation (White et al., 2017). The reasons for this affinity might be linked to the restorative (Allen & Balfour, 2014; Uzobo, 2020) and healing (Martin & Czellar, 2016; Richardson et al., 2019) effects of nature and the role of natural environments in reducing physical and mental stress, fatigue, and low self-esteem, and improving the sense of belonging in the community (Cramm & Nieboer, 2015). In addition, there is also copious evidence in the literature showing that connectedness to rich biodiversity fosters person-to-person interactions and connectivity (Coley et al., 1997) and has a positive link with altruism, biospheric concerns (Stern, 2000), egobiocentric concerns (Olivos et al., 2011), pro-environmental behaviour (Balundė et al., 2019), life satisfaction (Navarro et al., 2017), positive life perception (Zelenski & Nisbet, 2014), and good health and wellbeing (Mitchell & Popham, 2008; White et al., 2017; Nisbet et al., 2020). These benefits of connectedness between people and nature associated with GI have been linked to the fact that seeing an environment can cause an emotional swing from calmness to anxiousness, happiness to sadness, or being hopeful to helplessness, and vice versa, depending on whether the environment is pleasant or unpleasant (Tzoulas et al., 2007; Cramm & Nieboer, 2015). Therefore, studies on connectedness with nature are considered important in predicting people's pro-environmental behaviour and attitude, and in identifying ways of improving human health, wellbeing, and satisfaction with life in cities.

1.2 The nexus between urban green infrastructure and connectedness to nature

Nature is a huge reservoir of vital natural resources that provide several life-sustaining ecological services to people. However, studies (e.g., Irwin & Bockstael, 2007; Haase et al., 2014; Kozamernik et al., 2020) have shown that the massive reduction and loss of urban vegetation due to continuous conversion of greenbelts and open spaces to buildings and other physical infrastructure have remained the key channels through which urban residents are being disconnected from nature and the associated life-sustaining ecological services. As a result, much research effort is focusing on ways to promote, increase, and sustain the connectedness between people and nature in the rapidly urbanizing world (Haase et al., 2014; Zelenski & Nisbet, 2014). In light of this, there is a consensus among authors (e.g., Tzoulas et al., 2007; Dipeolu & Ibem, 2020) that one of the best ways of reconnecting the urban population to nature is conserving existing green areas and/or planning additional GI in the built environment.

In the built environment, the most common elements of nature are vegetation in the form of green gardens and parks, grass, street trees, shrubs, horticulture, and urban woodlands, bodies of water (e.g., floodplains/wetlands, streams, rivers, ponds, lakes, and fountains), natural landscapes (such as forests, woodlands, rocky outcrops, and mountains), and other features (e.g., open spaces, non-green parks, wildlife habitats, school playgrounds, and cemeteries; Naumann et al., 2011; Adegun, 2018; Dipeolu et al., 2021a). Incidentally, these are the different forms and elements of GI identified in the literature (Idiata, 2016; Adegun, 2018; Obi et al., 2021). Therefore, open spaces and green areas constitute key components of urban GI that serve different functions such as mitigation of the adverse effects of climate change (Idiata, 2016), reconnection of people to nature (Tzoulas et al., 2007; Botzat et al., 2016; Dipeolu & Ibem, 2020), conservation of the natural ecosystem (Madureira et al., 2018), promotion of wildlife and biodiversity (Zuniga-Tera et al., 2020), enhancement of liveability in urban areas (Conedera et al., 2015), and provision of food and medicine (Obi et al., 2021).

However, it is important to note that the potential of GI to effectively serve as a channel through which people are connected to nature depends on a number of factors. These include the type and quality of GI (Tzoulas et al., 2007; Hartig et al., 2014), extent of maintenance (Karanikola et al., 2016; Madureira et al., 2018), and accessibility (Conedera et al., 2015),

as well as the frequency and duration of human exposure to preferred forms of GI (Hartig et al., 2003; Coutts & Hahn, 2015). On the one hand, types refer to the various forms in which GI occurs in urban areas and the kinds of activities it can support, including relaxation, creativity, and visual contact (see Dipeolu & Ibem, 2020). The quality, on the other hand, deals with the characteristics of GI in terms of the number, size, arrangement/orderliness (design), vegetation density, plant colour, leaf size, and type (Samimi & Shahhosseini, 2020). In fact, these factors have been identified as the key determinants of preferences for GI among the urban population in various countries (Samimi & Shahhosseini, 2020; Dipeolu et al., 2021a). It is on this premise that the type and quality of GI within urban neighbourhoods are assumed to have a significant influence on residents' perception of connectedness with nature in this study.

2   Research methods

2.1   Study area

This study was conducted in Lagos State in southwest Nigeria. In 2013, Lagos had an estimated urban population of over thirteen million and a population density of about 6,871 persons per km² (LSBS, 2015). Administratively, Lagos State has twenty local government areas (LGAs; see Figure 1). Sixteen of these LGAs are in the metropolitan area, and the remaining four LGAs (Badagry, Epe, Ibeju/Lekki, and Ikorodu) are in suburban Lagos (Dipeolu et al., 2020). A study by Dipeolu et al. (2021b) reported that rapid urbanization has greatly contributed to the depletion of natural environment and resources, including biodiversity, in the Lagos metropolitan area in the past five decades. Consequently, a greater proportion of the residents have been disconnected from the natural environment and the associated life-supporting services.

In an attempt to replace the lost green areas and reconnect city residents to nature, Dipeolu (2017) noted that the government of Lagos State initiated large-scale planning of various kinds of GI in the city through the Lagos State Parks and Gardens Agency (LASPARK). This agency, which was established in 2011, is charged with the responsibility for greening the Lagos metropolitan area through planting trees, establishing parks, gardens, and green spaces, and enforcing compliance with relevant legislation related to the development, conservation, and management of open and green spaces. This research was informed by the need to better understand the extent to which the GI provided via LASPARK has improved connectivity between people and nature in Lagos.
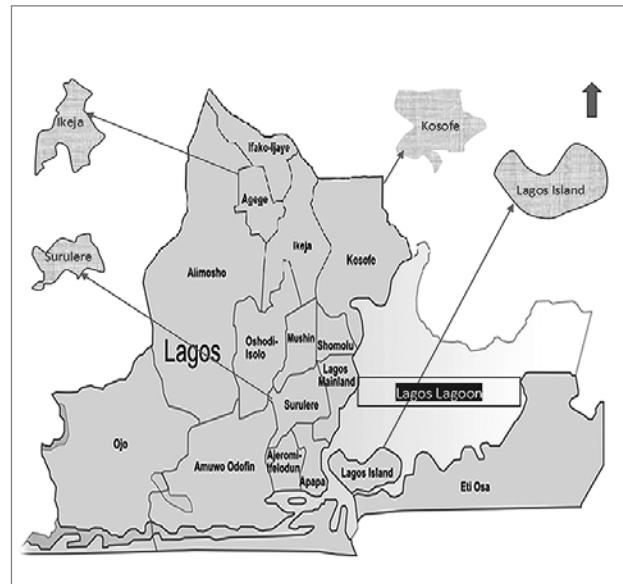

Figure 1: Map of Lagos, showing the location of the LGAs of Ikeja, Kosofe, Lagos Island, and Surulere, selected for the study (source: Lagos State Ministry of Physical Planning and Urban Development, 2021).

2.2   Research design, population, and variables

This study is based on a cross-sectional survey research design, which involved observation of the selected study sample or a cross-section of the study population at the same point in time. It was adopted in this study due to the research objectives and the fact that similar studies on this subject (e.g., Dipeolu et al., 2020; Nisbet et al., 2020) also used a cross-sectional survey design. The research population comprised residents of four selected LGAs: Ikeja, Kosofe, Lagos Island, and Surulere. To ensure that the participants selected for the survey represent the characteristics of the research population and that a valid scientific method was used in doing so, Turner's (2003) formula, presented in Equation 1, was used to calculate the sample size for the research. This formula allows accurate determination of confidence and significance levels, margin of error, and other key parameters that may not be possible in other methods.

$$n = \frac{(Z_\alpha)^2 r(1-r) fk}{phe^2}$$

In this formula, n denotes the sample size, Z_α is the critical value of the normal distribution as obtained in the table of standard normal distribution at the 95% confidence level, which is 1.96, r stands for an estimate of the proportion of the expected participants, which was fixed at 50%, f denotes the design effect, which is 4, and k is the non-response rate, estimated as 20%, $p = 0.03 \times 18 = 0.54$, and represents the

proportion of the total research population considered by the target population and upon which the parameter r was calculated. A key assumption here is the value of 0.03 for each year of age represented by the target population and h, which is the average household size per family, generally taken to be six persons per household in most developing economies. Further, e denotes the margin of error (which is 0.05) or level of precision, set at 5% of r. In substituting all the stated values in the formula in Equation 1, Equation 2 was obtained with an estimated minimum sample size of 380 participants.

$$n = \frac{(1.96^2 \times 0.5 \times 0.5 \times 4 \times 0.2)}{[0.54 \times 6 \times (0.05 \times 0.5)^2]} = 379.4 \approx 380$$

An estimated minimum of 380 participants were selected for investigation for each of the four LGAs. This means that a minimum of 1,520 participants were expected to participate in the survey in all four LGAs selected. However, twenty additional respondents, representing about 5% of the calculated number, were added to each of the four LGAs to make up for no responses. As a result, the minimum sample size for each LGA was four hundred respondents, which resulted in a minimum of 1,600 participants in the survey.

The data-gathering instrument used was a structured questionnaire designed by the researchers for this study. Variables included in the questionnaire were identified from the literature review. The questionnaire was divided into three parts in line with the research objectives. Part 1 contained questions on the participants' sociodemographic characteristics. Part 2 focused on the general characteristics of urban GI in the neighbourhoods investigated, and Part 3 was used to collect data on the specific aspects of urban GI with the most influence on self-perceived connectedness to nature by the participants. Although various scales are available for assessing human connectedness with nature (see Mayer & Frantz, 2004; Martin & Czellar, 2016), in Part 3 of the questionnaire, residents' perceived connectedness with nature was examined using fourteen items on the Connectedness to Nature Scale (CNS) previously developed by Mayer and Frantz (2004). This choice was informed by evidence in the literature (Dipeolu et al., 2019; Nisbet et al., 2019) showing that this scale has the capacity to assess individuals' experiences with nature and to describe human feelings and expressions when connected to nature.

The CNS was originally based on a five-point Likert-type scale (1 = strongly disagree to 5 = strongly agree). In this study, without changing the questions, it was modified to a seven-point rating scale (1 = Does not correspond at all, 4 = Corresponds moderately, 7 = Corresponds exactly). It is important to mention that the fourteen items were used in

research on connectedness with nature with a coefficient of reliability 0.86 in a previous study in Hong Kong by Sobko et al. (2018). However, in this study, Cronbach's alpha for the CNS returned a coefficient of reliability of 0.74, which is higher than the recommended minimum value of 0.60. Using this ordinal scale, the participants were asked to indicate the extent to which each of the fourteen statements used to assess connectedness to nature corresponds to their experiences and feelings. To enhance the validity of the findings of this research, the questionnaire used was pre-tested in another LGA outside the study area, and those results helped in restructuring some of the questions asked.

2.3 Data collection and analysis

The lists and maps of the existing Enumeration Areas (EAs) in Lagos State sourced from the National Population Commission (NPC) office in Lagos showed that there were a total of seventeen EAs in the study area, comprising three EAs in Ikeja, five EAs each in Kosofe and Surulere, and four EAs in Lagos Island. The participants in the survey were selected based on predetermined sampling intervals (SIs) obtained by dividing the number of houses available in each of the seventeen enumeration areas (EAs) identified by the sample size. The result was four hundred persons for each of the EAs. The household heads (or adult representatives) were systematically sampled from the list of numbered houses in each EA until the total number of household heads targeted in each of the EAs was achieved. In each EA, the sampling began with the selection of the first house at the nodal point. Systematic selection of subsequent houses was based on the calculated sampling interval for each of the four selected LGAs. Copies of the questionnaire were administered and retrieved by hand from the participants between March and July 2017. A copy was given to each household to complete, and of the 1,600 copies of the questionnaire administered by the investigators and field assistants, 1,560 copies retrieved were found to have been correctly completed by the respondents, representing a high response rate of 97.5%.

Two basic types of analyses were performed in this study. The first was simple descriptive analysis used to calculate the frequency and percentage distributions of the sociodemographic profiles of the participants and the mean scores (MSs) of the general characteristics of urban GI and the CNS as rated by all 1,560 respondents together. The second type of analysis performed was categorical regression analysis. This was used to examine how the perceived quality of GI has influenced residents' self-perceived connectedness to nature in the neighbourhoods. In the regression analysis, the mean value for CNS was the criterion variable, and the independent variables were

Table 1: Residents' perception of general characteristics of GI in the study area.

Characteristics of GI	Mean	SD
There is small quantity of green areas in this residential environment.	3.57	1.26
We are experiencing fast depletion of many green areas in this environment.	3.47	1.28
We have at least one garden or park where people interact in this neighbourhood.	3.28	1.27
This neighbourhood has green areas for residents' relaxation needs.	3.10	1.33
There are no parks in this neighbourhood where children can freely play.	2.82	1.40
The majority of green spaces in this area are close to the residents.	2.68	1.26
This neighbourhood has well-equipped green areas.	2.54	1.27
Residents usually enjoy the services of parks located in other neighbourhoods in this city.	2.53	1.29
This neighbourhood has green areas that are in good condition.	2.46	1.24
This neighbourhood has adequate green areas.	2.05	1.11

Table 2: Residents' self-perceived connectedness to nature in Lagos.

Influence of GI on residents' self-perceived connectedness to nature	Mean	SD	Rating
Makes me position myself as a top member in the hierarchy of nature.	5.51	1.61	1st
Helps me to recognize the intelligence of other living organisms.	5.50	1.32	2nd
Helps me understand how my actions affect nature and vice versa.	5.50	1.32	3rd
Helps me think about life and see myself as part of a larger cycle of living organisms.	5.48	1.36	4th
Enhances my feeling and understanding that I belong to the Earth and vice versa.	5.47	1.36	5th
Makes me identify with nature as a community I belong to.	5.47	1.33	6th
Helps me feel I am part of the web of life.	5.45	1.37	7th
Makes me feel part of the natural world, just like a tree is part of a forest.	5.40	1.44	8th
Helps me feel that all life on Earth, also nonhuman, shares a common life force.	5.36	1.43	9th
Helps me feel that my personal welfare is as important as the natural world's welfare.	5.35	1.55	10th
Enhances the feeling of a sense of oneness with the nature around me.	5.31	1.48	11th
Enhances the feeling of kinship with animals and plants.	5.21	1.55	12th
Reduces the feeling of being disconnected from nature.	5.16	1.69	13th
Reduces poor self-esteem and makes me feel important.	4.89	1.87	14th

the mean values for each of the ten items describing GI quality in the survey. Categorical regression analysis was used in lieu of other types of regression because the dataset mainly consists of ordinal data, and Shrestha (2009) recommended categorical regression analysis for its optimal scaling feature in dealing with this type of dataset. The results are presented in Section 3 of this article mainly using tables.

In line with ethical requirements, the questionnaire instrument used had an introductory section explaining the purpose of the research, the voluntary nature of participation, and how informed consent would be obtained from each participant. This section was also used to inform the participants that the information provided would be treated with the highest level of anonymity and that participation in the survey posed no kind of harm or risk to them.

3 Results

3.1 Participants' perceived quality of GI in Lagos

The participants' sociodemographic data revealed that 58.6% were males and 41.4% females, and most (85.8%) of them were between 30 and 49 years old. It was also observed that a majority (57.4%) of the respondents were married, with 88.8% of them having a household size of two or more. In addition, 62.1% of the respondents had a tertiary education, and a very high proportion were employed in various sectors of the Nigerian economy. The results generally show that a good number of the participants are literate and were able to provide valid answers to the questions in the research instrument with little or no supervision.

Table 3: Coefficients of the regression analysis of the influence of GI on residents' connectedness to nature.

Characteristics of green infrastructure in the neighbourhoods	Standardized coefficients				
	β	SE	df	F	p
There are enough green areas in this environment	0.087	0.119	2	0.526	0.591
This neighbourhood has green areas for residents' relaxation	0.177	0.057	3	9.595	0.000*
Residents in this neighbourhood usually access parks in other city neighbourhoods	0.023	0.092	1	0.066	0.798
There are very few green areas in my neighbourhood	−0.082	0.060	2	1.869	0.155
Parks for children to play freely are lacking in this neighbourhood	−0.059	0.057	2	1.053	0.349
This neighbourhood has at least a garden or park for residents' recreation	−0.110	0.085	1	1.686	0.194
The condition of the green areas in this environment is good	0.302	0.060	2	25.543	0.000*
In this neighbourhood many green areas are continuously depleted	0.092	0.054	2	2.957	0.052
The green areas in this neighbourhood are well-equipped	0.085	0.095	3	0.799	0.494
Most green facilities in this residential area are close to the public	−0.145	0.113	2	1.646	0.193

Note: Dependent variable = mean score of connectedness to nature scale;*significant predictors

The descriptive statistics of the participants' perception of the general characteristics of GI in the study area indicate that the mean scores for the ten items of GI quality investigated ranged from 2.05 ± 1.11 to 3.57 ± 1.26 (Table 1). This means that there are variations in the assessment of the characteristics of urban GI among the respondents in the survey.

The results show that a majority of the participants agreed that there was at least a park or garden where residents can relax and interact with one another in their neighbourhoods, and that the quantity of green spaces in the neighbourhoods was small. In contrast, the participants strongly disagreed that their neighbourhoods lacked parks where children can freely play, the majority of green areas in their neighbourhood were close to residents, and there were well-equipped green spaces in their neighbourhoods.

3.2 Residents' self-perceived connectedness to nature in Lagos

The results of the descriptive analysis of the fourteen items used to investigate residents' self-perceived connectedness to nature revealed that the mean scores ranged from 4.89 ± 1.87 to 5.51 ± 1.61 (Table 2). The results indicate that the participants felt that all the statements on connectedness to nature ranked from first to thirteenth positions in Table 2 corresponded significantly with the influence of GI on them, and that they thought the influence of GI on reducing poor self-esteem and making them feel important just like the grass on the ground or the birds in the trees moderately corresponded with their experience. These results suggest that GI has a positive influence on participants' feeling of connectedness to nature.

3.3 The influence of GI on residents' self-perceived connectedness to nature

The regression model used in this study produced $F (329.881, 1230.119) = 20.636$, $p < 0.000$, and $R^2 = 0.211$, and these indicate that around 21% of the variance in the influence of GI characteristics on residents' self-perceived connectedness to nature was accounted for in this research. The p-values also revealed that only two of the ten characteristics of urban GI investigated – existence of green areas in the neighbourhood for residents' relaxation ($p = 0.000$) and the condition of green areas in the neighbourhood ($p = 0.000$) – are significant predictors of residents' perceived influence of GI on connectedness to nature in this study (Table 3). These mean that they are the only two aspects of GI that explained residents' perceived connectedness to nature in this research.

The beta (β)-coefficients also show that conditions of green areas in this neighbourhood being good (β = 0.302) has a higher influence on residents' self-perceived connectedness to nature than the existence of green areas for relaxation in the neighbourhoods (β = 0.177; Table 3).

4 Discussion

This study investigated the influence of GI on residents' self-perceived connectedness to nature in selected neighbourhoods in Lagos, Nigeria. From the results it was observed that *the residents generally agreed that* green gardens, parks, and other green spaces where residents can recreate and interact were available in their neighbourhoods. However, they felt that the quantity and quality of GI in the neighbourhoods were

inadequate due to the large-scale conversion of green spaces to buildings and other physical infrastructure. This suggests that they have poor access to urban greenery, which could have implications for their self-perceived connectedness to nature. This result was expected and can be explained based on the finding by previous authors (Irwin & Bockstael, 2007; Haase et al., 2014; Obi et al., 2021) that there was large-scale loss of vegetation and green areas in cities of various countries, including Nigeria.

The results also revealed that, in spite of the relatively small quantity and poor quality of GI in the neighbourhoods, the residents felt that the available stock of GI has some level of positive influence on their perceived connectedness to nature. In fact, the data in Table 2 show that the participants were in agreement that access to GI offers them several benefits, including recognition of the contribution of other living organisms on Earth, having the feeling of being part of the web of life and belonging to a community of nature, and having a sense of oneness with nature and belonging to the Earth and its environment. These findings are on the one hand similar to those of previous studies (White et al., 2017; Hoyle et al., 2019) on the role of GI in reinforcing the connection between people as social beings and nature. On the other hand, these benefits of being connected to nature identified in this study further reinforce the feelings of people as not just dwellers and modifiers, but as an integral part of the environment.

Furthermore, the study revealed that the presence of GI in the neighbourhoods has also helped reduce the feeling of low self-esteem among residents and has increased their sense of community and feeling of importance in the urban environment. These findings provide support for previous research (Martin & Czellar, 2016; Hoyle et al., 2019), which identified these as some of the indices for measuring human connectedness to nature and its nexus with good quality of life and wellbeing. They also suggest that these positive contributions of GI to connectedness to nature as reported by this study are capable of helping the urban population see the environment as a life-support system (Stern, 2000), develop a positive perception of life (Zelenski & Nisbet, 2014), maintain calmness and joy (Cramm & Nieboer, 2015), improve mental health (Mitchell & Popham, 2008), and experience positive health outcomes (Allen & Balfour, 2014; Hartig et al., 2014). It can be inferred that the presence of GI in residential neighbourhoods has contributed positively to residents' self-perceived health outcomes and sense of value and oneness with the urban built environment. Apart from helping enhance the quality of life, these can foster pro-environmental behaviour among urban residents, as claimed by other authors (Soga & Gaston, 2016; Richardson et al., 2020).

It was also found that, of the ten aspects of GI investigated, only two ("the condition of green areas in the neighbourhood is good" and "existence of green areas for relaxation in the neighbourhoods") appeared to have a significant influence on residents' connectedness to nature. These seem to support previous studies (Martin & Czellar, 2016; Richardson et al., 2019) regarding the strong link between GI and the connection between people and nature. Notably, the identification of "the condition of green areas in the neighbourhood is good" as one the features of GI with a significant influence on residents' self-perceived connectedness to nature can be explained by evidence in the literature (Madureira et al., 2018) showing that cleanliness, adequate facilities, and regular maintenance are the key determinants of the condition of and residents' visits to GI sites in Portuguese cities. It can also be linked to the findings by Samimi and Shahhosseini (2020) in Tabriz, Iran, that tall evergreen plants and flowers, which also describe the condition of GI, were among the factors that influenced visits to GI sites by the residents of this city. It can be inferred from this study that the level of maintenance of GI is an influential factor in residents' perception of connectedness to nature in urban areas.

Similarly, the result regarding the "existence of green areas for relaxation in the neighbourhoods" as the other component of urban GI that influenced residents' self-perceived connectedness to nature is also consistent with the findings by Shan (2014) and Hoyle et al. (2019) that parks, grass, sport fields, street trees, and other natural elements have consistently been attractive and acceptable spaces where people meet, interact, and associate with one another in cities. It also seems to be in line with the findings by Samuelsson et al. (2020) indicating that locating GI closer to where people live provides them with the opportunity to engage in activities that can help reduce stress, especially during unusual periods, such as a pandemic (e.g., COVID-19), when people need to engage in much-needed recreation close to their homes without violating laws on restriction of movement (Hanzl, 2020). Therefore, appropriate location and accessibility to various forms of GI that encourage relaxation and recreation can have a significant influence on residents' self-perceived connectedness to nature in urban environments.

5 Conclusion

This study investigated the influence of GI on residents' connectedness to nature in selected residential neighbourhoods in Lagos, Nigeria. Three distinctive conclusions were derived from the findings. The first conclusion is that the study participants perceived the existing GI in Lagos to be small in

quantity and of low quality. This suggests that the residents were dissatisfied with the quantity and quality of the GI in their neighbourhoods and were not enjoying the full benefits associated with GI in the urban environments. Hence, there is a need to improve the provision of and access to green spaces and other GI in Lagos with priority attention given to neighbourhoods where it is conspicuously absent or in short supply. The second conclusion is that, in spite of the perceived small quantity and low quality of the existing GI, the residents felt that the available GI has a positive influence on all aspects of self-perceived connectedness to nature. This implies that the provision of more and high-quality green spaces, parks, and other forms of GI will further enhance residents' self-perceived connectedness to nature. The last, but not least important, conclusion is that the two attributes of GI with the most significant positive influence on residents' perceived connectedness to nature are "the condition of green areas" and "existence of green areas for relaxation in the neighbourhoods." The implication of this is that having high-quality, adequately maintained, and well-equipped GI would make green areas such as parks and gardens attractive and appealing to the people that use them. These will encourage them to walk, relax, recreate, and have close contact with natural elements, leading to an improved feeling of connectedness to nature in urban residential neighbourhoods. It is therefore suggested that city planners and managers should give priority to these aspects in future planning and development of GI. In view of the methodological limitations of this research, future studies might consider using mixed methods to reveal other GI characteristics influencing self-perceived connectedness with nature among the urban population in Nigeria and beyond.

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Are EU policies for brownfield redevelopment sufficient? A case study of Alpine industrial landscapes in the context of small and medium-sized towns

Small and medium-sized industrial towns in the Alpine area are often peripheral and degraded. These areas have also experienced declines in population and business opportunities as well as substantial environmental remediation costs, and they have undergone complex transformations. This research investigates what options towns with Alpine industrial brownfields have for redevelopment, what support is offered by the European Union, and how much development potential is fully valorized in this way. The evaluation was undertaken using four case studies of peripheral regions in four Alpine countries: Austria, France, Italy, and Slovenia. The results reveal that brownfields are not sufficiently covered by current EU policies, and that financial incentives are spread among several resources and, consequently, are difficult to absorb. In addition, the regions in question do not possess the required knowledge or capacity (both individually and collectively) to obtain the funds needed to turn their ideas into successful redevelopment stories.

Keywords: small and medium-sized towns, brownfield redevelopment, Alpine regions, policy analysis, EU policies

1   Introduction

Forty years after the start of redevelopment initiatives in the UK (Parkinson, 1988; Oc & Tiesdell, 1991), the redevelopment of brownfield sites has become part of the agenda of Alpine regions (Modica, 2019). Although EU Interreg programmes have supported transnational projects that have addressed multidimensional (financial, design, regional development, and environmental) redevelopment issues (Wirth et al., 2012; Harfst, 2015; Görmar & Harfst, 2019; Bole et al., 2020; Marot & Harfst, 2020), this topic has only recently been broached by Alpine stakeholders. Whereas the urban centres of the Alps, such as Turin, Munich, and Innsbruck, have already recognized brownfields as a political and development issue, peripheral Alpine areas have placed more emphasis on tackling demographic changes, creating innovation, and protecting their natural resources (Dax, 2008; Steinicke et al., 2012; Humer & Palma, 2013; Bausch et al., 2014; Marot et al., 2015; Chilla et al., 2019). Given this, only a few Alpine-focused studies have discussed the management of land-use challenges, including brownfield sites (Cortinovis & Geneletti, 2018; Cotic, 2019; Modica, 2019; Migliorati & Veronesi, 2020).

Brownfield sites are a multifaceted phenomenon and can be defined as any land or premises that have previously been used or developed even if they are currently not fully in use. A brownfield site can be vacant, derelict, or contaminated, and it may have a negative impact on the surrounding environment (Alker et al., 2000; Bergatt Jackson et al., 2006). This is especially true of sites that were previously used for industrial purposes (Walker, 2000; Jigoria-Oprea & Popa, 2017). The definitions of brownfield sites are numerous, and we highlight two. One is the statement by Yount (2003, p. 25), who argued that the brownfield "conceptual definition should contain terms that are unambiguous, and should allow policy makers and practitioners wide latitude in addressing the dual nature of brownfields as both environmental and economic problems." The second definition, claimed to be best known among European countries, derives from the CABERNET project (2006): brownfields are "sites that have been affected by the former uses of the site and surrounding land; are derelict and underused; may have real or perceived contamination problems; are mainly in developed urban areas; and require intervention to bring them back to beneficial use." In previous years, many projects funded by the EU – such as CLARINET (2002), CABERNET (2006), COBRAMAN (2009), TIMBRE (2012) and– have addressed the issue of brownfields and policy approaches to rehabilitating them. Thornton et al. (2007) and Vanheusden (2009) dedicated their research to EU and national initiatives, and they identified the different types of incentives and approaches that member states use to address the issue. As the

most important initiatives, national programmes were mentioned, including the German efforts described by the Umwelt Bundesamt (Stallmann, 2014) and those of France (EUGRIS, 2021), which date back to the 1980s. Several countries, such as Slovenia (Lampič et al., 2017; Cotič & Kerbler, 2019; Cotič & Azman Momirski, 2020) and the Czech Republic (Skrabal, 2020), have put substantial effort into preparing registries and categorizing brownfields.

Brownfields were put on the EU policy agenda through the European Spatial Development Perspective (1999), and they were subsequently integrated into the cohesion policy via the territorial cohesion concept. The older Territorial Agenda (2011) recognized brownfields as potential regions that could be valorized via development initiatives. The newer Territorial Agenda 2030 (Territorial agenda, 2020) mentions areas in economic transformation and industrial transition as the ones that possess various development potentials and challenges. Furthermore, the agenda argues a place-based development and utilization of the development potentials and challenges that EU regions have. Harfst et al. (2020) also defined brownfields as endogenous potentials of small- and medium-sized towns (or SMESTOs, an acronym adopted within the ESPON project The Role of Small and Medium-Sized Towns; ESPON, 2006). First, they classified brownfields as natural potentials, and then they argued that the most important factors that limited their redevelopment were human capacities and a lack of knowhow with regard to how to benefit from the European context.

This article reflects on brownfield redevelopment efforts in an Alpine context. The Alpine governance context has been evaluated in several articles (Sielker, 2016; Teston & Bramanti, 2018) as being complex and diverse. The governance constant in Alpine areas is the Alpine Space Programme which, strategically and financially, supports transnational projects. The topic of brownfields in the 2014–2020 programme period fell under priority 3 (Liveable Alpine Space), specific objective 1 (Sustainably Valorise Alpine Space Cultural and Natural Heritage). In our research, brownfields were more specifically defined as Alpine industrial landscapes (AILs). With this term we describe a framework of research that was adopted by the project partners of the trAILs project of the INTERREG programme Alpine Space (2018–2021), which comprehensively investigated the transformation and redevelopment potentials of former industrial SMESTOs of Alpine regions from five points of view: spatial, social, economic, environmental, and policy assessment (Weilacher et al., 2021). To explain the Alpine context of the redevelopment initiatives, we address the following research aims and questions. First, current EU policies were screened for how well they steer and facilitate the redevelopment of the industrial landscape. Second, the

Table 1: Reviewed documents divided by sectors under investigation.

Sector	Policy
General	Europe 2020 Strategy (2010)
	DG REGIO: Strategic Plan 2016–2020 (European Commission, 2016b)
Planning (spatial, regional)	Territorial Agenda of the European Union 2020 (2011)
	Leipzig Charter on Sustainable European Cities (2007)
	Alpine Convention from 1991 (2011)
	EU Strategy for Alpine Region – EUSALP (2014)
	EUSALP: Action Group 2 (AG 2) (European Commission, 2015)
	European Landscape Convention (2000)
Industry	DG GROW: Strategic Plan 2016–2020 (European Commission, 2016a)
	A Renewed EU Industrial Policy Strategy (2017)
	Strategies for Resilient, Inclusive and Sustainable Growth (2017)
Biodiversity	EU Biodiversity Strategy to 2020 (2011)
Energy	Energy 2020 (2011)
Culture	A New European Agenda for Culture (European Commission, 2018b)
	2019 Annual Work Programme of the "Creative Europe" Programme (European Commission, 2018a)
Agriculture	Common Agricultural Policy (European Commission, 1999)

national governance frameworks that regions need to rely on were inspected. Third, we investigated what EU financial instruments and incentives are well known in these areas, and how many of them are valorized as a supporting instrument for brownfield redevelopment, and to what extent. In addressing these points, we elaborate on the situation in four case study areas: Eisenerz in Styria (Austria), L'Argentière-la-Bessée in the Hautes-Alpes department (France), Borgo San Dalmazzo in the province of Cuneo (Italy), and Tržič in the Upper Carniola region (Slovenia). The analysis had a bottom-up approach, and so the case study areas were selected by the regional development agencies based on overall project criteria: a town or a wider area with a large degraded industrial landscape in need of redevelopment.

The answers to the research questions are provided in the following order: in the first part of this article we introduce the methodology, in the second the EU context, and in the third the results of the case studies. The discussion focuses on the lessons learned in both Alpine and wider contexts, and the factors that have impeded the redevelopment of Alpine industrial landscapes in the selected areas.

2   Method

The methodological work undertaken for this research was structured in three phases. First, desktop research was undertaken on Alpine industrial landscapes in the context of SMES-TOs at a supranational level (i.e., the EU). Second, a more detailed analysis was performed on the case studies, whereby their current national, regional, and local policies were analysed and a questionnaire was formulated that made it possible to garner more in-depth knowledge about the actors and initiatives at the regional and local levels. Four representatives of the regional development agencies responded to the questionnaire (Krošelj et al., 2020).

The policy analysis of the EU's framework focused on reviewing documents pertaining to EU and macro-regional policies that target AILs, and performing the ground analysis. In the first step we collected documents from policy sectors relevant to AILs' redevelopment. We categorized the documents based on their content context: the general sector (containing umbrella documents such as constitutions and comprehensive strategic plans, including spatial and regional planning), industry, biodiversity, energy, culture, and agriculture. We also considered tourism among relevant sectors; however, no common EU policy was found that exclusively targets the tourism sector.

In the first phase we reviewed sixteen documents, of which twelve were strategy documents, three were treaties, and one was an annual work programme from the culture policy sector (see Table 1). A majority of the documents reviewed were adopted for the period from 2011 to 2020 and correlated with the EU budget period (2014–2020) as well as the Europe 2020 Strategy (2010). Older documents, such as the Alpine Convention (2011) and the European Landscape Convention (2000), were included because they either covered the right

geographical area or were the most relevant document on landscapes. The majority of documents reviewed were endorsed by the European Commission and were prepared by various directorates-general or adopted by the Council of Europe. Given that the next funding period (2021–2027) was approaching at the time of the research, we also briefly looked into more current policies, and especially the newest cohesion policy. This was important to note given that it will be the instrument to support territorial development in the SMESTOs. However, these policies were not investigated in the same way as the previously mentioned policies because no finalized versions were available at the time of the research.

The ground analysis was based on the results of a keyword search for each selected policy document. The keywords were selected based on the most common and frequently used associations (i.e., terms and descriptions) for the AILs, as discussed and approved by the experts on the project team. The keywords used were *reactivation*, *reconversion*, *redevelopment*, *regeneration*, *remediation*, *restoration*, *reuse*, *brownfield*, *degradation*, *derelict*, *fallow land*, *marginal*, *pollution*, *polluted*, *vacant*, *wasteland*, *Alps*, *Alpine*, *cultural heritage*, *industry*, *industrial*, *landscape*, *mountain*, *periphery*, *peripheral*, *rural*, and *small and medium-sized towns*.

The data for the case studies were analysed via the regional reports that the project partners had prepared, and the questionnaires focused on the performance of the regions with regard to EU initiatives. The regional reports supplied information about the governmental frameworks of the regions: the administrative levels, governance, planning or other instruments, the regional and local actors' networks, and the levels of their interest and influence in decision-making processes for brownfield redevelopment. The questionnaires provided more targeted and detailed data input, including personal experiences of utilizing EU incentives for brownfield redevelopment, and the current challenges that the regions are facing in this regard. For comparison of the regions, the data were based on the NUTS 2 and NUTS 3 territorial unit classification.

3   Regions in question

The regions investigated are smaller regions located near larger national capitals (see Figure 1). Their first common characteristic is their industrial past; however, their economic sectors were not always the same. In Austria, the economy relies on the manufacturing sector transitioning toward the service sector, whereas in France and Slovenia the economies are shifting from industry toward tourism. The unemployment rate is highest in Styria (Austria), whereas the Upper Carniola region (Slovenia)

has the lowest registered unemployment rate. What all the regions have in common are transformation problems, and especially the out-migration of young people to larger urban agglomerations.

3.1   Eisenerz and the former Münichtal blast furnace area in Austria

Today the town's economic prospects are shifting from the industrial sector toward tourism. In the recent past, the brownfield site of the Münichtal blast furnace area saw many investors and inspiring development plans and ideas (such as the Re-design Eisenerz concept from 2006). However, only minor changes have been implemented. The main concerns pertaining to the site are the extent of pollution in the surrounding environment, the burden of rehabilitation costs, and the unexplored opportunities that the site has to offer potential investors (Pechhacker & Tiffner, 2019).

3.2   L'Argentière-la-Bessée and the former Péchiney factory in France

Similar to Eisenerz, the town has shifted its economic focus toward sports tourism. The industrial brownfield is located on the embankment of the Durance River in L'Argentière, and it has already been successfully redeveloped due to recent depollution of the site carried out by the public intercommunal cooperation agency. Depollution of such industrial areas is a common practice in France, and it is supported through national incentives. Even though these programmes fund only the initial phases of rehabilitation, they do relieve some financial burden from future investors. Today the site's buildings and open space are mainly used by local SMEs. Many of them specialize in industrial and tourism services and products (Kleitz, 2019).

3.3   Borgo San Dalmazzo and the Italcementi factory in Italy

The town's economy is exploring new development opportunities in gastronomy and the potential to redevelop the current cement plant site for tourism purposes. Currently, the cement factory is still partially in operation. Due to a lack of policy documents that address industrial brownfields, local officials and investors lack the support required to redevelop the area. Moreover, the local governance bodies do not have any instruments or power by which to prevent the current industrial uses of the area from polluting the environment (Abluton & Curato, 2019).
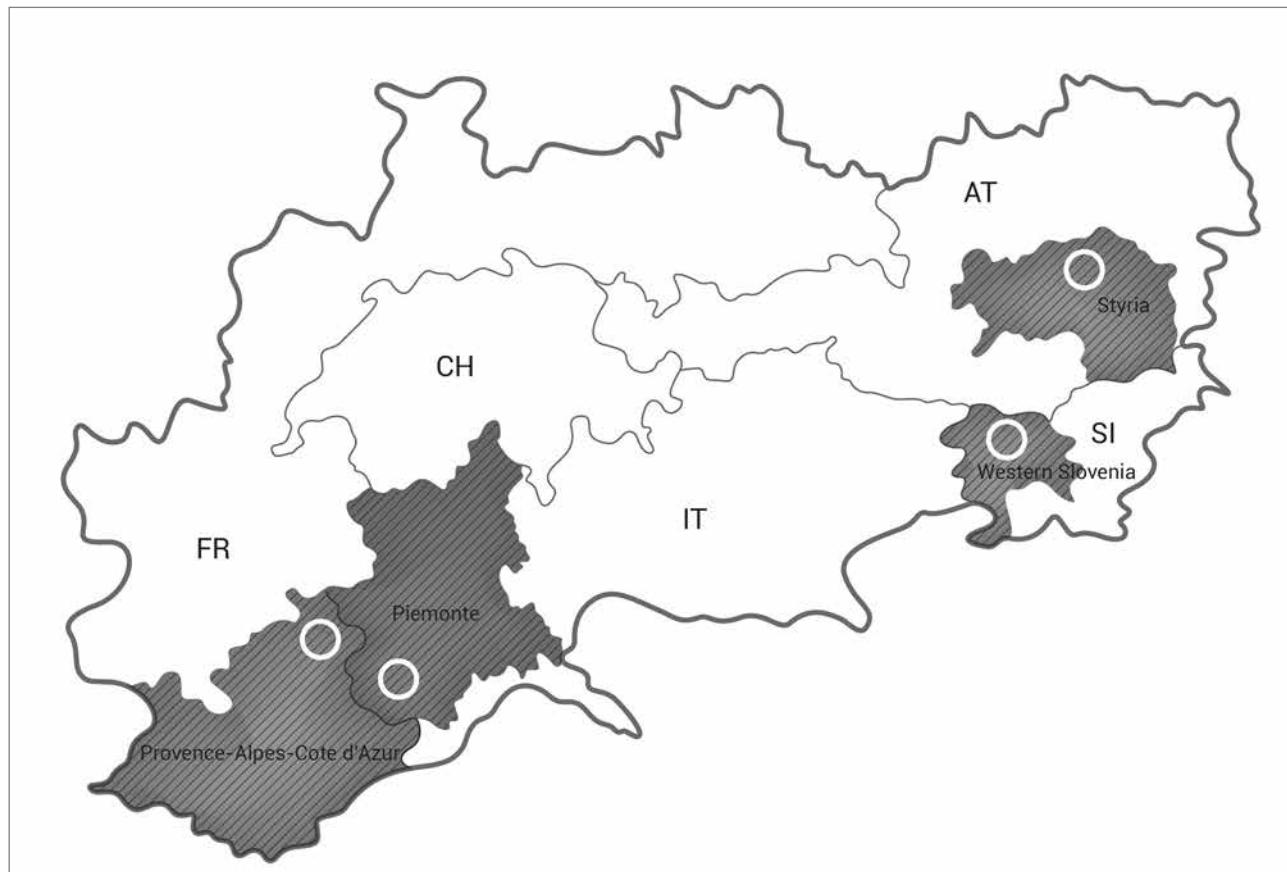
Figure 1: Case study regions by the NUTS 2 classification. White circles mark the small and medium-sized towns in the case study (illustration: Manca Krošelj).

3.4 Tržič and the former cotton spinning and weaving mill factory, Slovenia

In the recent past, the brownfields of the former cotton spinning and weaving mill factory in Tržič underwent a successful transformation, with increasingly more areas of the factory being used by local SMEs. This is an example of good practice. The ownership of the site is shared by the municipality and a private investor. The main concern of the local officials is the future opportunities that the site has to offer for sustainable cultural and sports tourism in the area. With regard to this, many interventions have already been undertaken; a successful public-private partnership has resulted in endorsed spatial plans that foresee a mixed use of residential, commercial, and general interest services at the site. Currently the main concern with regard to the site is the uncertainty of future investments in the area because the regional level of government does not have the autonomy to strategically support brownfield redevelopment in the long term (Branković et al., 2019).

4 Results of the policy analysis

4.1 Coverage of brownfields at the EU level

This article draws attention to the need to prove the legitimacy of AILs by exploring the coverage of commonly attributed associations of AILs (i.e., the keywords) at the supranational level of government. It does so by case-proving which policy documents, and thus sectors, most support the territorial development of SMESTOs in the alpine regions. Based on the keyword search and analysis, the most comprehensive support comes from the planning sector; specifically, the Territorial Agenda of the European Union 2020 (2011). Analysis at the supranational level shows not only a variety and combination of keyword occurrences, but also proves that AILs are a multifaceted subject addressed by many disciplines.

At the EU level, we were interested in three policy elements: recognition of brownfields and their integration into current policy documents; the suitability of the policy objectives for the redevelopment of brownfields; and the variety of financial incentives targeting brownfields.

4.2 Acknowledging the brownfields at the EU policy level

Surprisingly, the keywords *brownfield*, *redevelopment*, and *remediation* did not show up in any of the policy documents reviewed. Although some of the keywords may have been too specific, the term *brownfield* is well known today and is frequently used across Europe for describing degraded areas that face multiple development challenges (Alker et al., 2000). In a similar manner, the term *small and medium-sized towns*, the geographic scope of our research, was only mentioned in the Territorial Agenda of the European Union 2020 (2011) as areas lagging behind that need special attention for development. When looking at the positive or negative connotation of the keywords, policies generally do not recognize any in relation to brownfields. The group of keywords without a connotation only assumes either a morphological characteristic or a certain land use (such as industry, rural, or landscape). Almost none of the keywords with a negative connotation appeared in our search, the exception being the keyword *degradation*, which was a frequently used term in many sectors. The presence of this word in policies would mean that brownfields were recognized as a challenge or a problem. We found a high occurrence of the term *industry*. This was expected because it is common for brownfields in industrial regions to either be sites of former industrial activity or present redevelopment opportunities, especially in the context of the "reindustrialization" of the EU, the introduction of regional development concepts such as "Industry 4.0", and the promotion of industrial culture.

The most comprehensive combination of the keywords was found in the Territorial Agenda of the European Union 2020 (2011). This document introduces guidelines for spatial development and is thus, by default, more integrative, whereas the Common Agricultural Policy (European Commission, 1999) comprehensively addresses many aspects of rural and regional development.

4.3 Identification of the policy objectives

In total, the documents reviewed contained ninety-two policy objectives and measures, out of which thirty targeted AILs. The majority were identified in the policies of the planning and industry sector. The general, culture, biodiversity, and agriculture sectors each had a few objectives and measures targeting AILs, whereas the fewest objectives and measures were found in energy policies. Under the planning sector we identified objectives that targeted the cohesive and sustainable development of the (Alpine) region in the most integrative manner; by enhancing biodiversity, improving territorial integration, and connecting ecological, landscape, and cultural values of

the regions. Furthermore, they promoted sustainable growth by enhancing innovation and stimulating the transformation of the industrial structure to create jobs, empower people, and promote businesses.

The exception was the spatial planning sector because it did not have any legally binding policies or implications at the supranational level. The EU has no action plans assigned in this area. As a result, the guidelines and declarations that have been published mainly in the Territorial Agenda of the EU (2011), Alpine Convention (2011), and EU Strategy for Alpine Region (2014) were understood as objectives and measures that address AILs. With regard to other sectors reviewed (biodiversity, culture, agriculture, and energy), there were no objectives and measures beyond those already mentioned that targeted AILs directly.

4.4 Review of available financial incentives

A variety of incentives are offered by various policy levels and EU funds to aid AIL brownfield transformation. Moreover, the purpose of the EU budget is to implement policies and address challenges by allocating resources for investment and thereby provide long-term planning stability across the EU's territory. Two-thirds of the managing structure of the EU budget is managed in shared partnership with member states through the European Structural and Investment Funds (ESIF). In the context of AILs, we reviewed the accessibility and usefulness of these incentives to support brownfield redevelopment.

The funds most relevant for AILs were the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), and the European Agricultural Fund for Rural Development (EARDF). The greatest number of incentives for AILs were offered by the Cohesion Policy, which covers environmental, economic, social, and other aspects of territorial redevelopment. The most versatile fund in terms of supporting AILs was the INTERREG programme of the ERDF. The financial instrument supports the cooperation of EU regions across borders through project funding programmes. However, it only supports the development of soft solutions, such as studies, networking platforms, databases, action plans and so on, and in most cases there is a demand for a certain rate of co-financing. On top of that, the competition for funds is high, with the applicants – a consortium of partners – expected to be experienced and to have the skills and motivation necessary to successfully apply for the funds without reimbursement.

We can conclude that, at the EU policy level, the redevelopment of brownfields is not a major policy topic, nor is there a

Table 2: Reasons for not utilizing an individual incentive.

Incentive	Challenges and barriers
Competitiveness of Enterprises and SMEs (COSME)	Lack of connections to potential project partner (FR)
	Overly demanding application (FR)
	Lack of human capacity (FR)
	Lack of expertise (SI)
Connecting Europe Facility (CEF)	Lack of connections to potential project partner (FR, IT)
	Overly demanding application (FR)
	Lack of human capacity (FR)
	Lack of expertise (IT)
Creative Europe (CE)	Lack of connections to potential project partner (AT, FR, SI)
	Overly demanding application (FR)
	Lack of human capacity (FR)
	Lack of expertise (SI)
	Co-financing rate is too low (IT)
HORIZON 2020 (H2020)	Lack of connections to potential project partner (AT, FR, IT, SI)
	Overly demanding application (FR, IT, SI)
	Lack of human capacity (FR, IT)
	Lack of expertise (SI, IT)
	Limited nature of financial incentive (hard vs. soft outputs) (IT, SI)
	Very high competition (low probability of success) (IT)
	Abundance of administrative work in implementation phase (SI)
LEADER	Lack of connections to potential project partner (FR)
	Overly demanding application (FR)
	Lack of human capacity (FR)
LIFE	Lack of connections to potential project partner (FR, SI)
	Overly demanding application (FR, SI)
	Lack of human capacity (FR)
	Lack of expertise (SI)
	Pre-financing requirement (SI)
	Co-financing rate is too low (IT)
	Abundance of administrative work in implementation phase (SI)

Note: AT = Austria, FR = France, IT = Italy, SI = Slovenia.

targeted policy focusing solely on this policy matter. However, indirectly, there are several funding options for brownfield initiatives, but they are spread among EU programmes and policies; for example, the Just Transition Fund for mining regions in Europe through the DG REGIO, and the integrated territorial investments for sustainable urban renewal through the Cohesion Policy.

5   Comparison of the four case studies

Each of the selected towns has a rich industrial history. In addition to the most visible impacts of brownfields, there are often invisible legacies, such as pollution, and the deconstruction costs are such that the private sector will not take economic responsibility. As a result, SMESTOs are left to deal with expensive redevelopment on their own. As a consequence of globalization, the lack of jobs results in the SMESTOs suffering from brain drain, making them unfavourable to either invest in or live in. How do these specific areas of SMESTOs benefit from EU policies?

By examining the four quite different administrative frameworks, we learned about the workings of governing structures, actors, and implementation tools, and also identified which organizations or persons had the most power and/or resources to steer brownfield redevelopment. Through this, we gained essential knowledge by which to understand how current transformation practises are implemented at lower levels of governance. The results showed that the four regional development agencies had different levels of experience in dealing

with brownfields. Furthermore, the results showed that the most influential actors for brownfield redevelopment were administrative bodies and institutions at regional or local levels, the owners of sites, and the local inhabitants directly affected by the given brownfield.

The policy analysis of the four case studies showed similar results as the policy analysis carried out at the supranational level. None of the countries had reported or knew of any kind of national policy that was targeted specifically toward industrial brownfields or other degraded areas. However, strategic documents addressing the issue at the regional and local levels did exist, such as regional development programmes, the LEADER/CLLD strategies, and spatial plans at the municipal level. More support for brownfield redevelopment can be expected through the incentives introduced by the EU Cohesion Policy, such as the INTERREG programme, COSME, and Creative Europe. This greater level of support is also evident through the recent actions supported by the programmes: utilizing the industrial cultural heritage concept as a tourism economic driver of areas (Austria, Slovenia, Italy, and France), the activation of brownfields via endogenous resources in partnership with local inhabitants (Slovenia), and innovative approaches to re-naturalize areas through the implantation of pilot investments (Slovenia; Abluton & Curato, 2019; Branković et al., 2019; Kleitz, 2019; Pechhacker & Tiffner, 2019).

The results of the questionnaire showed that utilization of EU financial incentives for brownfield development from 2014 to 2020 was low, with the exception of the Slovenian case study. With the exception of the LEADER/CLLD and INTERREG programmes, the prevailing funding support for reported brownfield development projects were national incentives. The analysis of the questionnaire also identified several factors that limited the absorption of the funds: 1) a lack of connections to potential project partners, 2) overly demanding application forms, 3) a lack of human capacity, and 4) a lack of expertise among the potential project partners. To overcome these barriers, the EU or national institutions should offer more support to improve the knowledge of actors at the regional level (Table 2).

From the selection of useful and planned incentives and the challenges listed, it is concluded that the number and variety of instruments is not as great a concern as the ability of regional development agencies to utilize them. Regional development agencies are burdened by overly demanding applications, and most of them lack sufficient expertise or do not have the partnership network or human capacity necessary to successfully compete for the incentives.

6 Discussion

Based on our assumptions, the supranational level provides a general framework and guidance for member states to follow and integrate into their domestic policies. However, the availability of incentives does not ensure the ability of potential beneficiaries to utilize them. According to our analysis of supranational level policies between 2014 and 2020, no strategic policies directly targeted brownfield redevelopment. A similar situation was observed with regard to domestic policies at national levels. Regarding regional and local levels, individual examples of strategic documents were traced, mostly in documents such as regional development programmes, LEADER/CLLD strategies, and municipal spatial plans.

We found that support introduced by the EU, such as INTERREG programmes, COSME, HORIZON 2020, and others, is useful not only for brownfield redevelopment but also for all SMESTOs because it provides a more integrative and comprehensive approach. Even though this does not directly address brownfields, the regions and their SMESTOs have multifaceted transformation issues that should be strategically targeted to ensure sustainable solutions for brownfields. Specific priorities of dedicated resources for a variety of transformation objectives such as protecting the environment, supporting cultural heritage, developing sustainable energy resources, and improving territorial cohesion are welcomed.

Although several options to support transformations are available, the findings of the questionnaire showed that they are only moderately used. The use of incentives depends on how familiar and experienced the regional development agencies are in utilizing them. Factors inhibiting the absorption of the incentives include a lack of connections to potential project partners, overly demanding application forms, lack of human capacity, and a lack of expertise among partners. These factors should be addressed by the EU or by national institutions, and support should be offered to improve the knowledge of the actors dealing with these issues.

Due to the actual improvements in the New Cohesion Policy in favour of regions and better implementation prospects, we expect to see changes in the future. Moreover, and because the New Cohesion Policy reduced the number of thematic objectives from eleven to five, we expect there to be more targeted instruments. This may in turn make it possible for regions to focus on only one instrument – that which is most suited to their capacities, range of expertise, and experience. At the same time, national support should put more effort into supporting regions' transformations, not only by monitoring and

Table 3: More recent policies addressing brownfield redevelopment

Policy	Example of objectives directly targeting brownfield redevelopment
Territorial Agenda 2030 (2020)	Healthy environment: better ecological livelihoods, climate-neutral and resilient towns, cities, and regions. The policy objective foresees building resilient communities, local and regional strategies in response to climate change, and loss of biodiversity, including brownfield redevelopment.
The New Leipzig Charter (2020)	Empowering cities to transform: strengthening urban governance to ensure the common good – active and strategic land policy and land use planning. The policy objective foresees resilient and long-term development by prioritizing the renewal and complex regeneration of urban areas, including brownfield redevelopment.
EU Biodiversity Strategy for 2030 (2020)	EU Nature Restoration Plan: restoring ecosystems across land and sea – addressing land take and restoring soil ecosystems. The policy acknowledges the need to fortify efforts to rehabilitate polluted brownfields. To address these challenges, the policy updated the EU Soil Thematic Strategy for 2030 and will adopt concrete measures in the new EU Soil Strategy for 2030, a key deliverable of the policy.

preparing brownfield registries, as in the case of Slovenia, but also through providing targeted incentives. As can be seen in the more recent policies, there have been efforts to provide a more targeted approach to addressing brownfield redevelopment, as evidenced in Table 3. All three policies specifically target urban (re)development or land management issues. The Territorial Agenda 2030 (2020) mentions brownfield redevelopment, whereas the New Leipzig Charter (2020) prioritizes the renewal of brownfields and strengthening the land policy and land-use planning. The EU Biodiversity Strategy for 2030 (2020) focuses on soil sealing and land take to prevent the build-up of agricultural land, and instead promotes brownfield redevelopment.

Regarding administrative frameworks, the context of countries being "Alpine" does not distinguish them from any other regions because the national or supra-regional level was not recognized a being as important as the local level. The prevailing administrative bodies that have the major role in steering brownfield redevelopment are the municipalities. According to territorial governing approaches, countries mostly rely on bottom-up approaches, but they still depend on financial and regulatory support from the state. The French national level is the only case in which a national level implements a cross-administrative mechanism by the Ministry for Ecological Transition and the Ministry for Higher Education, Research, and Innovation to directly support rehabilitation of brownfields, via the so-called French Agency for Ecological Transition (ADEME, 2021), which not only develops knowledge but grants the actual financial support to brownfield redevelopment projects for former industrial areas.

A greater role was expected from the regional development agencies in Slovenia because they are the bodies in charge of preparing regional development programmes: the seven-year strategy plan for absorbing EU funds. Although it should be individual municipalities' priority to improve their knowledge, skills, and capacities to successfully tackle brownfields, financial incentives should be more user-friendly for the municipalities, especially because transformation activities demand a vast amount of financial resources and a large non-refundable financial input to prepare land for further development. With regard to the nature of solutions imposed on brownfields, current transformation practices in the pilot regions primarily address only "soft" solutions, such as action plans, studies, cooperation platforms, databases, action plans, and so on. We assume that the reasons for these unsustainable practices are the limitations of the seven-year perspective of the EU agenda, which forces regional development agencies to cyclically seek resources for short-term or "soft" solutions, and the fact that brownfields are recognized as opportunities for the development of AILs.

7　Conclusion

The policy analysis of this research has shown that brownfields, and Alpine industrial landscapes in particular, are currently dispersed among several sectors as a policy topic. To overcome this dispersion, also recognized as one of the reasons for lower absorption of funds, a specialized strategy led by the EU should be prepared and accompanied by financial measures. Currently, the transformation focus is very limited and comprises energy efficiency and energy innovation interventions, but it neglects softer approaches, such as tourism. The case studies, although they are all located in the Alpine area, are in different phases of their transformations and, more importantly, they possess different capacities to react pro-actively to transformation opportunities, especially with regard to their abilities to absorb funds.

What all the regions with SMESTOs have in common is the EU framework, whereby some are more resourceful than others. Measured by both incentives absorbed and levels of knowledge, we argue that the approach to redevelopment is mostly bottom-up and is not supported by the national level.

However, all of them are aware of the importance of the EU policy level, and especially the triggers presented in EU funds. For better absorption of these funds, all of them agree that they should be centrally managed and not dispersed between programmes and funds because this makes it difficult for regions with lower capacities to monitor, comprehend, and absorb. The lower capacity of the regions presented might be connected to the context of the SMESTOs, although the Slovenian case suggests that this is more dependent on local initiatives and the institutions in charge. The INTERREG programme was identified as the most useful among the EU initiatives, although the weakness of its funds, supporting only soft measures and not infrastructure construction, was also exposed. According to CABERNET (2006), public financial support should not be granted in the same way to all brownfields, but should instead be differentiated based on three models. Cases classified as "model A" are so-called "self-developing" sites: those that are very likely to be redeveloped in no time by private investors due to their relatively low regeneration costs and high land values.

This research also provides some generalized guidelines that may be applicable for other similar locations in the Alps. First, the study can empower awareness of the need for and added value of transformation processes. Second, it can allow better foresight into the specifics of this long-term and continuing path full of uncertainties, and thus encourage stakeholders that it is worth following it. Third, national and regional stakeholders should be inspired to invest more time and effort into building human capacity to support redevelopment. There is also a need to ensure that they obtain expert knowledge, develop potential project partner networks, and invest in building strong communities with clear visions for future brownfield redevelopment. Through doing so, it may become more possible to predict more sustainable spatial changes within the Alpine area, with improvements such as locally initiated and place-based transformations: reusing built-up areas, preventing greenfield soil sealing, improving the visual image of areas, and so on.

All in all, we argue that regions' needs for financial support and knowhow for transformation should be acknowledged and recognized by the EU. A more targeted, place-based approach is needed. The approach whereby the EU speculates that all regions comprehend what is available is also proved by our case studies not to be working and should be amended accordingly to allow a more targeted approach that will bring with it, *ceteris paribus*, more satisfying results.

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Are EU policies for brownfield redevelopment sufficient? A case study of Alpine industrial landscapes ...

103

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A spatial analysis of public transport accessibility in Slovenia

This article analyses the accessibility of public transport in Slovenia in terms of the proximity of stops and trip frequency. By combining the Central Population Register with data on the provision of public transport services, geographic information systems were used to calculate the share of the population living within a 500 and 1,000 m radius from stops with a basic number of daily trips. The spatial differences in accessibility were analysed, and the population density data were utilized to identify the main gaps in provision. Moreover, the location of newer settlements was analysed in terms of their integration into the existing public transport network. It was determined that public transport accessibility in the country is relatively adequate within a 1,000 m radius; however, within a 500 m radius, it is adequate only in most urban areas. There are extensive areas without adequate accessibility, which is a consequence of low population density particularly in the countryside, whereas larger gaps in provision appear in suburban areas that have grown outside public transport corridors. The 2004–2020 study period revealed a trend of lower demographic growth than the Slovenian average in areas with the best public transport accessibility, whereas the areas of the greatest population growth and most intense residential construction have been only partly located in the vicinity of the public transport network. This confirms the hypothesis that current strategic spatial planning documents are not followed consistently, and that transport and spatial planning are insufficiently integrated.

Keywords: accessibility, mobility, public transport, settlement, spatial planning

1　Introduction

Public transport is an important element of the transport system, allowing mobility without the use of one's own vehicle, especially where distances are too great for active mobility. Since the nineteenth century, public transport has boosted city growth by increasing the capacity of transport systems and the ensuing intensity of the circulation of people, goods, and capital (Uršič, 2006) while preventing the social exclusion of people living in the countryside during accelerated modernization (Gabrovec et al., 2021). With the upsurge of private transport in the developed world (including Slovenia) in the second half of the twentieth century, public transport gradually began falling out of favour. Nowadays, a suitable quality and accessibility of public transport are major goals of sustainable transport, environmental, and spatial policies. This is because public transport offers numerous social, economic, and environmental benefits, such as reducing social exclusion, increasing employment rates, and reducing greenhouse gas emissions (e.g., Nazari Adli & Donovan, 2018; Saif et al., 2018).

Public transport accessibility is a very broad term with no clear consensus on its definition (Lei & Church, 2010). It is often regarded as one of the fundamental dimensions for measuring the quality of public transport; for example, in accessibility standards (Gabrovec et al., 2009). Several accessibility models have been developed that are used to analyse the situation for planning purposes or to verify the efficiency of measures. One of the most commonly analysed accessibility elements is the proximity to public transport stops from various starting points (Saghapour et al., 2016), and the more seldom analysed – but no less important – aspects are the time and cost of the journey, the number of possible destinations, users' needs, and similar (for an overview, see Lei & Church, 2010; Mavoa et al., 2012; Saghapour et al., 2016; Malekzadeh & Chung, 2020). Regardless of the different approaches, there is a general consensus that such measurements are useful or even crucial (Mavoa et al., 2012) because good public transport accessibility positively affects its use (e.g., Chowdhury et al., 2016; Curtis et al., 2019). The choice of transport mode is also predicated on many other factors, such as individual (psychological and situational), spatial (population and activity/service density), infrastructural (network of roads, routes, or stops), temporal (travel speed and duration), and political factors (transport policies; e.g., Collins & Chambers, 2005; Buehler, 2011). Similar criteria can be applied to public transport (Beirão & Sarsfield Cabral, 2007).

Malekzadeh and Chung (2020) carried out an extensive overview of the approaches to evaluating the accessibility of public transport and categorized them into three groups:

1. System accessibility models. These are mostly limited to measuring the accessibility of public transport stops, mostly within a walkable distance. This approach has significant drawbacks because it focuses on measuring the availability of the system and not necessarily accessibility for using it; however, it is relatively easy to use and therefore quite popular. In addition to opportunities, more complex models of this kind also consider travel demand (e.g., the spatial distribution of the population and employment), whereas on the demand side waiting time and frequency, often of various types of transit (Wu & Hine, 2003), are considered in addition to the distance to the stops. Instead of a specific radius, more advanced, gravity-based system accessibility approaches consider the distance decay function (Gutiérrez et al., 2011) because the attractiveness of individual locations does not diminish linearly with increasing distance (Taylor, 1975). The authors also place utility-based models in this group, based on the benefits that different user groups have with the proximity of individual stops (e.g., Rastogi & Krishna Rao, 2003).

2. System-facilitated accessibility models consider both the accessibility of the transport system and passengers' options for reaching the desired destination by taking into account the travel time or cost of the selected route. The most advanced models of this kind utilize the cumulative approach; for example, by determining the number of residents with access to a certain location within a specified time or cost (Liu & Zhu, 2004). Their drawback is that they do not consider the significance of the options from the viewpoint of the individual resident or passenger.

3. Integral accessibility or access-to-destination models measure the overall access to a number of possible destinations, indicating how easy it is for people to travel with public transport. The development of geographic information systems has led to the development of numerous models; that is, tools whose features allow their further categorization into distance-based, gravity-based, and utility-based access-to-destination models. This approach best highlights travellers' difficulties accessing various destinations (Fransen et al., 2015), but it is the most complex to utilize and interpret; in addition, the aggregated results reduce model accuracy.

By far the most extensively used studies in Slovenia fall into the first group; that is, system accessibility models. One such example is the PTAL (Public Transport Accessibility Level) index calculation for Ljubljana, which considered the proximity of bus stops, the average waiting time, and trip frequency (Tiran et al., 2014, 2015). This group also includes studies on the accessibility of bus stops in Slovenia (Gabrovec & Bole, 2006), public transport accessibility in the Ljubljana Urban Region (Gabrovec & Razpotnik Visković, 2012, 2018), an analysis of the accessibility of public services with interurban

passenger transport (Zavodnik Lamovšek et al., 2010), a comparison of the accessibility of city bus stops in Ljubljana using various methods (Kozina, 2010), and a multistage model to calculate uniform bus stop service areas (Paliska et al., 2006). The public transport accessibility index has also been used for evaluating regional development (Pečar, 2020). Another study by Tiran et al. (2019) modelled walking accessibility to urban amenities in Ljubljana based on the concept of distance decay, whereby it surveyed the residents of Ljubljana on their perception of what a suitable walking distance is, including to public transport stops. Studies based on the other two approaches are rarer. They study accessibility to selected locations with public transit, and so they can be included in the system-facilitated models (Koblar et al., 2019; Koblar & Mladenovič, 2020; Koblar, 2021a, 2021b; Tiran et al., 2021).

The first comprehensive public transport accessibility study for Slovenia was performed by Gabrovec and Bole (2006), who considered both proximity to bus stops and trip frequency. They analysed interurban passenger transport and calculated the accessibility on different reference dates for a 500 and 1,000 m radius. They determined that the network of bus lines is adequately dispersed across Slovenia; over three-quarters of the population have adequate bus connections within a 1,000 m radius on weekdays during the school year, whereas the provision is significantly reduced or even unsatisfactory on other days. A different study performed in about the same timeframe determined that interurban passenger transport offers relatively satisfactory accessibility to public services, but that it is outperformed by car travel (Zavodnik Lamovšek et al., 2010). Another relevant study analysed the adequacy of the public transport network in the Ljubljana Urban Region in terms of dispersion of settlement and detected some gaps in the provision of public transport services (Gabrovec & Razpotnik Visković, 2012).

The settlement pattern relative to the public transport network in Slovenia is regulated in detail by the General Settlement Guidelines (Splošne smernice, 2013). These guidelines stipulate that planning and managing a wider urban area should consider the possibility of connecting to public transport, and that residential construction should be directed into denser areas where efficient and comfortable public transport can be provided. The guidelines for economical land use in urban areas place the most attention on areas with good accessibility and well-organized public transport. The guidelines summarize the current Spatial Development Strategy of Slovenia (Strategija prostorskega, 2004), which emphasizes well-connected and synchronized development of the transport and settlement networks along with building public infrastructure as one of the priorities. Public transport accessibility is also addressed in the General Guidelines for Sustainable Mobility (Demšar

Mitrovič, 2018), which stress that, in practice, large new residential construction projects do not have an alternative to cars, which can be overcome with accessibility standards. No document defines what a suitable distance from residential areas to public transport stops is. The Spatial Development Report (Fonda et al., 2016) and the latest draft of the Spatial Development Strategy (Strategija prostorskega, 2020) emphasize that the settlement pattern and the public transport network have not developed in synchronicity. This has also been concluded by some studies pointing to the spatial dispersion of activities in Slovenian cities and suburbs, increasing commuting and traffic flows, and the increasingly dispersed travel patterns that worsen the competitiveness of public transport (Rebernik, 2010). As was found to be the case in Ljubljana, modern high-rise housing developments are no longer tethered to public transport to the extent that they were in the past (Bole, 2004). Public transport accessibility across the country, especially in terms of settlement trends, has not been thoroughly analysed yet. It is reasonable to assume based on these reports and studies that current spatial planning documents are not followed consistently, and the integration of traffic and spatial planning is low.

This article analyses public transport accessibility in Slovenia in terms of proximity to stops and trip frequency. The analysis focuses on the accessibility of public transport stops to people's dwellings because these are the most important origin of travel. The following objectives were set:

- To analyse public transport accessibility across the country;
- To determine the adequacy of the public transport network in terms of the settlement pattern and identify the main gaps in the provision of public transport services; and
- To analyse contemporary settlement changes in the vicinity of public transport stops.

2 Methodology

The analysis was carried out using geographical information system tools utilizing population data at the level of individual house numbers and travel timetables of all kinds of available public transport in Slovenia.

2.1 Input data preparation

The population data for 2004 and 2020 were gathered at the house-number level (Centralni register, 2005/2021); to calculate the number of residents at an individual house number, the statistical definition of a usual residence at the time was followed. In the accessibility calculation for 2020, the case of a

person having both a permanent and temporary residence was resolved by using the temporary residence (section 3.1), and the temporary comparability in the settlement change analysis (section 3.2) led us to use only the permanent residence, not the temporary one. The Central Population Register was linked to the House Number Record for each of the years, which contains the geographic coordinates of buildings with house numbers (Geodetska uprava, 2005/2021).

The analysis focused on the days with the greatest traffic demand, and so the public timetable data with the locations of the public transport stops correspond to a typical workday during the school year in 2021. These were acquired from multiple sources: the first data source was the Ministry of Infrastructure, which uses the IJPP application to manage data on interurban passenger transport and rail timetables (IJPP aplikacija, 2022). The database also contains data on some city itineraries, but these data are not regularly updated, and so the only data on city travel itineraries used from this source were for public transport in Novo Mesto and Murska Sobota; the timetables for the public transport in other cities were obtained directly from the service providers. Some of the service providers did not enclose coordinates of the stops; in these cases, the coordinates were determined with field visits. Some municipalities, particularly those in Alpine areas, also offer public transport for tourists in the summer and/or winter season, but this does not operate on the typical workday set for our analysis. The analysis of settlement changes in terms of the public transport network between 2004 and 2020 considered stops with suitable or adequate accessibility (see section 2.2), and public transit data for 2021 were used to pinpoint the stops.

2.2 Determining the distance to stops and trip frequency

Studies on the accessibility of public transport usually use a distance that is still acceptable for daily walking to stops: the most commonly used and generally accepted distances are 400 m for bus stops and 800 m for rail transit, which correspond to five and ten minutes of walking, respectively (Saghapour et al., 2016). Travel habit studies indicate varying deviations from these distances: in some places (e.g., outside urban areas), these routes can also be longer (El-Geneidy et al., 2010). This led our analysis to set 500 m and 1,000 m distances: the former was mostly used to evaluate accessibility in urban areas and the latter in the countryside; the same radii were also used to determine gaps in the provision relative to the population density (see section 2.3).

When evaluating trip frequency, we modelled our study on that by Gabrovec and Bole (2006), distinguishing between

unsuitable, adequate, and suitable frequency. Stops with an adequate frequency have at least eight pairs of trips a day. This means a potential traveller has at least two to three trips in each direction during both the morning and afternoon peak times, as well as at least one trip outside peak times in the morning, afternoon, and evening. This kind of provision allows travellers to commute for work and school and partly for other purposes, but it cannot compete with personal transport. A suitable provision was determined to be one availability for at least twenty-three pairs of daily trips, constituting a half-hour interval during peak times and one-hour intervals outside them. This analysis summed up departures from all the stops of individual stations. If a station consisted of several modes of transport (interurban passenger transport, train, and city public transport) in the same location or the stops were less than 200 m (straight line) apart from one another, they were considered a single station and the departures of all the modes of transport from all the stops were tallied.

The distance from residences (house numbers) to the stops were calculated based on straight-line distance. We created a buffer area in a radius of 500 m around each point representing a house number; then we checked whether the buffer contained a station with a certain category of trip frequency. In cases where there were several such stations, we considered the one with the best frequency. The data on the station with the trip frequency were ascribed to an individual house number. The process was then repeated for the buffer area in a radius of 1,000 m.

2.3 Identifying gaps in provision

By cross-referencing the data on public transport stops and the calculated population density, we were able to pinpoint gaps in the provision. First, we determined densely and very densely populated areas. Densely populated areas were defined as house numbers with over 200 residents within a 500 m radius, and very densely populated areas were defined as those with over 1,000 people living within a 500 m radius around the house number. In densely populated areas, gaps in the public transport provision were defined as places where buildings are over 1,000 m from a public transport stop; in very densely populated areas, these are buildings that are over 500 m away (Gabrovec & Razpotnik Visković, 2012). The gaps were calculated in terms of the proximity to the nearest stop as well as to stops with an adequate trip frequency (at least eight pairs of trips a day). These data on density are directly transferrable to public transport planning: according to German recommendations, quality public transport should connect all areas where at least 200 people live in an influence area (Heußner et al., 2001, p. 12).

3 Results

3.1 Public transport accessibility in Slovenia

The results of the calculation for a 1,000 m proximity to public transport spots are reasonably encouraging. Only about a tenth of the population lives outside these areas, whereas over three-fifths have a stop with suitable accessibility within that distance. As expected, the results of the calculation for a 500 m proximity are somewhat poorer: the greatest differences occur in the share of residents that do not have a public transport stop within that distance – it jumps from about a tenth (8.3%) to just under a fourth (23.2%) – and in the share of residents with suitable accessibility, which falls from about two-thirds (61.8%) to under half (49.4%; Figure 1).

3.1.1 Spatial differences in accessibility

There are considerable differences in public transport accessibility within the country, especially in terms of the smaller, 500 m radius (Figure 2). Some municipalities have very good accessibility according to both the stop proximity criterion and the trip frequency criterion: these are mainly more densely populated municipalities with larger urban centres and some municipalities in their surrounding countryside, of which some also have their own city bus transport. The two largest city municipalities, Ljubljana and Maribor, along with Jesenice, lead here: over 90% of the population resides within a 500 m radius of a stop with suitable accessibility. Somewhat lesser, but still very good, accessibility was found in the municipalities of Kranj, Velenje, Škofja Loka, Murska Sobota, Trbovlje, and

Izola, as well as the smaller municipalities of Ruše, Mežica, Mengeš, Miklavž na Dravskem Polju, Naklo, and Šempeter–Vrtojba. Of the city municipalities, Krško and Ptuj stand out negatively due to the dispersed settlement pattern outside the city centres: only 27 and 36% of the residents live in areas with a suitable trip frequency within a 500 m radius, and the municipality of Slovenj Gradec, where a high (44%) share of residents that do not have a public transport stop in that proximity at all, is especially problematic.

The differences across the country are somewhat smaller considering the criterion of the 1,000 m distance, which is more suitable for municipalities with a smaller urban population. Among those municipalities, there are differences between those in which the vast majority of the population has a public transport stop with an adequate trip frequency (between eight and twenty-two pairs of trips per day) – including municipalities such as Ankaran, Odranci, Destrnik, Preddvor, Dobrovnik, and Središče ob Dravi – and between municipalities where the vast majority of the people have a guaranteed connection at that distance, but the trip frequency is inadequate (fewer than eight pairs of trips per day): many of these are located on the outskirts of the country; for example, in Prekmurje (Kobilje, Razkrižje, Šalovci, and Gornji Petrovci) and in the municipalities of Brda and Kostel. Another type of municipality has centrally located municipal centres within the main public transport corridors with a relatively large share of people with suitable accessibility (over two-thirds) on the one hand, whereas the scattered settlement in the countryside surrounding these centres mean that a large share of residents (over a third) live outside an adequate distance to stops on the other hand. This group includes most of the municipalities in
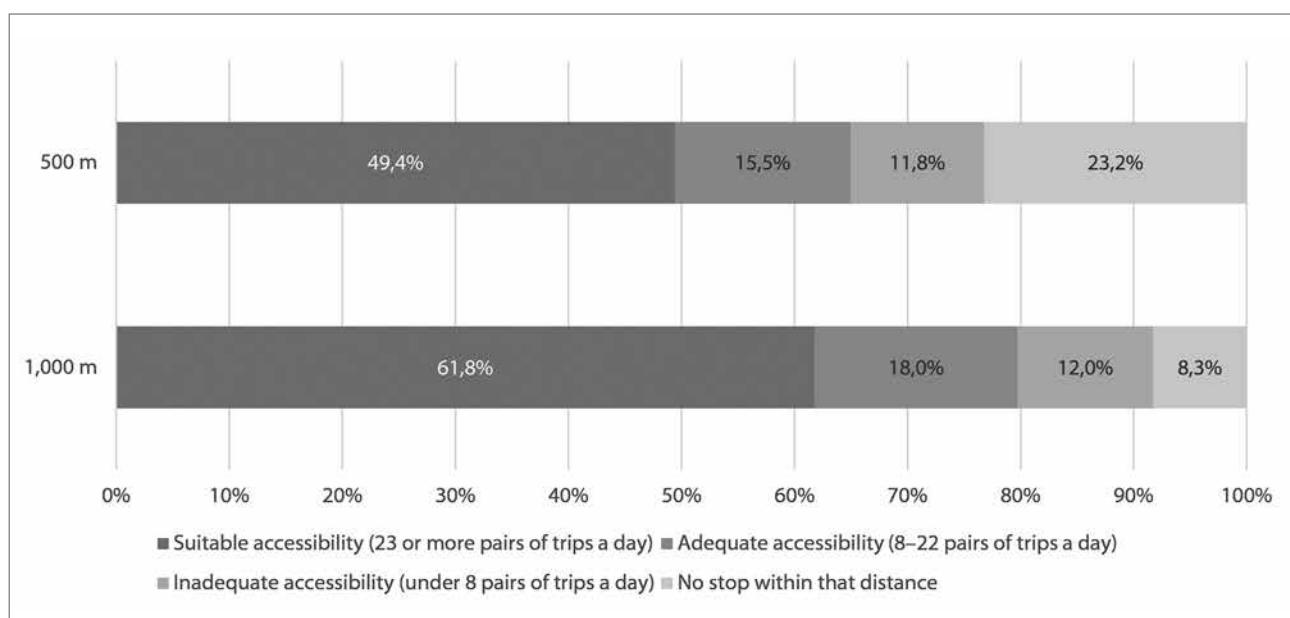

Figure 1: Public transport accessibility in Slovenia in 2020 within a 500 and 1,000 m radius in terms of trip frequency (illustration: Jernej Tiran).
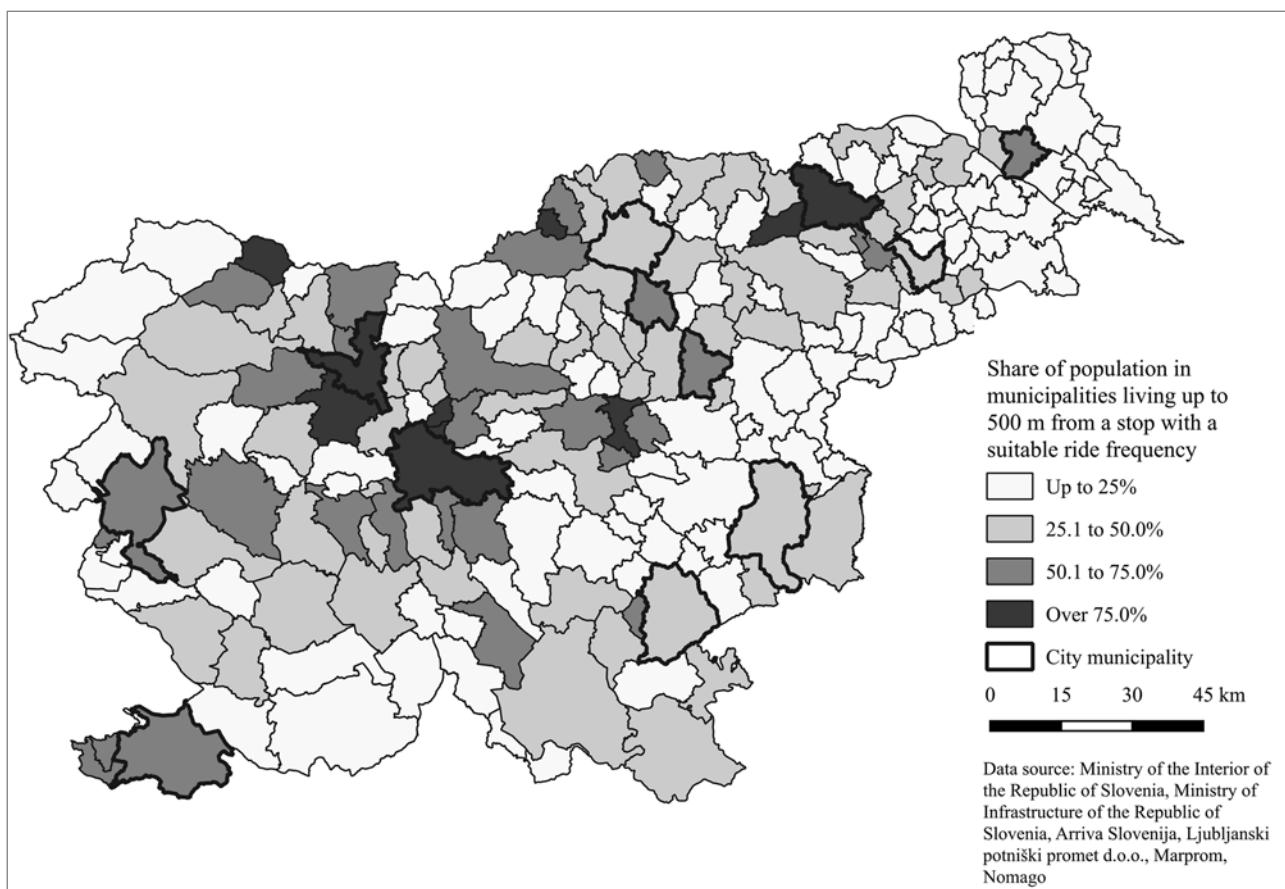
Figure 2: Share of residents per municipality living within a 500 m radius from a public transport stop with a suitable trip frequency (at least twenty-three trips a day) (illustration: Nika Razpotnik Visković).

Carinthia, as well as some municipalities in the Upper Savinja Valley (Mozirje and Rečica ob Savinji), and Ribnica.

There are also a reasonably large number of municipalities in which the major share of the population lives within a distance to public transport stops that is outside the still walkable 1,000 m radius (Figure 3). These include, for example, more remote municipalities south of Ljubljana, those in the Škofja Loka Hills, municipalities in a large share of Lower Carniola, the Sava Hills, the Kozje and Haloze regions, and the majority of Carinthia, where the share is somewhere between 30 and 47%. Considering the trip frequency criterion, the municipalities of Sodražica, Osilnica, and Bloke stand out expressly negatively, where not a single resident has available public transport frequency that would be at least adequate.

3.1.2 Gaps in provision

The absence of adequate proximity to a public transport stop is especially characteristic of sparsely populated areas, where setting up effective public transport is very challenging. To a lesser degree, the same is true for more densely populated areas where better public transport provision could reasonably be expected. In Slovenia, 33,556 people live in very densely populated areas that are over 500 m from the nearest public transport stop; this corresponds to 6.7% of the population that does not have a stop within 500 m. A number of such areas lie north of Ljubljana in the municipalities of Domžale, Mengeš, Komenda, and Trzin; these are mostly confined areas of newer, single-family houses that were built outside public transport corridors (Figure 4). If the calculation considers stops with at least adequate accessibility (eight or more pairs of trips a day), the number of residents in very densely populated areas without suitable accessibility jumps to 51,256 people. Some gaps in the provision were also located in city municipalities.

Altogether, 20,859 people live in densely populated areas that are over 1,000 m from the nearest public transport stop; this corresponds to 11.8% of the population that does not have a stop within 1 km. Many such areas encompass dense villages; for example, Bevke in the Ljubljana Marsh, Dolenja Vas and Dolenje Jezero near Cerknica, the string of settlements east of Ajdovščina running along the foot of the Trnovo Forest Hills (Gojače, Kamnje, Skrilje, and Lokavec), or periurbanized areas in the Ljubljana Urban Region (Golo Brdo and Kamnica).
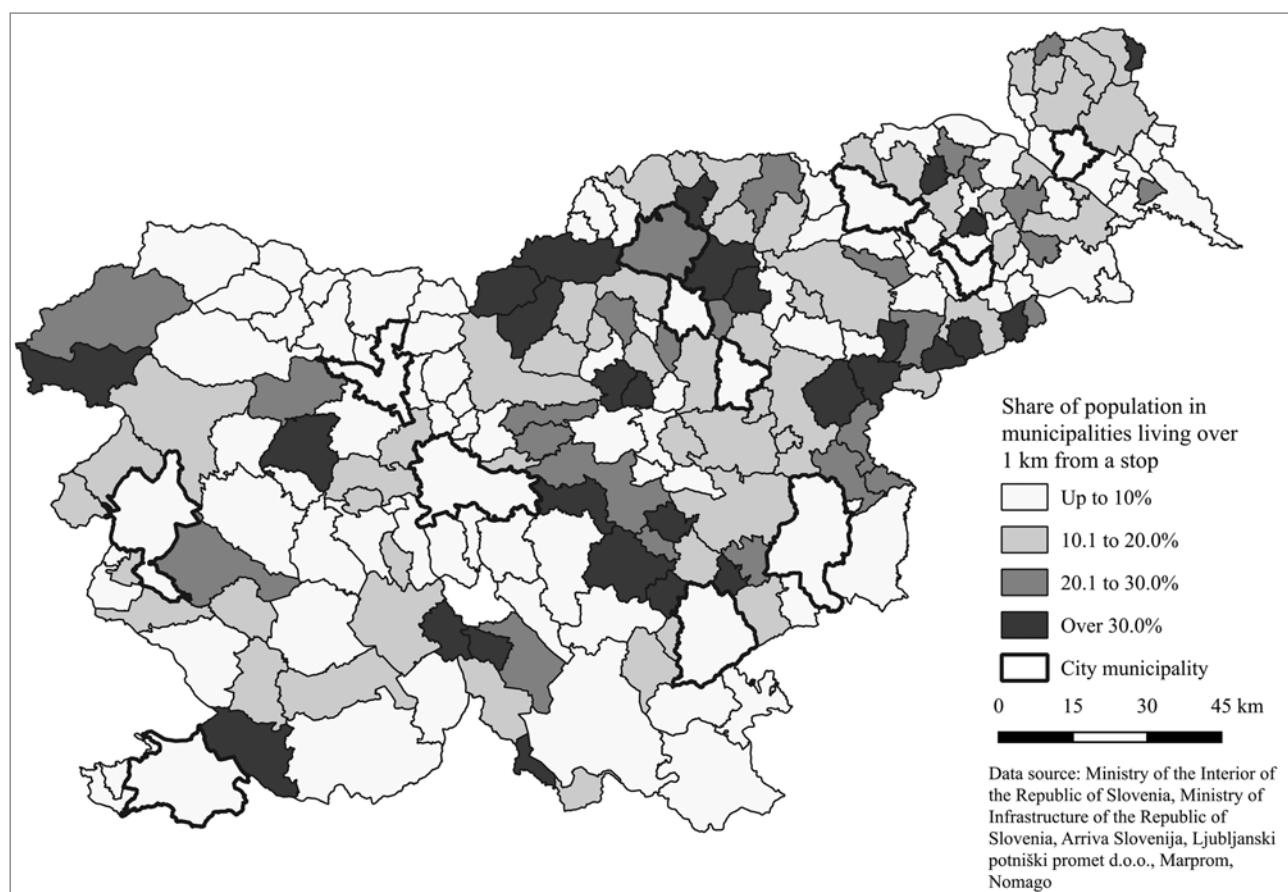
Figure 3: Share of population in municipalities living over 1 km from the nearest public transport stop (illustration: Nika Razpotnik Visković).
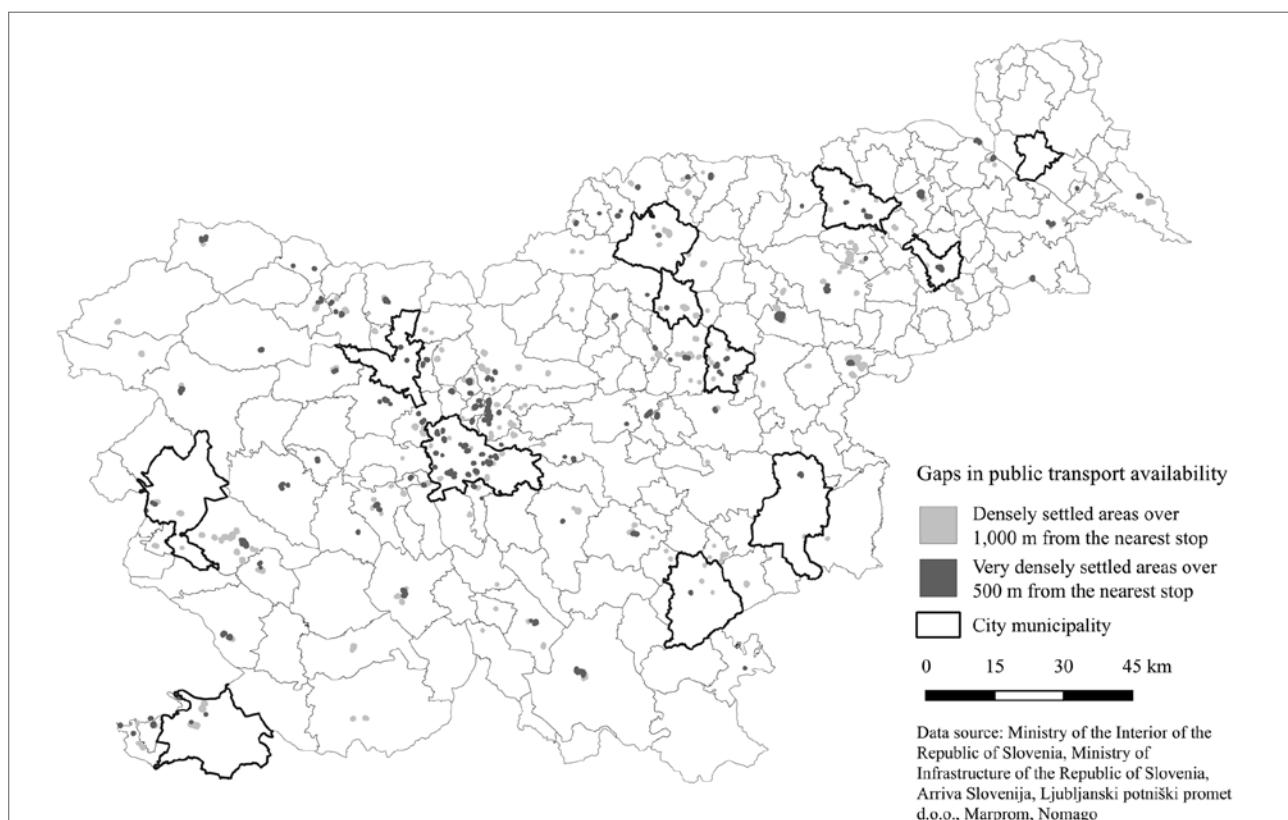

Figure 4: Gaps in public transport provision in Slovenia relative to population density (illustration: Nika Razpotnik Visković).

Table 1: Population changes in selected municipalities, 2004–2020.

Municipality	Absolute population growth	Absolute population growth in vicinity of stops (≥ 500 m)
Pivka	235	247
Benedikt	396	407
Trzin	168	231
Vransko	84	91
Cirkulane	6	15

Source: Central Population Register, 2005/2021.

Considering only stops with at least adequate accessibility, the number of residents rises drastically to 92,168. In some municipalities located outside the main public transport corridors, the share of these residents exceeds 50% (Bovec, Velika Polana, and Loški Potok) or even 80% of the total population in the municipality (e.g., Kobilje).

3.2 Analysis of settlement changes in the vicinity of public transport stops

Public transport accessibility is affected not only by the stop distribution and suitable trip frequency, but also by directing settlement into the vicinity of existing public transport infrastructure. Between 2004 and 2020, the population of Slovenia rose by 43,304 or 2.2%, whereby one hundred Slovenian municipalities recorded an increase in population, and 112 municipalities recorded a decrease (most of these are border and mountain municipalities).

The results indicate that, on average, settlement between 2004 and 2020 did not follow public transport infrastructure. In the period studied, the absolute number of people living within 500 m of a public transport stop with suitable or adequate accessibility (i.e., stops) rose by 0.4% (a difference of 5,183 people), whereas the relative share of the population in these areas dropped by 1.1% (from 64.8 to 63.7%). If the distance to the stop is increased to 1 km, 1.9% more people lived in those areas in 2020 than in 2004 (a difference of 29,351 people), whereas the relative population share dropped by 0.2%, from 79.0 to 78.8%. It is also noted that the share of people living further than 500 m from a public transport stop grew by 6.3% in that period (29,064 people) and by 4.7% for people living further than 1,000 m away (8,020 people). Settling in the vicinity of public transport stops therefore decreased at the national level during the period studied, with noticeable local differences that are explained in greater detail below.

The comparison of the share of the total population living within 500 m of stops for 2004 and 2020 indicates that it decreased in 141 municipalities (including all city municipalities) and increased in fifty-eight municipalities, whereas no change was recorded in thirteen municipalities; however, these are municipalities with no settlements near stops at all. The municipalities of Benedikt (11%) and Dol pri Ljubljani (5.8%) recorded gained shares of over 5% (Figure 5).

The comparison for the distance of 1 km indicates that the share of people living in this zone increased in ninety-one municipalities, decreased in 105 municipalities (including all city municipalities), and remained unchanged in sixteen municipalities. The largest share was again seen in the Municipality of Benedikt (7.7%), followed by Hodoš (6.6%), and Divača (5.1%; Figure 6).

3.2.1 Trends in municipalities with positive demographic growth

The first municipalities listed are those that directed population growth to areas near public transport stops. Considering the 500 m distance, there are five such municipalities: Trzin, Vransko, Pivka, Benedikt, and Cirkulane. The number of residents in areas near stops in all five municipalities increased by at least as much as the growth in the total absolute number of residents (Table 1). All five municipalities recorded above-average population growth compared to the national average, with the Municipality of Benedikt standing out significantly: it recorded 18% demographic growth between 2004 and 2020. If the distance to the stop is increased to 1 km, the number of municipalities recording the trend nearly triples (Figure 7). These cases involve either population growth in established settlement areas or new residential construction being appropriately located in the vicinity of stops, or a combination of both.

Of the ten municipalities with the greatest level of population growth, the first nine are in the Central Slovenia Region. In some, most of the population growth is in areas within 500 m of a public transport stop, whereas in others (Logatec, Ivančna Gorica, and Rače–Fram) that share is very modest and indicates that the focus of the settlement is shifting from the stops outward. At distances up to 1 km from the stop, the trend of orienting excess population is somewhat more favourable. In six municipalities, over 90% of the population growth is in areas under 1 km from public transport stops (Table 2).
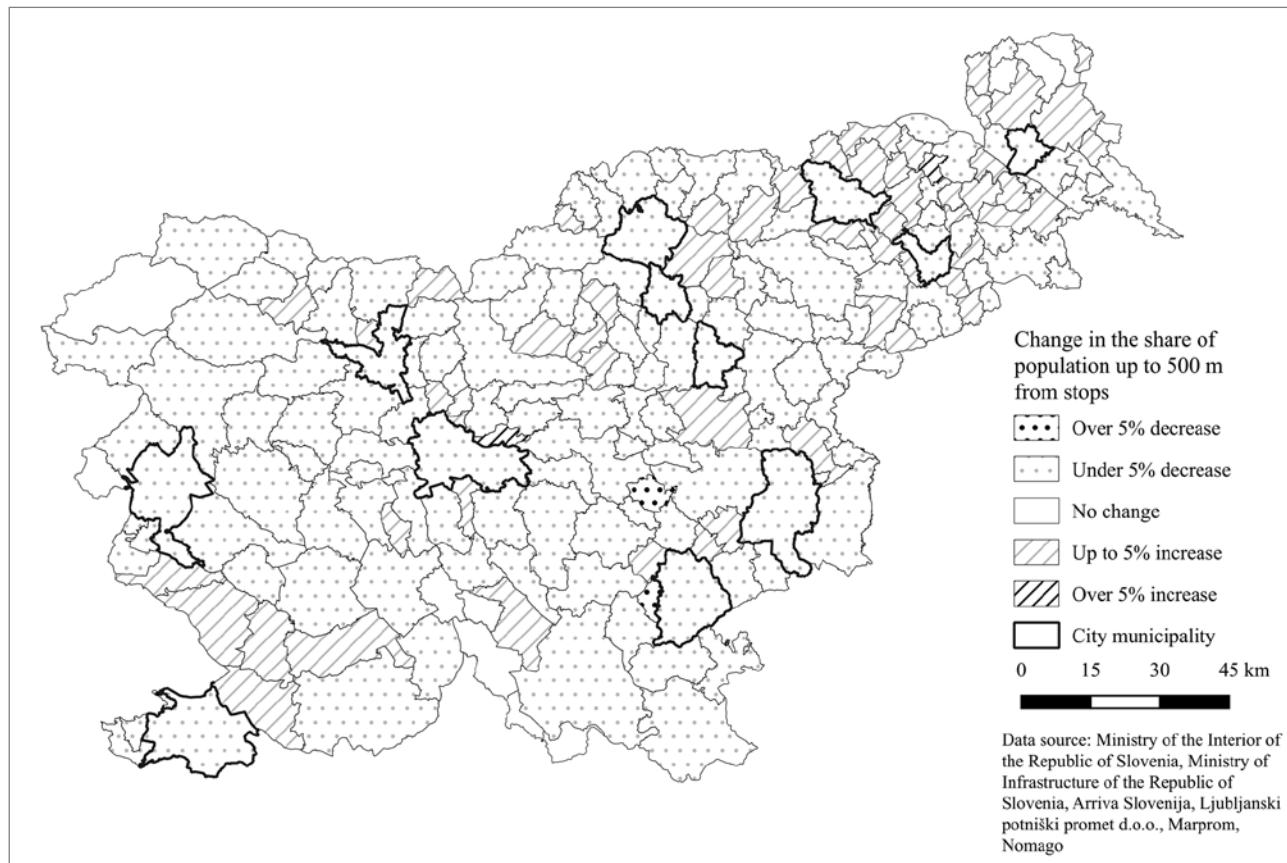
Figure 5: Changes in the share of population living near public transport stops, 2004–2020 (up to 500 m) (illustration: Nika Razpotnik Visković).
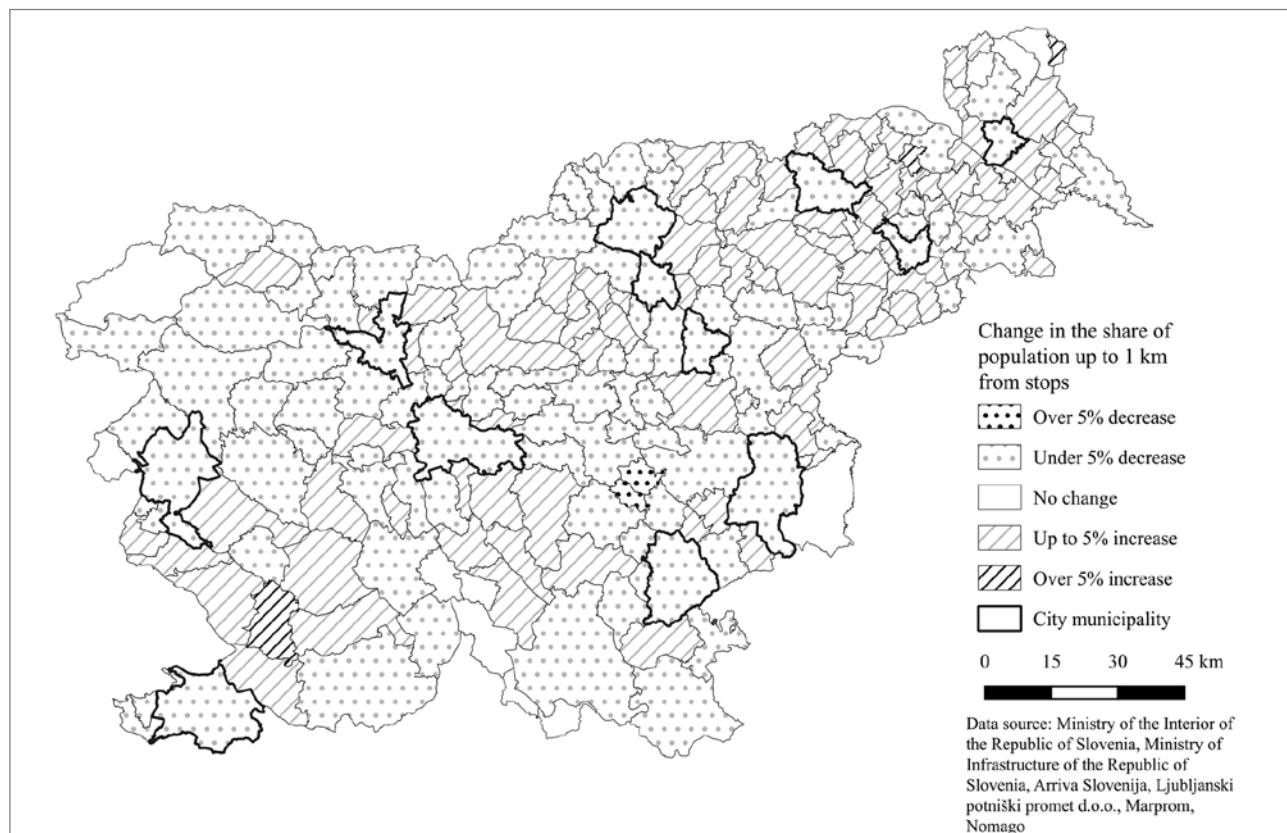

Figure 6: Changes in the share of population living near public transport stops, 2004–2020 (up to 1 km) (illustration: Nika Razpotnik Visković).
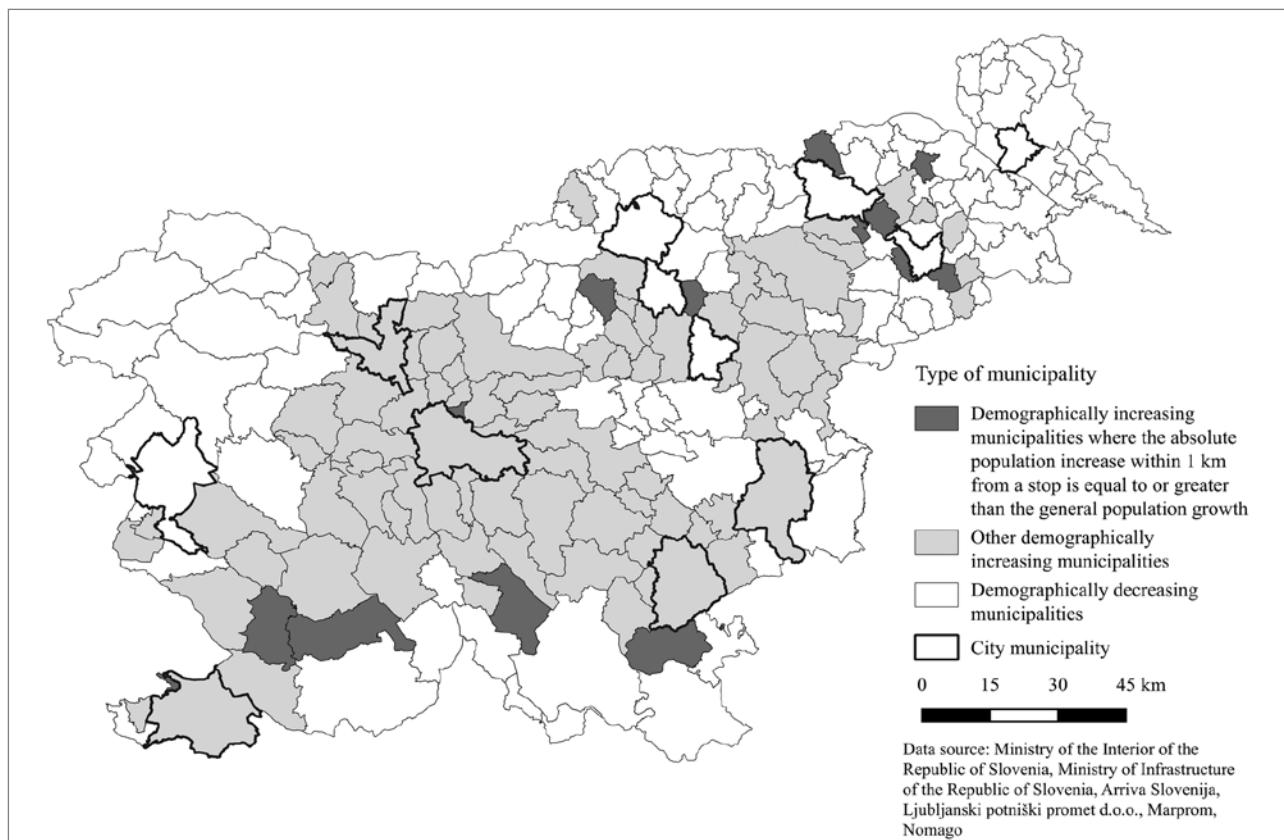
Figure 7: Municipalities with favourable settlement placement in terms of vicinity of public transport stops, 2004–2020 (distance up to 1 km) (illustration: Nika Razpotnik Visković).

Table 2: Directing population growth between 2004 and 2020 in municipalities with the greatest population growth.

Municipality	Relative population growth (%)	Absolute population growth (no. of people)	Share of people in population growth ≤ 500 m from stop (%)	Share of people in population growth ≤ 1 km from stop (%)
Škofljica	47.2	3,572	79.6	93.7
Komenda	38.3	1,766	52.8	96.5
Dol pri Ljubljani	36.2	1,663	85.4	92.7
Ig	27.9	1,590	77.2	91.1
Brezovica	27.9	2,727	76.9	91.5
Vodice	23.4	958	81.1	93.3
Grosuplje	23.2	3,834	68.1	88.9
Logatec	21.2	2,486	43.2	83.2
Ivančna Gorica	20.5	2,880	41.8	70.3
Rače–Fram	19.9	1,277	13.6	55.9

Source: Central Population Register, 2005/2021.

3.2.2 Areas of demographic decline

When analysing municipalities facing depopulation, we verified whether this is concentrated in areas with a greater distance from public transportation stops. The analysis results do not confirm this. In these municipalities, the absolute number of people living in areas where the distance to the nearest stop exceeds 500 m has decreased by 3,830 people or 1.8% since 2004; these are predominantly rural and border municipalities that already have poorer public transport accessibility: Ormož,

Radenci, Laško, Pesnica, and Rogaševci. The number of inhabitants in areas within a 500 m radius to stops decreased by 37,485 during the period studied, which is a 6.9% decrease (the highest in urban areas, such as Maribor, Trbovlje, Velenje, Jesenice, Celje, Ptuj, Murska Sobota, and Hrastnik). The situation is similar at the 1 km scale. The number of people that are over 1 km from stops decreased by 2,312, which is a 3.1% decrease compared to 2004, and by 38,057 in areas with a distance up to 1 km, which is a 5.7% decrease. The geographical pattern is similar to that at the 500 m distance.

Table 3: Slovenian municipalities with the most intense residential construction.

Municipality	Pop. in 2020	Pop. growth 2004–2020 (%)	Constr. permits 2007–2020 / 1,000 res.	Population share change			
				≤ 500 m from a stop (%)	> 500 m from stop (%)	≤ 1 km from stop (%)	> 1 km from stop (%)
Komenda	6,383	38.2	134.3	−2.3	2.3	1.2	−0.6
Benedikt	2,584	18.1	126.1	11.1	−9.9	7.7	−4.8
Vransko	2,627	3.3	105.4	2.0	−2.2	1.3	−1.2
Hrpelje - Kozina	4,572	11.8	100.5	4.9	−1.9	4.2	−2.0

Source: Statistical Office of the Republic of Slovenia, 2021.
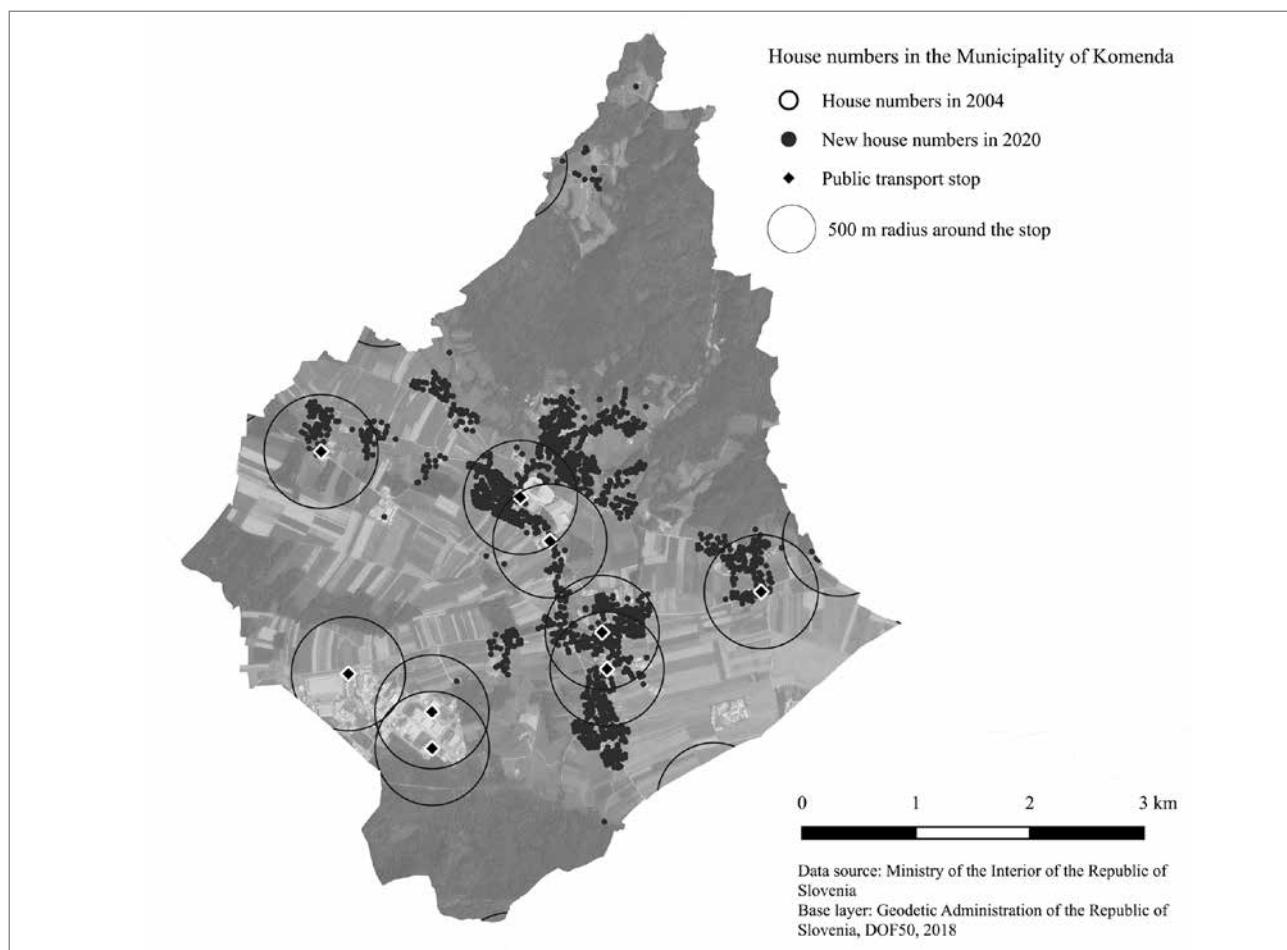

Figure 8: Locations of house numbers with permanent residence in the Municipality of Komenda (illustration: Nika Razpotnik Visković).

### 3.2.3 Selected areas of intense residential construction

Finally, we would like to highlight the suitability of directing settlement based on the case of Slovenian municipalities that recorded an intense settlement dynamic, which is demonstrated by the number of building permits for residential construction from 2007 to 2020 (Statistični urad, 2021). These are Komenda (Central Slovenian Region), Benedikt (Drava Re-

gion), Vransko (Savinja Region), and Hrpelje–Kozina (Coastal–Karst Region) (Table 3).

The Municipality of Komenda was not very effective in locating settlements near public transport stops from 2004 to 2020. Settlement mostly spread because single-family houses were built on the edges of settlements, but too far from public transport stops. The construction of the Šmidov Log and Sončna Aleja housing developments in Gmajnica also contributed
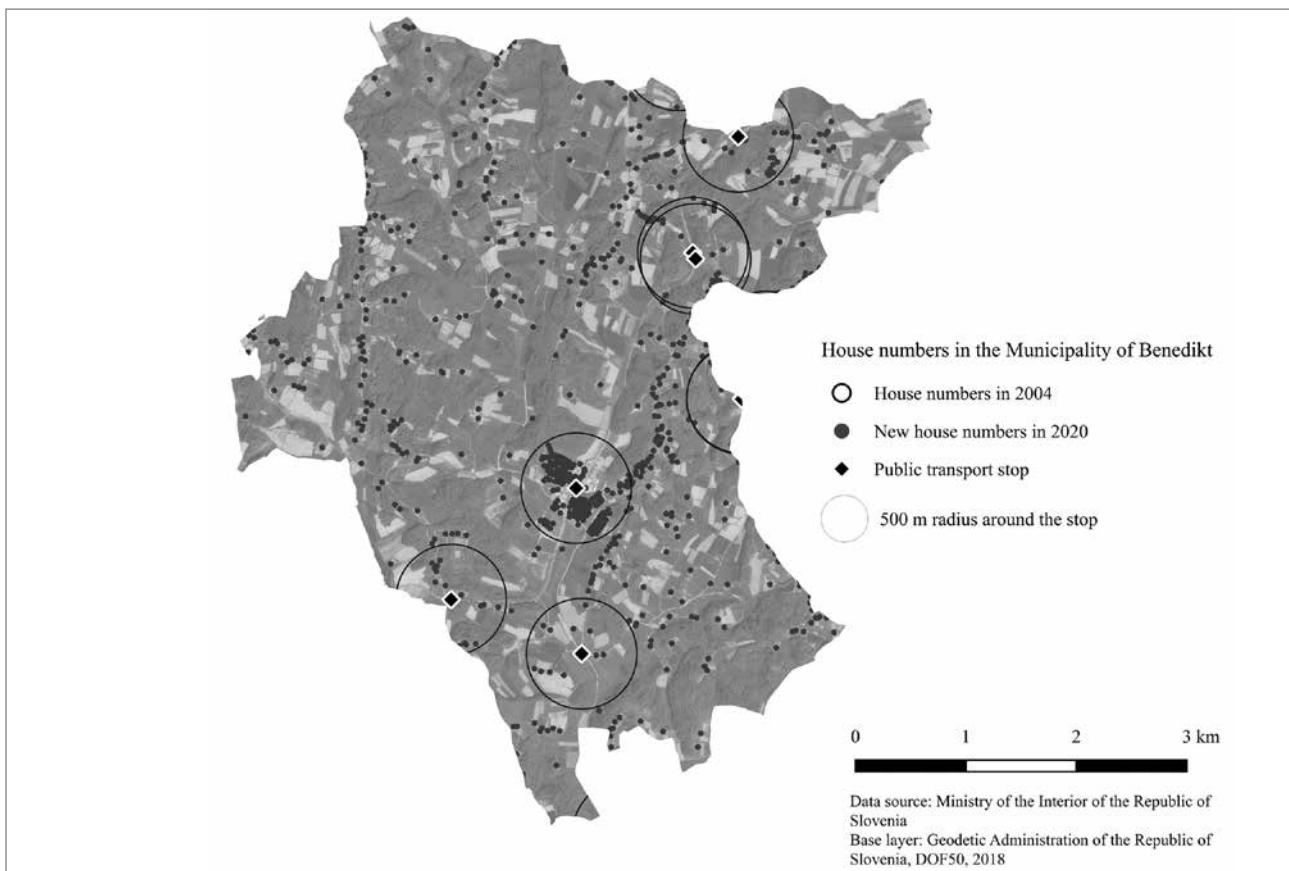
Figure 9: Locations of house numbers with permanent residence in the Municipality of Benedikt (illustration: Nika Razpotnik Visković).
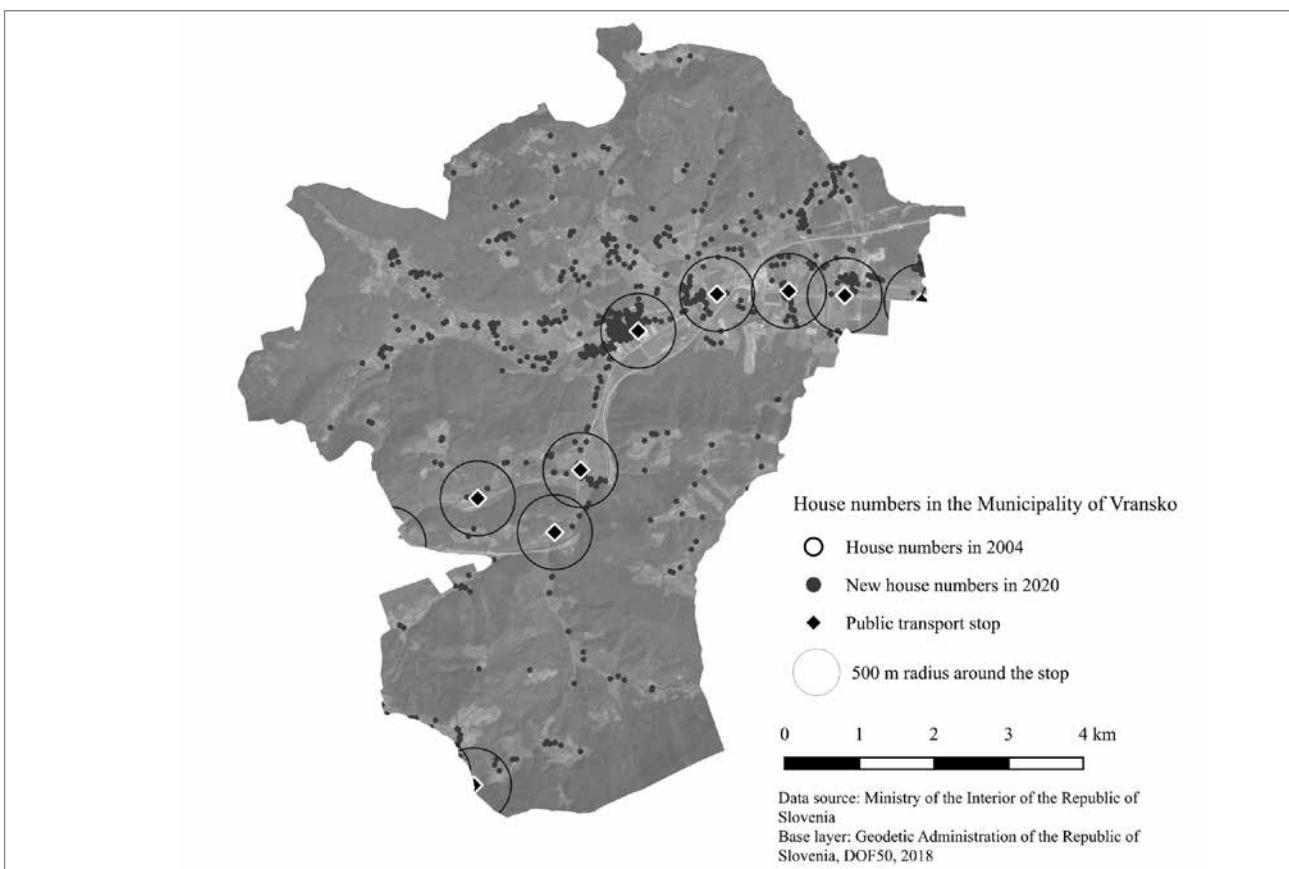
Figure 10: Locations of house numbers with permanent residence in the Municipality of Vransko (illustration: Nika Razpotnik Visković).
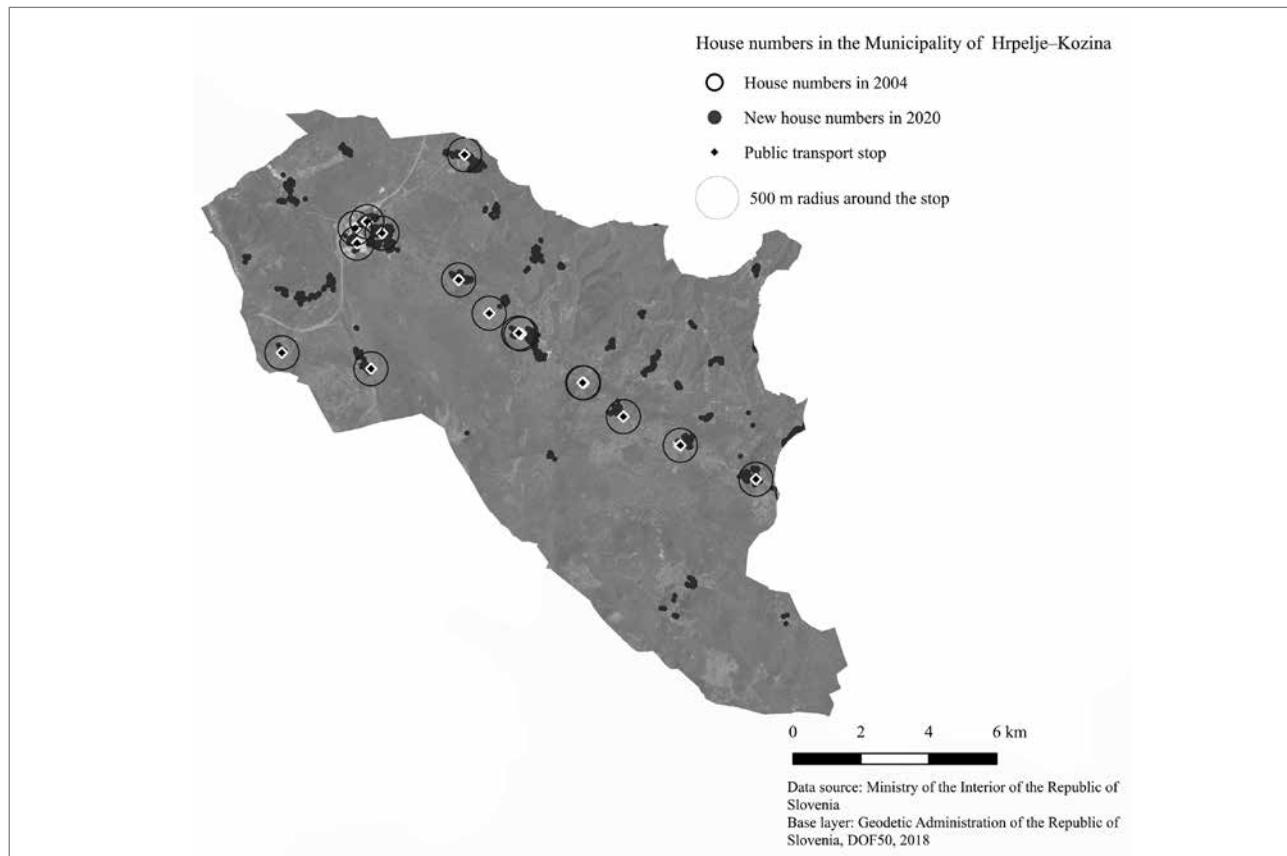
Figure 11: Locations of house numbers with permanent residence in the Municipality of Hrpelje–Kozina (illustration: Nika Razpotnik Visković).

to considerable population growth, but they are over 500 m from the nearest public transport stop (Figure 8).

The Municipality of Benedikt recorded a "progressive" residential policy in the reference period, which focused on the centre of the settlement of Benedikt v Slovenskih Goricah and in the vicinity of a stop, and is an example of paying suitable attention to public transport accessibility (Figure 9).

The Municipality of Vransko is interesting in terms of its settlement due to the vicinity of freeway access. During the period studied, growth was based on dispersed individual construction in areas that are over 500 m or 1,000 m from stops (Figure 10). In 2022, the construction of the Grofice housing development near the freeway access is also coming to an end, but it is also near a public transport stop.

The Municipality of Hrpelje–Kozina is particularly attractive for settlement due to the vicinity of freeway access, which resulted in the construction of several housing developments from 2004 to 2020 (Brinje and Sončna Pot in Kozina; a development is being built at the foot of Slavnik Hill), including scattered construction across the rest of the municipality (Figure 11). The share of residents living near public transport stops additionally increased there.

4   Discussion

The results of this public transport accessibility analysis are useful for planning achievable goals to shift travel habits, evaluating how settlement is being directed, and planning measures, such as changes to the public transport network and timetables. Some results are difficult to evaluate due to the absence of clear measures. It is difficult to determine unequivocally whether the nearly half of the population of Slovenia that does not have a public transport stop with a suitable trip frequency within 500 meters is still acceptable or not; that is, whether this significantly impedes greater public transport use. Research on the influence of the proximity of public transport stops on public transport use in Slovenia has so far only been examined for Ljubljana (Tiran et al., 2019) and Koper (Paliska et al., 2006), where willingness to walk decreases exponentially with distance (Zhao et al., 2003); the findings of similar studies from abroad are only partly applicable because of their different context. At the same time, the public transport network depends on numerous factors and limitations, such as financial means, population density, infrastructural possibilities, and actual public transport use. Regardless of this, we have determined that a significant share of the population lives in areas where public transport is not accessible enough for people to

use it on a larger scale, whereby accessibility is only one of the elements of good public transport (Gabrovec et al., 2009).

The accessibility results are easier to evaluate by identifying gaps in the provision of public transport services based on population density because this is what largely determines the public transport network. These results have an important applied value because they can be used as a basis for expanding or optimizing the public transport network, and the potential measures involve changing the routes and stops and adding new ones or increasing the trip frequency on current lines. Considering the relatively low shares of the population living in (very) densely populated areas without suitable public transport accessibility, it can be concluded that the public transport network in Slovenia is relatively adequately dispersed in terms of the settlement pattern, especially for very densely populated areas in comparison to densely populated areas. However, improvements are necessary in many areas; for example, in Ajdovščina, almost the entire north-eastern part of the city lacks suitable access to public transport, despite its relatively high population density; a potential solution to this is to move a stop or introduce an additional stop nearer to the densely populated area, which would not involve great expenditure. A similar example can be identified in south-eastern Cerknica. In areas without public transportation, travel time competitiveness will have to be considered when positioning additional stops because an overly dense stop network can decrease this. In more densely populated areas where introducing new lines is not possible or sensible, new and more adaptable forms of public transport should be considered, such as demand-responsive transport, rural taxi service, or placing smaller park and rides near the nearest stop with suitable accessibility (Mees, 2009; Prinčič et al., 2016; Gabrovec et al., 2021). Adaptable forms of public transport are also necessary in more sparsely populated areas that are much more spatially extensive.

The results of the analysis of contemporary settlement changes relative to the current public transport network are not very encouraging. The population has decreased most in areas in the vicinity of public transport stops, which leads to the conclusion that public transport is not an important element when choosing a place of residence. This finding agrees with the results of some other studies (Aslam et al., 2019). In municipalities with the most intense settlement dynamics, newer settlements are partly placed in the vicinity of public transport stops; however, a detailed analysis indicates that some either do not have suitable access to public transport stops via the footpath network (e.g., Sončna Pot in Kozina), or that the vicinity of public transport stops is secondary compared to freeway access (e.g., the Grofice housing development in Vransko under construction), judging by the absence of public

transport being mentioned on the development's presentation website. Current settlement can only partly follow the public transport network, which confirms the discrepancy between national strategic documents and planning practices, which has also been emphasized in the Spatial Development Report (2016) and the draft Spatial Development Strategy of Slovenia 2050 (2020). All of this is reflected in modest public transport use in Slovenia, which additionally decreased during and after the COVID-19 pandemic (Brezina et al., 2021).

Some drawbacks and limitations of the selected methodological approach should be highlighted. First, the accessibility calculation was based on the straight-line distance and not the distance on the road network. Such calculations overestimate actual accessibility, but with significant deviations between areas due to the differences in the density of the road network, natural and artificial barriers, and similar (Kozina, 2010; Tiran et al., 2015). Second, accessibility was analysed in radii of 500 and 1,000 m, which do not necessarily reflect the distance to the stop that people are willing to travel. Due to the greater availability of travel options in urban areas, 1,000 m is probably too great a distance for locals to use public transport daily unless they do not have an alternative. In light of some research that indicates people's unwillingness to walk to stops – for example, in Ljubljana (Tiran et al., 2019) – this partly also applies to the 500 m radius. The radii used do correlate with an (acceptable) walking distance, which is the most universal travel mode, but public transport stops can also be accessed in other ways. In any case, additional research is necessary to determine the desired and necessary (walking) distance to public transport stops in Slovenia, which would also serve as the foundation for establishing more precise accessibility standards.

Furthermore, the study only considered access from the travel origin (from home) to the entry stop, but not also access from the stops to potential travel destinations (e.g., workplaces), which also affects the selection of the travel mode. In terms of the public transport supply, our calculation was somewhat simplified. Even though using the data on the number of trips a day does not necessarily reflect the suitability of timetables for travellers, it is an important step forward compared to more rudimentary calculations of accessibility. In terms of public transport demand, we only considered population dispersion, but not the population's actual mobility needs or socioeconomic characteristics. This methodology also does not consider other significant accessibility elements and public transport quality, which affect the actual use of the system (e.g., travel speed and travel time). A more comprehensive overview should be developed with other travel modes (e.g., electric scooter, bicycle, and car), which would require detailed input data.

5 Conclusion

The research utilized geographical information systems to analyse public transport accessibility in Slovenia in terms of the vicinity to stops and trip frequency. We determined that public transport accessibility in the country is relatively adequate in terms of the 1,000 m radius, even if the trip frequency is considered, but less so in terms of the 500 m radius, where it is adequate only in most urban areas. Vast areas across the country, including in some city municipalities, do not have adequate public transport accessibility, which is the consequence of low population density in the countryside, and larger gaps in provision were identified in suburban areas that have formed outside public transport corridors. The analysis of the settlement changes near stops between 2004 and 2020 indicates that public transport provision is not an important locational factor. In areas of the greatest population growth and intense residential construction, settlement was only partly located in the vicinity of public transport. This confirms the assumption of inconsistent adherence to current strategic spatial planning documents, insufficiently integrated traffic and spatial planning, and continuing spatial trends that represent a shift from effective, economical, and quality spatial development.

To improve public transport accessibility in Slovenia in the future, the public transport network does not need to be significantly altered, but new settlement must be diligently located inside areas with suitable public transport accessibility, and settlements in sparsely populated areas without suitable public transport accessibility, which are extremely extensive in Slovenia, require improved provision of alternative forms of mobility.

This research has provided additional and more comprehensive insight into public transport accessibility in Slovenia, and it has introduced some new measurement tools for evaluating accessibility that are also internationally transferrable. Future research should examine the extent to which accessibility affects the frequency of public transport use in terms of both the distance from stops and trip frequency compared to other spatial characteristics (parking policy and land use) and other elements of public transport quality. For a more comprehensive image of public transport accessibility in Slovenia, the analysis should also be expanded with the socioeconomic characteristics of the population, the diversity of travel options at a given location, accessibility to the travel destination, and so on.

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Visions of cities' futures: A comparative analysis of strategic urban planning in Slovenian and Croatian cities

Due to overpopulation, pollution, noise, and other ecological and social problems, cities face a worsening quality of urban life, which requires effective planning of their futures. Urban visions as an aspect of strategic planning can be a starting point for a radical transformation of how towns develop into cities of the future that successfully address current challenges. This article, deriving from the anthropology of the future and planning, analyses how cities imagine their futures and how they narrate it. It compares the visions of eight Slovenian and Croatian cities – Ljubljana, Zagreb, Koper, Rijeka, Maribor, Kutina, Nova Gorica, and Hvar – and assesses how they understand the concept of sustainable development and take into account its principles (economic, environmental, social, and cultural sustainability). Discourse analysis reveals that visions often remain on paper only, with undefined elements of sustainability and values. They repeatedly instrumentalize urban realities – that is, natural and cultural resources – for their goals. To achieve better cooperation of residents in helping create cities of the future, visions should be more long-term and imaginative.

Keywords: anthropology of the future, urban planning, cities' visions, Slovenia, Croatia

1 Introduction

Since 2010, more people have lived in urban centres than in the countryside; in 2020, the urban population stood at 56.2% (Buchholz, 2020). Increasing population negatively impacts cities; they face overpopulation, pollution, noise, and other ecological and social problems. This requires strategic planning of development, management, and the city's future at multiple levels, from global to local. Thus, in the last decade, the United Nations and the European Union have adopted agendas for a better urban future; among the current ones are the *New Urban Agenda* (United Nations, 2017) and *The Future of Cities* (European Commission, 2019), which are based on the *2030 Agenda for Sustainable Development* (United Nations, 2015). The European Union also affects the planning of individual development of European cities; this is evident from the common emphasis of development strategies and their relatively equal duration (mainly addressing the seven-year period of financial frameworks of the European Union).

The term *planning* indicates different practices in different parts of the world and refers to several levels. Each act of planning is strategic but can also result in concrete "maps" and spatial, social, cultural, and other development projects. In the most common sense of imagining the future and preparing for it in advance, planning entails "a broad set of tactics, technologies, and institutions to try to control the passage into the future, including practices and ideas that have spread across private and public organizations" (Abram & Weszkalnys, 2013a: 2). It can also be understood as "an assemblage of activities, instruments, ideologies, models, and regulations aimed at ordering society through a set of social and spatial techniques" (Abram & Weszkalnys, 2013a: 3).

Although anthropology, from which this article derives, has often dealt with (abstract) concepts that are crucial for (strategic) planning, such as *country*, *policy*, *development*, and *agency*, or with the concrete practices of colonial and postcolonial (and very rarely democratic) governing of space and residents (cf. Abram & Weszkalnys, 2013b), this activity has only received greater research attention in the last decade (the opposite is true of applied anthropology, which has intensively dealt with planning in practice). One of the reasons for the assertion of planning as an anthropological subject of research is definitely the need for increased participation of residents (cf. Poljak Istenič, 2019a, 2019b; Svirčić Gotovac et al., 2021) because ethnography can very successfully explain frequent conflicting views on what people want and what they think is possible. The second reason is theoretical because anthropology, which was established as a synchronic/diachronic discipline, has finally faced its "tempocentrism" (Textor, 2005; cf. Munn, 1992)

and has begun to deal with the future, which, according to some urban theorists, is unique for the identity of (spatial) planning (cf. Myers & Kitsuse, 2000: 221). Urban planning is thus defined by some authors as "storytelling about the future" (cf. Throgmorton, 1992). They emphasize that reading urban planning as one of the styles of storytelling about the future of cities helps highlight a particular type of discourse and narrative strategies that urban planning uses to make sense of its role in society and urban development (Collie, 2011: 425). Accordingly, this article is based on a discourse analysis of the visions of selected Slovenian and Croatian cities. It stems from the project Urban Futures: Imagining and Activating Possibilities in Unsettled Times, and its aim is to present how cities imagine their future and how they narrate it according to the concept of sustainable development, which was crucial in the European Union at the time when Slovenian and Croatian urban strategies were being outlined. In this way, the article follows the enhanced anthropological interest in the studies of imagining the future (Appadurai, 2013; Salazar et al., 2017; Petrović-Šteger, 2018a; Bryant & Knight, 2019; Gulin Zrnić & Poljak Istenič, 2022).

2 Methodology and the structure of the article

The research analyses discourse from a cultural point of view (cf. Foucault 1972). We were interested in the "authorized discourse" (Smith 2006) of urban policy: the manner of writing visions, a vision as a collection of content knowledge, and visions as a procedure for appropriate communication and use of knowledge. The subject of the analysis is visions that are part of the current urban development strategies of eight Slovenian and Croatian cities. If they have not yet published documents for the current European Union financial framework period (2021–2027) on their webpages, we took into account the strategies for the previous period (2014–2020); some of them were extended until 2030. We analysed the following documents: *Trajnostna urbana strategija Mestne občine Ljubljana 2014–2030 / Sustainable Urban Strategy of the City of Ljubljana 2014–2030* (hereinafter: TUS MOL), *Razvojna strategija Grada Zagreba za razdoblje do 2020. godine / Development Strategy of the City of Zagreb for the Period until 2020* (hereinafter: RS Zagreb), *Trajnostna urbana strategija mesta Koper 2030 / 2030 Sustainable Urban Strategy of the City of Koper* (hereinafter: TUS Koper), *Plan razvoja grada Rijeke 2021.–2027. / 2021–2027 Plan for the Development of the City of Rijeka* (hereinafter: PR Rijeka), *Maribor ima priložnosti: Trajnostna urbana strategija Mestne občine Maribor / Maribor Has Opportunities: Sustainable Urban Strategy of the City of Maribor* (hereinafter: TUS MOM), *Strategija razvoja Grada Kutine za programsko razdoblje 2014.–2020. /*

Development Strategy of the City of Kutina for the 2014–2020 Programming Period (hereinafter: SR Kutina), *Mlado in zeleno središče ustvarjalnih energij: Trajnostna urbana strategija Nova Gorica 2020 / Young and Green Centre of Creative Energies: Nova Gorica 2020 Sustainable Urban Strategy* (hereinafter: TUS Nova Gorica), and *Strategija razvoja Grada Hvara do 2020. godine / Strategy for Developing the City of Hvar by 2020* (hereinafter: SR Hvar). To contextualize the visions (when necessary), we also analysed the strategic goals and priorities published in these documents.

The cities whose visions we analyse were selected based on similarities that allow a comparison. Ljubljana and Zagreb are the capital cities in the two countries and the most important political, economic, educational, health, administrative, and cultural centres; as such, they are also the most attractive urban locations for national and international immigration and investment, but they differ from each other in their positioning at the European or global level. Considering only the titles conferred by UNESCO and the European Commission, Ljubljana has been the World Book Capital (2010), the UNESCO City of Literature (since 2015), the Green Capital of Europe (2016), and a candidate for the 2025 European Capital of Culture (losing to Nova Gorica in the second round); Zagreb does not yet have such titles. Koper and Rijeka are the leading national ports as well as multiethnic and multicultural cities. Maribor and Kutina are inland cities, regional centres, and industrial cities that flourished during the socialist period and faced a transition crisis due to unemployment and urban restructuring after the breakup of Yugoslavia. Hvar and Nova Gorica are geographically peripheral cities with very different urban characters. The first is an island city whose urban character comes from antiquity; it was a historically important Mediterranean port and is now an attractive tourist destination. The second was built according to the garden city concept and modernist principles; it arose after the Second World War due to the loss of access to Gorizia (in Italy) as an administrative, economic, and cultural centre.

The analysis follows the approach of the anthropology of public policy, which Janine R. Wedel and Gregory Feldman (2005: 2) call "studying through"; that is, the "process of following the source of a policy – its discourses, prescriptions, and programmes – through to those affected by the policies." We thus analysed how the European Union, through its programmes and requirements in different national frameworks, influences the planning of cities' futures in accordance with sustainable development. Sustainable development is most explicitly defined in the *2030 Agenda for Sustainable Development*, which sets seventeen general objectives and 169 concrete objectives for this kind of development. Among these, the eleventh general objective is specially dedicated to urban development (to

make cities and human settlements inclusive, safe, resilient, and sustainable); however, it had not yet been adopted at the time when the strategies of the previous period were being developed. Therefore, the article refers to the concept of sustainable development, which was endorsed at that time – especially in academic circles related to the study of culture – and was also the basis for the aforementioned agenda (Wiktor-Mach, 2020). It is based on four pillars: the economy, the environment, society, and culture. In the visions, we analysed whether cities take these pillars into account, in what terms they address them, what role the individual pillars play in a vision, and what cities emphasize as worthy of developing in a specific pillar (e.g., entrepreneurship, tourism, mobility, energy, green spaces, participation, creativity, heritage, etc.). We traced contexts in which a particular idea (or an element of sustainable development) appears, compared them, looked for similarities and differences, and sought to show the diversity of understandings in selected cities. We read the visions as narratives of the possible understanding of this concept that direct political discussions toward selected elements of sustainability, influence the way political problems are recognized, and legitimize or marginalize certain political solutions. In doing so, we set the basis for future ethnographic research on how policies expressed on paper are translated into practice.

The article first outlines the theoretical framework from which the analysis derives and then presents the visions of the selected places. We scrutinize the process of the visions' creation and pay particular attention to the analysis of how the cities understand and use the concept of sustainable development in the visions. Finally, we summarize how visionary the urban visions are.

3 Imagining the future in planning

Planning combines two key concepts that have occupied researchers from different disciplines since the beginning: time and space. "Planning is a form of conceptualizing space and time, and the possibilities that time offers space" (Abram & Weszkalnys, 2013a: 2). However, even though it was explicitly defined by imagining the future, at the end of the last century urban theorists warned that the vision of life in the twenty-first century outlined in spatial planning is relatively unchanging. It was based solely on traditional projection and modelling methods, which are ineffective techniques for predicting rapid, qualitative, and nonlinear changes (Warren et al., 1998: 49; cf. Myers & Kitsuse, 2000). Under the pressure of budget cuts and other (neoliberal) circumstances, planners have ceased to be visionaries and idealists, and so it is imperative that planning "reassert its unique claim to the future, and accept again the responsibility of being a source of ideas, knowledge, and inspi-

ration about what might be and what ought to be" (Isserman, 1984: 219). There have been calls for the use of imagination, including literary approaches (Warren et al., 1998; Collie, 2011; Sjöberg, 2017), especially in scenario writing (Ratcliffe & Krawczyk, 2011; Stojanović et al., 2014; Textor, 1995). Under the influence of these calls, three techniques proved to be productive for an effective (i.e., inspiring and mobilizing) representation of the future: visioning, scenario writing, and storytelling. They are intended to serve as heuristic or rhetorical guidelines for action – to encourage discussion of desired futures, prepare planners to address the future with authority, and persuade others to adopt a particular plan for the future (Myers & Kitsuse, 2000: 227).

Storytelling is a technique that is mainly established in folklore (see MacDonald, 1999; Marković, 2015; Kropej Telban, 2021), whereas in planning it is used to prepare the audience for the future and persuade people to accept what the narrator thinks the best course of action or performance is (cf. Throgmorton, 1992). Scenario writing was promoted as early as the 1970s by the American anthropologist Robert Textor (1995) as a method to explore the future, whereas urban planners understand scenarios as narratives of potential events that could influence planning decisions (see Myers & Kitsuse, 2000). However, because the analysis shows that these two techniques are not established in Slovenian and Croatian (urban) planning, this article focuses only on visioning. Visions are a mandatory element of (sustainable) urban strategies required by national legislation and a condition for applying for European cohesion funds. Although we build on the experience of some Slovenian anthropologists that have dealt with visioning or visionaries and questioned what they can achieve with their ideas about the future (Gregorič Bon, 2018; Kozorog, 2018; Petrović-Šteger, 2018b, 2020; Vodopivec, 2018), we do not deal with people that create visions, but with cities using them to influence their residents. Visions have proven to be a starting point for a radical transformation of how towns evolve into cities of the future, addressing current challenges and promoting the long-term prosperity of society and the planet. Based on experience from abroad, the most successful visions are created by political authorities through strong participatory processes. The imaginaries they build typically define major urban functions and support all urban projects and policies in the short and long term (Ortegon-Sanchez & Tyler, 2016: 6). The creation of urban visions was stimulated precisely by the requirements for participatory planning; the vision has proven to be a good tool for motivating residents to participate and for clarifying the community's essential concerns and interests. As noted by Myers and Kitsuse, a vision is not a fantasy but an optimistic image of what could be achieved in a city (municipality, region, etc.) in terms of available capacity and resources. Visions that balance the creative and collaborative

aspects of the visioning process with feasibility projections and soundness in action scenarios have proved the most effective. When visions are not followed by strategies for achieving goals and the authority to reach them is absent, they can degenerate into "inconsequential and expensive wish lists for the future" (Myers & Kitsuse, 2000: 227–228). Ideally, visions are the first step by which cities plan their futures. They use them to define the cities' fundamental values and perceived competitive advantages. The vision is followed by a strategy (in addition to the general urban one, it can also be a sectoral strategy, e.g., cultural, tourist, welfare, etc.), which determines how and in what order the goals outlined in the vision should be realized. Spatial plans then define where and how development should be actualized in space. The last step is development projects, through which plans become implemented (Šumi, 2007: 4).

4   Visions of the selected cities

After the breakup of Yugoslavia in the 1990s, Slovenia and Croatia had different experiences with the transition to post-socialism / capitalism and consequent entry into the EU. Today, both countries are characterized by very uneven urban development. Slovenia is subject to suburbanization, which is most pronounced in the Ljubljana and Maribor urban regions, with high population density and employment. According to data from 2020 (Statistični urad Republike Slovenije, 2021), 14% of Slovenia's population lives in Ljubljana, which is also the economically strongest city; Maribor is the only other settlement in the country that Eurostat recognizes as a city. On the other hand, the National Statistical Office recognizes 156 urban settlements in Slovenia based on population, surplus jobs, and/or the town's role in a certain area; nine are considered medium-sized towns (Ministrstvo za okolje in prostor, 2016). Except for Koper with its port, none are internationally important. All face demographic stagnation, and as many as five depend on state subsidies (Ministrstvo za okolje in prostor, 2020), which calls into question the ability of these cities to independently plan their development. In Croatia, 20% of the population lives in Zagreb, which generates almost 35% of the national gross domestic product (data for 2019; cf. Gradski ured za gospodarstvo, ekološku održivost i strategijsko planiranje, 2022). The Ministry of Justice and Public Administration lists 127 towns (Ministarstvo pravosuđa i uprave, n. d.); twenty-five of them have the status of a large town, either because of the population (more than 35,000) or because of being the regional administrative centre (Škunca, 2015). Apart from the capital and three regional urban centres (Rijeka, Split, and Osijek), Croatian towns are unevenly developed and even face urban shrinkage because many cannot attract and retain their population. According to demographers, this is one of the reasons for the current rapid depopulation of some regions and

international migration (Wertheimer-Baletić & Akrap, 2014; cf. the 2021 census, gl. Državni zavod za statistiku Republike Hrvatske, n. d.). In both countries, economic, political, social, and cultural urban trends emerge, such as deindustrialization of cities, post-Fordism, strengthening the creative economy and tourism, neoliberal governance and deregulation, declining public services and social security, insecurity, and an aging society, which strongly influence the cities' spatial, social, and imaginary dimensions. Each city faces its own challenges, which affect the planning of the urban future. We show this through the examples of Ljubljana, Maribor, Koper, Nova Gorica, Zagreb, Kutina, Rijeka, and Hvar.

4.1 Creating the visions

The first among them to create its vision was Ljubljana in 2007. The vision claims to have the "character of a resolution that obliges the city administration to realize it in the long run." It is intended to be "up-to-date as an instrument of monitoring and testing the efficiency of the city's development policy" for the next two and a half decades (Oddelek za urbanizem Mestne občine Ljubljana in Šumi, 2007: 9). Its purpose is to encourage "establishing the self-image of the city, which shows what the city means to the residents and what the actual expectations are about its future. A positive image of a city, which comes from its history, cultural traditions, and spatial features, thus has a major impact on life in the city and is also a powerful factor for its economic and social development. It helps in discovering the benefits and new opportunities of development and is especially important for making basic strategic decisions that change the city" (TUS MOL, 2015: 24). Maribor was the only city besides Ljubljana to create its vision before 2014 (2012 for 2030). Visions are intended to form the basis for further urban strategic documents. All Slovenian cities included them in development strategies by 2020; they were a mandatory element of sustainable urban strategies, which were the prerequisite for obtaining European cohesion funds for 2014–2020. The visions are, as a rule, stated after the analysis of the situation and of the benefits, weaknesses, opportunities, and dangers (SWOT), and they are followed by a description of goals, priorities, and measures. These strategies were created by the beginning of 2016 with a vision until 2020, and in Nova Gorica to 2020+; Ljubljana and Koper later extended them to 2030 with minor adjustments.

Creating development strategies with integrated visions in Croatia has been similar to Slovenia's process. Zagreb started preparing its strategy in 2009 and adopted it in 2012 with a development plan until the end of 2013. Later, it was expanded, revised, and adopted in the fall of 2017 as a development strategy until 2020; its validity was extended until 2021. The vision of Zagreb, defined in the first document, remained the

same in all later versions of the development strategy. The development plan for 2021–2027 is currently in the making. Kutina prepared a development strategy until 2020 in 2015. The same applies to Hvar, which has not published a new one yet. Rijeka adopted its 2014–2020 strategy and is currently the only Croatian city in our analysis that has already published a development plan for 2021–2027, which includes the 2030 vision of Rijeka.

To sum up, the vision statements in the Slovenian and Croatian cities studied are generally part of a broader document (i.e., a development strategy), which includes an evaluation of the current state of affairs (a SWOT analysis) as well as strategic goals and action plans. Although development plans are published on municipal websites (however, the links are not always easily accessible), visions are not highlighted or singled out. We can thus conclude that the cities do not consider them crucial for communication with residents. Below, we summarize them with keywords or sentences explicitly marked or underlined as a vision.

- "Ljubljana will be an all-Slovenian metropolis, a natural and ideal city." (TUS MOL, 2015: 24–25; Mestna občina Ljubljana, n. d.).
- "The City of Zagreb – an urban incubator of sustainable concepts, entrepreneurship, and new values" (RS Zagreb, 2017: 111).
- "Koper – a city tailored to man, a city of the sea, sun, and greenery, a city of tradition, modernity, and the future" (TUS Koper, 2020: 70).
- "Rijeka 2030 – a smart, open, and resilient city" (PR Rijeka, 2021: 81; Grad Rijeka, n. d.).
- "Maribor will be a self-sufficient city of satisfied residents who will participate in creating dynamic spatial development, a socially embedded economy, and a fair social environment" (TUS MOM, 2015: 61–62).
- "The city of Kutina is an attractive and vital global city with an economy based on an innovative approach to sustainable development, with a recognized identity based on natural and cultural resources, with a high quality of life for residents based on community and a feeling of home" (SR Kutina, n. d.: 85).
- "Nova Gorica 2020+ – a young and green centre of creative energies" (TUS Nova Gorica, 2016: 20–21).
- "The vision of the city of Hvar is tourism prominence and attraction because of its natural beauty, historical values, and contemporary trends" (SR Hvar, 2016: 176).

The clearest visions are expressed in keywords (with a slogan), such as those for Ljubljana, Zagreb, Rijeka, Koper, and Nova Gorica. They are usually followed by a more detailed explanation of what the place should look like in the future. However, some cities fail to articulate clear visions from which residents

can imagine how their city will develop. They remain unclear because of too many emphases (many keywords, lengthy and dense descriptions), generality (the same vision could refer to several cities), or technocratic language (visions or their explanations conceptually and terminologically follow the key emphases of European strategies), or because they do not clearly link the text of the vision to the slogan (or with the individual goals of development they list later on). An example of the last is the Maribor vision, which is supposed to be summarized by the slogan "Maribor: a self-sufficient inclusive city"; however, the slogan of the city's sustainable strategy reads "Maribor has an opportunity." At the same time, when explaining the concept of sustainability, which is the basis of the strategy, the emphasis is on "Maribor will be a circular city." These different points impede a clear, unambiguous understanding of the vision and weaken its message about what kind of city the residents should strive for and act toward. Some visions remain only on paper; for example, Zagreb predicts new values that the city of the future will be built on. However, it is difficult to identify with them because they are not clearly defined. On the other hand, Hvar does not plan its future tailored to its residents, but predominantly tourists. The visions therefore differ in affective notions because with the very choice of words or discourse some cities fail to encourage residents to identify with the city or accept the vision of future urban life. Other cities are more successful in doing so and address the residents with positive ideas for living in a "city tailored to man" (Koper) or in "the centre of creative energies" (Nova Gorica). Maribor even directly addresses residents to participate in the creation of the future city: "The city has the opportunity to succeed and at the same time offers its residents the opportunity to share the vision and hope with it. Let's become part of the solution to the problem" (TUS MOM, 2015: 61). It is also informative that only one vision explicitly envisages the "city of the future" (Koper) and that only two visions are written in the future tense; that is, they quote what the city is going to become (Ljubljana and Maribor); in two cases (Nova Gorica and Rijeka), the future is symbolized by the year (written in numerals).

As we have already pointed out, visions are the most successful when created through residents' participation. Slovenian and Croatian cities were also obliged to involve the public (residents, city organizations, and various departments of city administration) in preparing strategies. Each strategy thus explains public participation procedures, either in the document itself or in special annexes. Except for Hvar, which entrusted the task to the Faculty of Economics in Zagreb (which is also reflected in the strategic discourse), the preparation of strategies was led by urban services or local organizations (e.g., development agencies). They set up strategic councils or working groups for individual areas. They conducted various workshops

(e.g., with focus groups or organizations, meetings with experts and residents, surveys, etc.). However, participation differed from city to city. Some cities made an effort to communicate with the residents face-to-face, whereas others accepted only written initiatives, corresponding to the lowest levels on the ladder of citizen participation (Arnstein, 1969).

4.2 How sustainable will the urban future be?

When the majority of strategies were created, the European cohesion policy emphasized the importance of sustainable development for its implementation, and so all strategies are at least based on this concept on paper. Although it is rooted in concern for nature, without exception it relates to an economy that is understood as the main force of development. Critics thus point to the economic logic of the concept; nature (and in recent times also culture) is treated as a source of development and not as a value in itself. A development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987: 16) was initially conceptualized as three pillars; however, after the adoption of *Agenda 21 for Culture* in 2002, it is based on four pillars: economy, environment, and society linked to culture as the central pillar (cf. Nurse, 2006; Labadi & Gould, 2015; Poljak Istenič, 2016; Fakin Bajec, 2020). However, as the Slovenian sociologist Drago Kos (2004: 332) warned almost two decades ago, simplifying the understanding of sustainable development raises doubts about the seriousness of approaches and discussions, "which, despite the declared end of history [cf. Fukuyama] still deal with the future." This has been proved by John et al. (2015), who analysed sustainable visions of nine cities of the global North. They ascertained that the visions do not include the concept of sustainability comprehensively and consistently, but focus on improving individual aspects of urban life; for example, the built environment, ecosystem services, the economy, management, and so on.

4.2.1 Economic sustainability

Economic sustainability is a crucial pillar of sustainable development, which has also been substantiated by other terms or concepts in the last decade such as green growth (Jänicke, 2012), degrowth (D'Alisa et al., 2014), and the circular economy (Geissdoerfer et al., 2017). Sustainability in the economy usually implies that the economy does not harm the environment and exploit people or destroy natural, social, and human capital (Spangenberg, 2005: 49). The 2025 vision of Ljubljana was the first to anticipate a more sustainable urban future. This was intended to be an influential factor in the economic (and social) development of the city, although the economy has a more or less marginal role in the vision itself and is also

ambiguously conceived. On the one hand, it implies growth and development of the area (the vision of a metropolis for all Slovenians). On the other hand, the city is expected to "harmonize the interests of the market with social benefits" (the vision of the ideal city) and, in the context of a natural city, to exploit (rather than primarily protect) natural potentials; for example, for energy (TUS MOL, 2015: 25). The vision of Koper sets the economy in a similar context: "the sea and the seashore, the sunny sub-Mediterranean climate, and green areas . . . are important carriers of specialized economic activities of Koper's urban area" (TUS Koper, 2020: 70). Economic sustainability is therefore (also) based on the exploitation of nature, although nature is supposed to be protected precisely by the transformation of the economy. Meanwhile, Rijeka defines sustainability as "smart management of its own resources and capacities" but does not limit the resources to nature (PR Rijeka, 2021: 81).

Unlike the cities mentioned above, Zagreb, Maribor, Kutina, Nova Gorica, and Hvar place the economy at the centre of their visions. The economy's sustainability is most explicitly defined in Maribor's vision of the circular city: the economic pillar of sustainable development is based on the introduction of a circular economy. The city understands the circular systems of action as those "which use the inner spatial potentials, try to include all population strata, and encourage economic cycles that will evenly distribute the welfare" (TUS MOM, 2015: 61). The special feature of Maribor as a post-industrial city is that the former industrial economy still has significant symbolic value for its future; the city grounds the (visual) scheme of the "self-sufficient inclusive city" vision in the logo of the former TAM automobile factory, which "acted as one of the basic drivers of economic, social, and cultural life in the city" and without which "it is impossible to conceive of the city" (TUS MOM, 2015: 62).

Whereas Maribor's vision is based on a specific understanding of the economy as sustainable, Zagreb – based on the terms *incubator*, *entrepreneurship*, *entrepreneurial approach*, and *creative process* – narrates it in a distinctly neoliberal sense. The economy's competitiveness is cited as the first strategic goal; developing a stimulating entrepreneurial environment and an economy based on knowledge, innovations, and quality products and services seems necessary for the future of Zagreb. Sustainability is explicitly linked only to agriculture and forestry, which, however, are not mentioned in the goal's explanation or in the impact indicators. The vision of Zagreb as an "urban incubator of sustainable concepts" (RS Zagreb, 2017: 111) thus remains merely on paper and even more elusive for residents, who are expected to become inspired to participate in creating the future city.

The visions of Nova Gorica and Kutina also address entrepreneurship as a key to their future. Nova Gorica wants to establish itself as an innovative economic centre and "an excellent business location for propulsive companies from the wider border area" (TUS Nova Gorica, 2016: 20). As a university city, it connects entrepreneurship with knowledge and research; the idea is close to the notion of a creative city (Landry & Bianchini, 1995), which relies on creative industries (i.e., economic activities focused on creating and using knowledge and information). This kind of city is also promoted as a brand by UNESCO and its creative cities network (cf. Poljak Istenič 2017). Such an understanding of cities is also reflected in the visions or strategic goals of Ljubljana, Zagreb, and Rijeka, which are also university centres. However, Nova Gorica does not mention the activities characteristic of this sector – with the possible exception of tourism, information and communication technologies, and gambling – which weakens the vision of a "green centre of creative energies." Nova Gorica's vision also does not define sustainability or the green economy; except for activating degraded areas, it is not clear how such an environment or the industries could sustainably develop (TUS Nova Gorica, 2016: 20). In contrast, Kutina, places its hopes on competitive entrepreneurship. However, in contrast to Nova Gorica, the city would also develop this in non-urban sectors of the economy; it understands the sustainability of the economic pillar in linking it to both the environment and society; that is, as "holistic concern for the environment while promoting and enhancing socially responsible business" (SR Kutina: 87). The vision of Kutina is, at least for the economy, otherwise distinctly non-urban; the city sees its future in the development of ecological agriculture, sustainable rural tourism based on preserved heritage, and social entrepreneurship.

Hvar's vision is the most specific in economic terms. It focuses on developing tourism – however, not explicitly sustainable tourism, but "adventurous, health, and cultural" tourism (SR Hvar, 2016: 176). Sustainability is a fundamental development principle, but it is not the identity of economic activities.

4.2.2 Environmental sustainability

The concept of sustainable development, which emerged from concern for nature or the environment, is paradoxical. By interfering with nature and exhausting natural resources in the name of development, people change the environment (Jabareen, 2008: 181). Therefore, some have understood the environment as a major obstacle to human progress (Goodland, 1995: 2). Although two approaches have developed to understanding environmental sustainability – the first implies the dominance of nature (i.e., the environmental dimension of the sustainability of social institutions and practices), and the

second advocates for nature's rights (i.e., the sustainability of the natural environment; cf. Meadowcroft, 1999: 14) – today the emphasis is on the first approach. We do not strive to protect nature itself, but to meet human needs so that they do not endanger the health of ecosystems (cf. Morelli, 2011).

Cities are not ambitious in planning an environmentally sustainable future, although this plays a relatively important role in their visions. Slovenian cities mainly identify with this dimension; on paper, they will become a "natural city" (Ljubljana), a "green low-carbon city" (Nova Gorica), "grounded Maribor" (Maribor), and "the city of sea, sun, and greenery" (Koper). Croatian cities define care for the environment and sustainable handling of natural resources mainly in strategic goals. The most affective is Rijeka's vision, which calls to "[p]reserve Rijeka 2030: a smart, green, and clean city adapted to the needs of all residents" (PR Rijeka, 2021: 82). Zagreb emphasizes the importance of protecting the environment and managing natural resources and energy, Hvar the development of infrastructure and protecting nature and the environment, and Kutina the recognition and preservation of cultural and natural heritage, development of the quality of life, and protection of the environment.

Emphasized green topics are primarily sustainable mobility (developing public transport infrastructure, especially for strengthening public transport and cycling), energy efficiency (reducing energy consumption, use of renewable resources), improving access to green spaces, connecting with the city's outskirts, and protecting natural heritage. Environmental issues in the visions are often linked to the concept of a smart city, which implies smart and efficient energy management and "the most modern urban supply" (TUS Nova Gorica, 2016: 21), or optimization of actions, minimization of environmental effects, and providing the highest quality of living (TUS Koper, 2020: 70). On the other hand, Rijeka, which explicitly narrates the vision of development into a smart city, understands this concept much more broadly: as the use of modern technologies in all fields to improve its residents' quality of life (PR Rijeka, 2021: 81).

4.2.3 Social sustainability

The social pillar of sustainable development is not only often a neglected aspect of this concept (Vallance et al., 2011; Eizenberg & Jabareen, 2017; Poljak Istenič et al., in press); it is also not clear which processes, phenomena, or measures it addresses (Murphy, 2012). Böstrom (2012: 7) thus lists a wide range of quality-of-life indicators that define this pillar, such as social security, social justice, social cohesion, cultural diversity, democratic rights, gender and other equalities, labour rights,

and broad participation, as well as the development of social capital and individual abilities.

The vision of Maribor most explicitly explains how the city understands the social pillar of sustainable development – it envisages introducing "the principles of the circular system of social integration, and the residents' involvement in the processes of the city's operation" (TUS MOM, 2015: 61). This is emphasized in the term *inclusive city*, which constitutes the vision's slogan. Some other cities also summarize social sustainability with engaging phrases such as "ideal city" (Ljubljana), "open city" (Rijeka), "city tailored to man" (Koper), "the city of the joy of life for all generations" (Nova Gorica), or the city of "high quality of life for residents based on community and a feeling of home" (Kutina). In social terms, the visions of Zagreb and Hvar are the least inspiring. The former addresses the social pillar in the strategic objective "improving the quality of life" and defines its priorities as improving the quality of housing, social integration of local communities, safety, quality leisure time, and improving social infrastructure (RS Zagreb, 2017: 117). However, the indicators (quality public schools and the number of health staff with a higher education) do not relate to the first two priorities. Using technocratic language, Zagreb's strategy does not offer a vision of social sustainability, which is meant to be an essential component of the quality of urban life. Hvar does not relate to this aspect of sustainability in its vision, but it addresses it in the mission. By 2020, it expects to develop a city brand of a "place of a pleasant and happy life that offers high quality of life for residents" (SR Hvar, 2016: 177).

One of the most critical elements of social sustainability is the participation of residents in the decision-making process. Rijeka explicitly highlights its vision to "take care of all its inhabitants and promote their involvement and civil activity in all spheres of life." In 2030, it will be "a city open to all, a city that proactively includes and seeks the cooperation of residents, and a city that plans its development with its residents and for its residents" (PR Rijeka, 2021: 81). The visions of Koper and Maribor are similar but more modest. Zagreb and Kutina would develop residents' participation through societies and other civic associations. However, this aspect does not seem to be crucial for the future of Nova Gorica and Hvar. Ljubljana is a particular case because the cooperation of the residents (self-organization of civil society for managing public affairs, participatory urban governance, and inclusion of NGOs in solving the problems of city governance) is highlighted as crucial for developing into the ideal city in the vision published on the municipal website; however, there is no trace of these accents in the current vision published in TUS MOL.

4.2.4 Culture: the central pillar of sustainable development

In the twenty-first century, critiques of the three sustainable development pillars have become more prominent. Researchers have pointed out that the concept, conceived in such a way, was in crisis because it failed to integrate a key component: cultural aspects of society. Culture was not recognized as a critical factor in development. The concept also overlooked the influence of culture as a way of life for how people understand the term *development* or perceive the world around them (Duxbury et al., 2012: 73). Researchers that mainly focused on developing countries thus proposed a different concept of sustainable development, in which culture has a central position. They established a new model in which the pillars of social justice, ecological balance, and economic self-sufficiency are linked to cultural identity. In addition to cultural identity, the cultural pillar also consists of tangible and intangible heritage, cultural industries, cultural pluralism, and geoculture (Nurse, 2006: 40).

Based on the visions analysed in the article, we can point to three emphases of the cultural pillar crucial for cities' futures: culture as a way of life, cultural heritage, and creativity (also as a component of the cultural and creative sectors, which are more likely to relate to the economy). Developing or making an urban lifestyle possible is understood as vital for some of the cities' futures. In 2025, Ljubljana sees itself as "the space of the realized ideals of modern urban life and residing" (TUS MOL, 2015: 25), and Koper understands the "everyday life of people [as] a guarantee for the vibrancy of the city; and the cosiness of urban space and the variety of content [as an assurance] for strengthening the city's Mediterranean urban culture" (TUS Koper, 2020: 70). Other cities speak of their identity, which is considered essential for their future; Hvar is poised to become a "place of recognizable cultural identity [and] urban-cosmopolitan orientation" (SR Hvar, 2016: 177), Kutina aims to be a city of "recognized identity based on natural and cultural resources, with a high quality of life for residents based on community and a feeling of home" (SR Kutina: 85), and Nova Gorica is counting on multiculturalism as a factor in the development of urban culture, which is intended to be the "cornerstone of the city's identity" (TUS Nova Gorica, 2016: 21). These specific visions of urban life also build on the range of cultural activities available or cultural conditions, which correlates with the other two emphases of the cultural pillar.

Creativity (as cultural production in the broadest sense) became important in the 1990s with the need to restructure the industrial economy in the global North, when the field of culture began to be credited with the potential to create

wealth and increase economic efficiency (Poljak Istenič, 2017). Creative people have also become the foundation of sustainable development. This is evident in the vision of Ljubljana as a "historic city of creative people," in which creative culture is intended to help create the character of a European capital (TUS MOL, 2015: 25). Other visions mention cultural content, services, or resources. However, they link creativity, if mentioned at all, primarily to entrepreneurial initiatives and therefore include it in the economic (and not cultural) pillar of sustainable development.

Heritage is the most significant cultural resource for urban identity and tourism development. This is most emphasized by Koper: "The cultural heritage of the historic city centre is the cornerstone of the revived city" (TUS Koper, 2020: 70). Kutina's vision, which mentions cultural resources (and not culture), makes recognizing and preserving cultural and natural heritage one of its strategic goals; the same applies to Hvar. In other visions, culture does not play an important role, although some cities emphasize its importance for spatial development, tourism, or the development of local communities when describing priorities, goals, and measures.

5 Conclusion

Although efforts for a better future are not tied to specific locations, they are most noticeable in cities as the central foci of power that determine the state of the modern world. Due to the increasing urban population and the economic dependence of the rural environment on cities, cities become increasingly exposed to climate change, economic crises, and social turmoil. They are thus in need of "future-proofing" (Girardet, 2008). On the other hand, they try to convince their residents, visitors, and investors with branding (cf. Poljak Istenič, 2016, 2018) and visions that tell of a beautiful, better future. Based on the analysis of the visions of eight Slovenian and Croatian cities, this article presents how they imagine their futures and how they narrate these in official development strategies.

When most visions analysed in the article were created, Europe placed key strategic emphasis on sustainable development, generally conceptualized by four pillars: economic, environmental, social, and cultural sustainability. Visions are intended to be a powerful factor for economic development, but not all cities imagine it sustainably; Maribor's vision, which envisages a circular economy, stands out in a positive sense, in striking contrast to the cities that base their future on the development of entrepreneurship, following neoliberal development trends. Most cities also associate the economy with exploiting natural resources and thus instrumentalize nature for sustainable development, which is a peculiar but well-known paradox of

this concept in the theoretical literature. Cities are also relatively unambitious in planning an environmentally sustainable future; visions of sustainable, green, or low-carbon cities remain more ideas on paper than affective concepts. Thus, they have low potential to motivate residents to participate in creating the city of the future. In this sense, visions of social sustainability are somewhat more inspiring; they are reflected in slogans such as an inclusive and ideal city, a city tailored to man, a city of the joy of life for all generations, or a city of high quality of life for residents based on community and a feeling of home. An essential emphasis of the social pillar of sustainable development is also residents' participation in decision-making processes, which is most advocated by Rijeka in its vision of an open city. As the basis of cultural sustainability, the cities emphasize the urban lifestyle and cultural heritage, which are crucial for the city's identity and residents. In doing so, Nova Gorica places its hope in multiculturalism, but not Rijeka, which utilized it (along with the slogan "port of diversity") to build its candidacy and programme for the 2020 European Capital of Culture. Therefore, visions are not always aligned with urban projects and programmes, which is not necessarily negative.

Why is this so? By linking strategic urban planning to investments already approved (or projects and programmes), it becomes mundane, instrumentalized, and reduced to the process of using government methodologies based on rather abstract political imperatives (Abram, 2017) instead of being inspiring and assuming an optimistic (if not utopian) urban life in the future. According to anthropologists and urban planners, people respond better to planning the future that leaves them more opportunities for (self-)interpretation. Therefore, when designing suitable visions, the most visionary cities use various techniques, such as scenario writing (pessimistic, optimistic, and realistic) and storytelling, thus better engaging their inhabitants in the (shared) creation of the urban future. On the other hand, it is also essential for residents' motivation that visions not be short-term. In contrast to most cases analysed, they should exceed the span of strategies framed by the seven-year financial framework of the European Union. In this sense, urban masterplans from the socialist era (e.g., Ljubljana's from 1966 and Zagreb's from 1971) were much more visionary. They included all development segments (spatial, social, and environmental) and imagined the future until 2000. Long-term visions of the future, which do not define all projects and interventions, leave urban residents more space to use imagination and create their own ideas about the future, which can significantly contribute to the brighter future of cities.

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Sanja CUKUT KRILIĆ

A critical approach to economic accounts of migration and inequality

International migration has not only increased in absolute numbers in recent decades, but it has also become increasingly diversified as migrants come from different geographic areas. In addition, the majority of them are now women and children. Although the global COVID-19 pandemic has affected migration processes, historical experience around the world reminds us that they cannot be permanently stopped. Nevertheless, given the increasingly anti-migration climate in many countries, it is no surprise that the pandemic has disproportionately affected migrants and migrant communities. In Obeng-Odoom's view, such a socio-political context presents an opportune moment to analyse the issue of mass migration (p. 2), which is increasingly framed as a crisis in political and media discussions of the topic. In particular, mainstream economic discourses barely mention the importance of internal migration as opposed to international migration. These theories, despite common differences, are still embedded in push-and-pull models of migration as an (individual) rational choice, rather than examining the institutional dynamics and links between countries of origin and destination at the local, regional, national, and global levels. Moreover, the

predominant focus is on global migration in relation to (economic) growth, whereas researchers pay less attention to processes of social inequality and various layers of social stratification, such as gender, ethnicity, race, class, migrant status, and so on.

Global Migration beyond Limits uses these layers as central points of analysis. Drawing on a wide range of case studies from around the world, Obeng-Odoom examines a variety of migrant categories – migrant farmers, street workers and other migrant workers, refugees, international students, and others – to present the intersections and similarities between these categories and their embeddedness in political and economic systems. His central concern is to examine the impact of migration on the economy, society, and the environment. The stratification economics approach to migration that he proposes examines land, in addition to labour, capital, and the state, to develop a more nuanced land-based analysis of global inequalities (pp. 9, 11).

In this way, Obeng-Odoom examines the various proponents of dominant migration currents, such as the conservative, neoliberal, and humanist views,
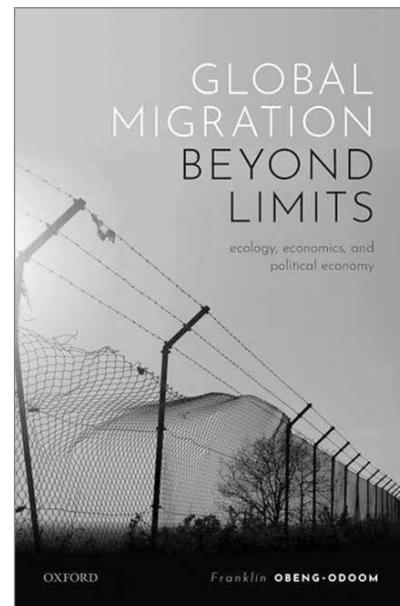
which he argues share a similar conceptual framework despite their plurality. He argues that migration is not an autonomous individual choice, as these conceptions claim, but that it is primarily shaped by institutions and colonial and other histories that also reflect class differences. Within such a framework, for example, one can understand the ubiquity of racism as an expression of the historical treatment of particular races, reflecting political and economic structural discrimination and stereotyping, rather than as a problem allegedly perpetuated by 'too much migration' per se. Although structuralist-oriented accounts have theorized these issues to some degree, there has been a lack of further theorizing of connections between land, property rights, race, class, nationality, and migration on a global scale (p. 36).

For this reason, the next chapter of the book aims to develop a more holistic

approach to the study of migration, drawing on modified versions of Henry George's political economy, J. R. Commons' institutional economics, and the emerging field of stratification economics. The combination of these three theoretical strands forms a methodology that the author proposes as an alternative to mainstream economic theory as well as its current alternatives. Georgian political economy focuses on the structural contradictions in rent, value, and wealth (p. 51), which explain not only structural inequalities and discrimination, but also their effects, such as global systemic poverty. Henry George based his migration theory on the Irish migration experience and examined the social, political, and economic underpinnings of both the Irish famine and conditions in the United States, where many Irish had moved. In his view, migration from Ireland was driven and sustained by the concentration and monopolization of land and the enslavement of labour, downplaying the crucial role of race in this process. Institutional economics analyses various aspects of the state apparatus and other related institutions such as the church, the market, and the university, as well as their intersections and webs of relationships, which Obeng-Odoom sees as key levels of analysis. From this perspective, individuals do matter, but their decisions are inevitably influenced by other social forces and institutions. Stratification economists add important aspects to this point: the constant reproduction and transformation of identities in the migration process, and the role of economic interests in stratifying between race, gender, colour, caste, class, and other social identities. Obeng-Odoom's approach emphasizes property rights, land, and rent in relation to capital and labour, while also methodologically taking an intersectional and multidimensional approach to examining the causes, effects, and policies of migration (p. 64).

The subsequent chapters put these theoretical starting points into an empirical light by examining a wide range of empirical cases, including internal migration between rural and urban areas in Africa, particularly in Ghana; the position of international students in Australia and their experiences of housing; and the role of remittances in the migration process. Obeng-Odoom presents a wealth of empirical data and previous studies on this topic, but he also meticulously adheres to the theoretical approach outlined in earlier parts of the book. He emphasises that institutional and structural processes, rather than individual and household motives, also shape internal migration processes (p. 67). Against this background, he examines the experiences of urban peasants, traders, and head porters in Ghana and elsewhere in Africa. In this context, for example, he documents the privileges of male farmers in southern Ghana in terms of access to land and other agricultural resources, whereas in northern Ghana, especially for women and internal migrants, the relationship to land is more insecure and uncertain. Structural issues are also evident in the problems faced by women and children as migrants, as evidenced by the various economic and psychosocial challenges faced by female head porters and street children. Such divisions again highlight the role of gender, ethnicity, class, migrant status, and other identities described in previous chapters that are mostly absent from current migration policies.

The complex history of colonialism, imperialism, and unequal access to land and resources (p. 103) is also important for contextualizing and analysing the political economy of wars. Not only refugees, but also other migrant groups are portrayed in both research and media as those that put pressure on host communities and are consequently seen as non-deserving and non-contributing actors to welfare states. Such percep-

tions are particularly prevalent in urban agglomerations. Using the Australian city of Lidcombe, a suburb of Sydney, as an example, Obeng-Odoom shows how gentrification forces triggered by private interests lead to rising property prices. They also displace different groups of people, including migrants, who are often victims of exploitative labour conditions (p. 125), and class and race play an important role in this process as well. However, migrants were also among the groups that contributed to the transformation of social and moral economies in the city, and their presence continues to be visible in various aspects of the built environment and in the city's food systems. In the next chapter, the author analyses the dynamics of Afro-Chinese labour migration to show that, although migrants can contribute to economic growth, they often do so at the cost of socio-spatial displacement and socio-environmental degradation, as well as a life of insecurity (pp. 159, 167). In this regard, Obeng-Odoom argues that economic success must be conceptualized in terms of working conditions and inequalities, and their consequences for society as a whole, not only in terms of growth.

Unlike forced migration and some forms of labour migration, international student migration is generally praised as a win-win situation in both origin and destination countries. Yet the social conditions under which such education takes place are rarely considered in such research and policy efforts. Obeng-Odoom believes that education can also institutionalize stratification (p. 183), and he therefore presents an in-depth qualitative and quantitative analysis of the housing market situation in Sydney, Australia, for this group of students. The analysis suggests that students face a limited market for affordable housing and that most of their housing problems are related to landlords, who often take advantage of the vulnerability of international students, especially in times of

economic, environmental, and health crises (p. 198). Thus, housing is both a symptom and a cause of economic disadvantage, and neither education nor housing policies alone will address the disparities between international and domestic students on the one hand, and, on the other, between those that are non-white and from the Global South versus their wealthier, predominantly white peers (pp. 208, 210).

The final empirical chapter, which concludes the themes of migration and return, addresses how the characteristics of different families are altered by institutions such as the state and property rights, using transnational family life analysis (p. 213). Although remittances and their effects are important to both migrants and countries of origin and destination, their social costs are disproportionately borne by migrants, especially non-white migrants, making return a complex and often-impossible process. In this regard, remittance behaviour can take a significant toll on migrants and affect their quality of life in host countries. Looking at the situation of Ghanaian workers in Australia, the author notes that they participate in the global economy of remittances because remittances put less or no pressure on states to provide social protection (p. 238).

Returning to the title question of this volume: Could we consider global migration as migration beyond limits? Obeng-Odoom clearly contextualizes migration within the cycle of global inequalities and the various axes of social stratification, pointing to the institutional drivers of the social and ecological crisis. He argues that a particular focus on equal access to and control over land and the simultaneous reconstruction of other institutions, such as systems of social protection for migrants, could actually lead to a reduction in global long-term inequalities. A particularly interesting part of

the book is the policy recommendations the author makes at the end of the empirical chapters. In doing so, he remains faithful to the volume's main theoretical premises: for example, that improving inclusion and integration is insufficient without changing institutions, that migration cannot provide a spatial solution to a fundamental social problem, and that housing-related remittances do not guarantee a fixed return of migrants to their countries of origin. In turn, he argues that it is necessary to address historical, socio-political, and economic connections and partnerships between labour and capital in relation to land (p. 253). Although he is a proponent of open border policies, he insists that they do not suffice and that we need greater awareness of class-based land issues. This would lead to the creation of more equal access to land, easier granting of citizenship status and rights, and the expansion of social protection for various immigrant groups.

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Franklin Obeng-Odoom is an associate professor in global development studies at the Helsinki Institute of Sustainability Science, based at the University of Helsinki in Finland. Previously, he taught at various universities in Australia, including the University of Technology Sydney. Obeng-Odoom's research and teaching interests are centred on the political economy of development, urban and regional economics, natural resources, and the environment, fields in which he has written six books, including *Property, Institutions, and Social Stratification in Africa* (Cambridge, 2020) and *The Commons in an Age of Uncertainty: Decolonizing Nature, Economy, and Society* (University of Toronto Press, 2021).

Information about the book

https://oxford.universitypressscholarship.com/view/10.1093/oso/9780198867180.001.0001/oso-9780198867180

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