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Posadimo drevo

V mnogih kulturah poznajo tradicijo, da ob rojstvu otroka posadijo drevo. Jaz imam svoj macesen, ki še vedno raste ob hiši, kjer je živela moja nona.

Vsi smo že slišali rek, da mora človek vzgojiti sina, napisati knjigo in posaditi drevo. Vsaj eno drevo. Posadimo ga lahko ob hiši, v skupnosti, soseski ali v gozdu, ki ga je prizadela ujma. Posadimo ga sami ali se pridružimo pobudi za sajenje dreves ali pogozdovanje. Vrtovi, soseske in ulice z drevesi so polni življenja, vsak odprti prostor v mestu je drugačen, bolj živ in prijazen, če ga bogati drevo. Mesta in vasi so popolni šele, ko jih pogledamo od daleč, v zelenem omrežju travnikov in gozdov, ki jih obdajajo, jih hkrati povezujejo in držijo narazen, da se ne zlijejo v puščobno sivino.

Drevesa sadimo premišljeno, izberimo pravo drevo za dano lokacijo. Ne sadimo lipe tam, kjer je prostora le za glog, in ne ciprese tam, kjer bi morala rasti lipa. Posadimo drevesa zdaj in z malo sreče bodo rasla, ko nas ne bo več tukaj. Drevesa kot zavetje za druga živa bitja in neprecenljiv naravni vir ter simbol življenja in resnične trajnosti. V njihovi senci se bodo hladili zanamci, ki nam bodo zagotovo hvaležni za vsak živi in zeleni delček planeta, ki jim ga bomo zapustili.

Naj vas v teh časih greje misel na zeleno in svetlo prihodnost. Zima bo hitro mimo in spet bo pravi čas za sajenje dreves, skrb za njihovo dobro uspevanje in uživanje v vsem, kar nam dajejo.

Damjana Gantar,
glavna urednica

Let's plant a tree

Many cultures have the tradition of planting a tree whenever a child is born. I, too, have my very own larch, still growing next to the house where my grandma used to live.

We are all familiar with the adage that every man should have a child, write a book, and plant a tree. At least one tree. We can plant it next to our house, in our community or neighbourhood, or in a forest damaged in a storm. We can plant it alone or join a tree-planting or afforestation initiative. Gardens, neighbourhoods, and streets with trees are full of life, and any urban open space feels different, livelier, and friendlier when graced by trees. Towns and villages only achieve perfection when viewed from afar in the green network of meadows and forests surrounding them, both connecting them and keeping them apart, so they do not merge into a uniform drabness.

We should plant trees wisely, by selecting the right one for a particular location. We should not plant a linden tree where there is only enough room for a hawthorn, or a cypress where a linden tree should grow. Let us plant our trees now and, with a little luck, they will still be growing after we are no longer here. Trees provide shelter to other living beings, are an invaluable natural resource, and are a symbol of life and real permanence. Our descendants will appreciate their cool shade with gratitude for every living green piece of the planet we have left behind.

May the thought of a green and bright future keep you warm in these times. Winter will soon be over, and the time will come again for planting trees, cultivating them, and enjoying everything they give us.

Damjana Gantar,
Editor-in-Chief

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Peter BIKAM
James CHAKWIZIRA

Vpliv tradicionalne zasnove naselij na urbanistično oblikovanje in načrtovanje: primer nigerijskega mesta Zaria

Avtorja na primeru starega dela nigerijskega mesta Zaria, ki se je razvijal med 11. in 19. stoletjem, proučujeta vpliv tradicionalne zasnove naselij na načrtovanje novih mestnih predelov. Njuna glavna teza je, da so bile nekatere prvine stare zasnove naselij vključene v novi del mesta. Ob pregledu literature analizirata razvoj mesta, pri čemer se osredotočata na tradicionalno arhitekturo Havsov in zasnovo njihovih naselij ter vpliv te arhitekture in zasnove na prostorsko ureditev. Z zemljevidi, skicami in preglednicami ponazorita, kako je bogata tradicija Havsov vplivala na urbanistično oblikovanje in načrtovanje mesta. Izsledki raziskave kažejo, da so nekatere tradicionalne zasnove naselij vplivale na urbanistično oblikovanje mesta, saj je bila ljudska arhitektura postopno vključena v regulacijske načrte novih mestnih predelov. Avtorja v sklepnem delu ugotavljata, da se lahko arhitekti, načrtovalci in investitorji veliko naučijo iz študije primera mesta Zaria.

Ključne besede: tradicionalna naselja, ljudska arhitektura, urbanistično oblikovanje in načrtovanje, kultura Havsov

1 Uvod

Bivališča so namenjena zadovoljevanju osnovnih človekovih potreb, zlasti zagotavljanju strehe nad glavo, varnosti in udobja. Kot navaja Astrolabe (2002), se ustvarjanje doma z vidika izbora lokacije, načrtovanja in gradnje v praksi od države do države razlikuje (Dobronravin, 2013; Barau idr., 2015). V povezavi z naselji Dmochowski (1990) poudarja, da lahko sodobne oblike stanovanjske gradnje vključujejo tradicionalno arhitekturo in zasnovo naselij, ki se mešata s sodobnimi oblikami in jih oblikujeta. Številna etnična in geografska območja v Nigeriji, vključno z osrednjimi, vzhodnimi in zahodnimi regijami, imajo tradicionalno arhitekturo in obliko poselitve, ki se od območja do območja razlikuje. Tradicionalna arhitektura Havsov je nekaj edinstvenega (Buchanan in Pugh, 1995). Prostorska razporeditev njihovih bivališč in odprtega prostora se je razvijala več generacij, nanjo pa so vplivali številni civilizacijski, kulturni in drugi dejavniki, povezani s tradicijo okolja. Olotuah (2000) navaja, da so lahko nekatere arhitekturne oblike značilne za posamezne etnične skupine in posledično vplivajo na obliko njihovih naselij, Egipčani, Grki in Rimljani so na primer razvijali arhitekturo, namenjeno različnim funkcijam (Hutchison in Sterbenz, 2018). Podobno so tudi Havsi z območja Zarie v severni Nigeriji znani po edinstveni arhitekturi, pri kateri oblika stavb izraža družbene vrednote (Rowan, 1981). Zaria je primer zgodovinskega naselja Havsov, v katerem so zunanji dejavniki, kot so podnebje, lokacija in družbene potrebe, vplivali na izbor materialov, tehnik in okrasja naselja, poleg tega pa še na velikost in razmerje prostorov ter razporeditev hiš (Denyer, 1978).

Avtorja obravnavata oblike in zasnove naselij tega ljudstva ter analizirata njegovo tradicionalno arhitekturo, da bi opredelila značilne urbanistične koncepte, ki jih lahko mestni načrtovalci, arhitekti in investitorji vključijo v sodobne urbanistične projekte. Na primeru starega mestnega jedra Zarie, ki se je razvijalo med 11. in 19. stoletjem, proučujeta vpliv tradicionalnih oblik naselij na načrtovanje novih mestnih predelov. Obravnavata naslednja vprašanja:

1. Kateri so zgodovinski razlogi za razvoj tradicionalnih havških naselij in arhitekture?
2. Kateri dejavniki so vplivali na prostorsko ureditev, obliko in tloris havških naselij?
3. Katera mnenja prevladujejo o vplivu tradicionalnih naselij in arhitekture v Zarii na združevanje starih in novih oblik naselij v sodobnem urbanizmu?

2 Gradivo in metode

V tem poglavju je opisano območje raziskave, predstavljene so podobne starejše in novejše raziskave in opredeljeni so razlogi za izbor uporabljene metode zbiranja podatkov. Mesto Zaria je bilo izbrano, ker dobro ponazarja, kaj se lahko urbanisti in drugi strokovnjaki naučijo iz bogate arhitekturne tradicije Havsov ter zasnove in prostorske ureditve njihovih naselij. Metoda zbiranja podatkov je bila podobna tisti, ki so jo uporabili drugi raziskovalci (npr. Faludi, 1979; Taylor, 1998; Deckro in Hebert, 2003). Združevala je etnografijo in paradigmo načrtovalske teorije, ki upošteva tradicionalne in sodobne pristope k arhitekturi, zasnovam naselij in načrtovanju mest. Z izbrano raziskovalno metodo sta lahko avtorja pokazala, kako je tradicionalno havško naselje vplivalo na urbanistično oblikovanje in načrtovanje v Zarii.

2.1 Izbor proučevanega območja in zbiranje podatkov

Staro mestno jedro Zarie je primer značilnega naselja Havsov in po mnenju avtorjev eden najboljših primerov tradicionalnega načrtovanja mest v Zahodni Afriki. V skladu z etnografskimi metodami vključevanja skupnosti v raziskave zgodovinskih naselij (npr. Ibrahim, 2015; Narayanan, 2015) so bili primarni podatki zbrani na podlagi intervjujev s prebivalci Zarie. Primarni in sekundarni podatki so bili potrebni za boljše razumevanje vpliva tradicionalnih havških naselij na arhitekturo, načrtovanje in prostorsko ureditev mesta. Podatki so bili zbrani v dveh fazah:

- v prvi fazi so bili na podlagi pregleda ustnega izročila in objavljenih informacij zbrani sekundarni podatki. Proučeni so bili *številni* viri, zlasti strokovni članki o tradicionalni arhitekturi in zasnovah havških naselij ter knjižnično gradivo mesta Zarie in tamkajšnje Univerze Ahmaduja Bella;
- v drugi fazi so bili podatki pridobljeni od ključnih posameznikov, kot so tradicionalni vodje, starešine, trgovci, uradniki in raziskovalci oddelka za arhitekturo na Univerzi Ahmaduja Bella. Poudarek je bil na boljšem razumevanju razvoja naselij in urbanističnega načrtovanja na proučevanem območju.

Z izbranimi raziskovalnimi metodami je bilo mogoče analizirati vpliv zasnove starih naselij na sodobno urbanistično oblikovanje in načrtovanje, kar se ujema z metodami, ki poudarjajo potrebo po upoštevanju zgodovinskih, kulturnih, fizičnih, gospodarskih in družbenih vidikov urbanih sistemov in območij. Pristop temelji na knjigi z naslovom *Field instruction: A guide for social work students* (Royse idr., 2007), ki vsebuje smernice za opravljanje terenskih raziskav v skupnostih.

Preglednica 1: Raziskovalna vprašanja, metode, analiza in rezultati

Vprašanje	Metoda	Analiza	Rezultat
1) Kateri so zgodovinski razlogi za razvoj tradicionalnih havških naselij in arhitekture?	• sekundarni viri (11.–19. stol.) • intervjuji po gospodinjstvih • intervjuji s ključnimi posamezniki • participativno kartiranje	• opisna statistika • analiza trendov • zgodovinska analiza/analiza dokumentov	prikaz in tipologija arhitekture, tradicionalnih naselij in urbanističnega načrtovanja
2) Kateri dejavniki so vplivali na prostorsko ureditev, obliko in tloris havških naselij?	• splošna raziskava proučevanega območja • terenska opazovanja • terensko preverjanje izsledkov intervjujev • intervjuji s ključnimi posamezniki	• analiza značilnosti/prostorska analiza • analiza dejavnikov združevanja starih in novih oblik • prostorska analiza • analiza dejavnikov združevanja starih in novih oblik • analiza arhitekture/oblike hiš • hitra participativna analiza • tematska analiza	prostorski vzorci in tloris naselij, arhitekturni slogi in oblika hiš
3) Katera mnenja prevladujejo o vplivu tradicionalnih naselij in arhitekture v Zarii na združevanje starih in novih oblik naselij pri sodobnem urbanističnem oblikovanju in načrtovanju?	• intervjuji s ključnimi posamezniki • deduktivna metoda	• analiza intervjujev • analiza dejavnikov združevanja starih in novih oblik • prostorska analiza • deduktivna analiza	mnenja o vplivu tradicionalnih naselij in arhitekture v Zarii na združevanje starih in novih naselij

Vir: avtorja, na podlagi Ibrahim (2015) in Narayanan (2015)

2.2 Anketiranje

Na desetih ključnih točkah v Zarii (blizu mošeje, tržnic in trgovin) so bile s ključnimi posamezniki opravljene ankete o arhitekturi ter urbanističnem oblikovanju in načrtovanju. Vprašanja so se nanašala na uporabljene gradbene materiale, vpliv vere na arhitekturo, verske simbole in značilne okrasne vzorce, sestavo gospodinjstev in prostorsko razdelitev zemljišča posamezne domačije. Navedeni pristop je bil potreben, ker je večina prebivalcev Zarie muslimanov, zaradi česar je dostop do ženskih anketirank otežen. Poleg tega je bilo 63 anket opravljenih z glavno osebo v posameznem gospodinjstvu, pri čemer je morala taka oseba najprej povedati, ali živi v starem ali novem delu mesta.

2.3 Terenska opazovanja

Opravljene so bile terenske raziskave havških naselij, sestavljenih iz posameznih gospodinjskih enot s pripadajočimi funkcionalnimi površinami, izsledke pa sta nato avtorja primerjala s starimi skicami iz kolonialnega obdobja. Na tej podlagi sta izdelala ilustracije in skice, prikazane v članku. O pomenu okrasja in podob na pročeljih in vratih sta govorila s ključnimi posamezniki in raziskovalci iz Oddelka za arhitekturo Univerze Ahmaduja Bella. Navedeno je omogočilo globlji vpogled v vpliv tradicionalne arhitekture in naselij Havsov na sodobno načrtovanje mesta. Tradicionalne oblike naselij sta avtorja prikazala na skicah.

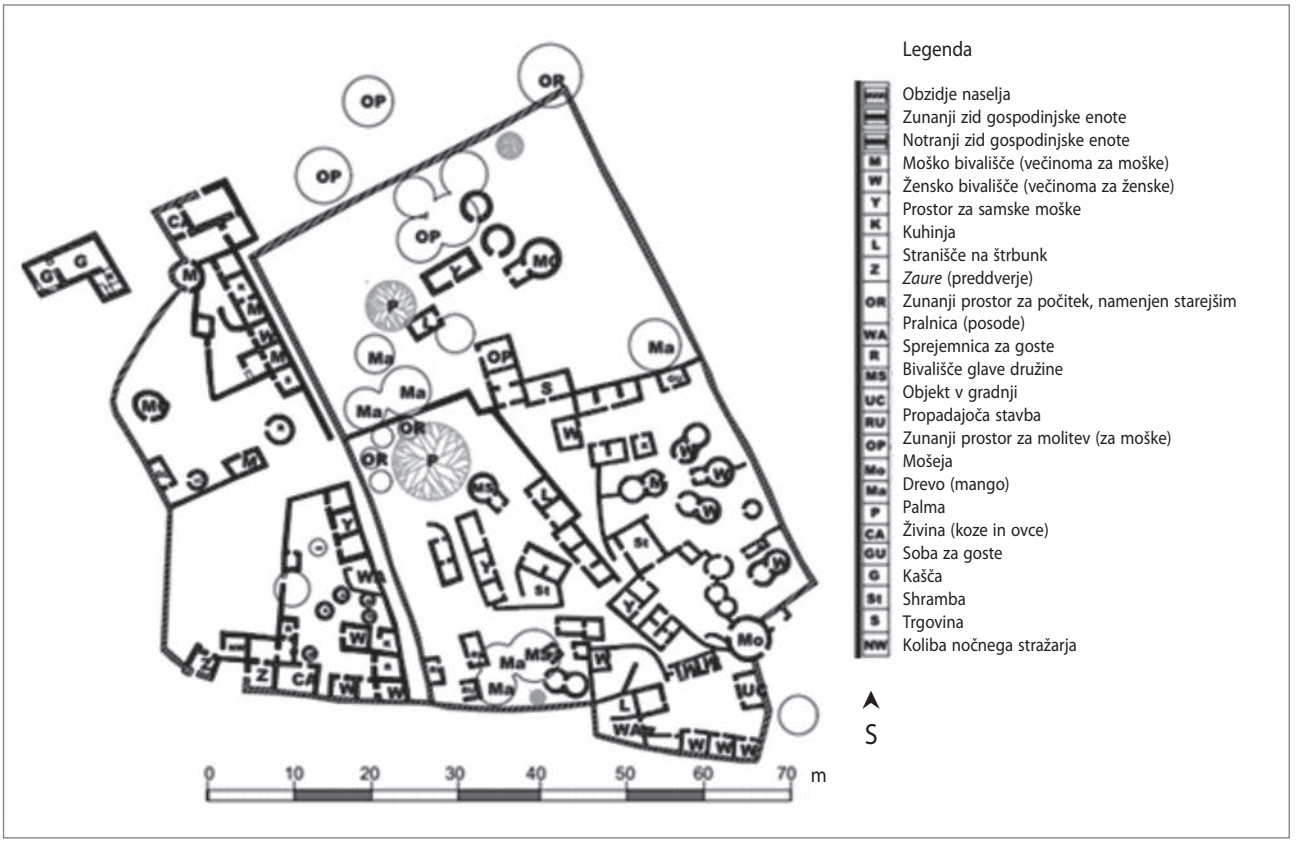
3 Havška naselja

Zaria je na južnem robu etničnega havškega ozemlja. Naselja Havsov so bila nekdaj fevdalne mestne države z monarhično obliko vladavine. Obdana so bila z obzidjem, znotraj katerega je bila tržnica. V 14. stoletju se je iz malijskega cesarstva med ljudstvo razširil islam, ki je po mnenju avtorjev obogatil njegovo kulturo. Na začetku 19. stoletja so upravo nad nekdanjimi emirati prevzeli Britanci. Ustanovitev univerze in univerzitetnega naselja je vplivala na tradicionalno arhitekturo in prostorsko ureditev širšega območja Zarie, tudi v Bomu – še enem havškem naselju severno od Zarie.

3.1 Geografsko in zgodovinsko ozadje havških naselij

Havška naselja so v savanah običajno blizu rek. Na območju njihove poselitve se včasih gozdnate doline izmenjujejo z ob-

Slika 1: Lokacija Zarie in drugih nekdanjih havških mestnih držav (ilustracija: avtorja, na podlagi Ayodele in Odeyale, 2019)



Slika 2: Prostorska ureditev in tloris havškega naselja (ilustracija: avtorja, na podlagi Moughtin, 1964, in lastnih opazovanj)

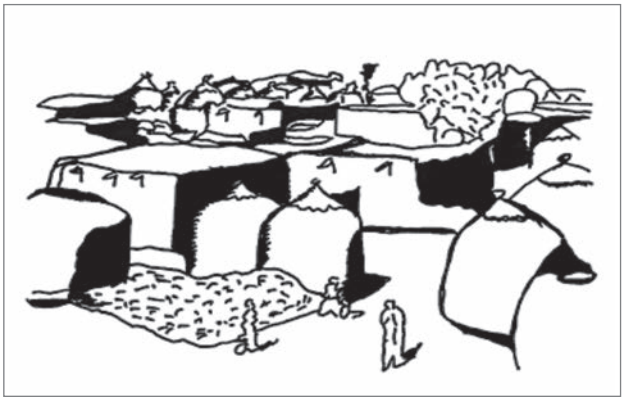
močji, poraščenimi z redkim trnatim grmičevjem. Pred britansko kolonialno vladavino so imele havške države vzpostavljeno predkapitalistično gospodarstvo in dobro razvita upravna središča. Havsi so poznali raznoliko tehnologijo, ki so jo uporabljali pri raznih obrteh, kot sta lončarstvo in krašenje buč (Kirk-Green, 1961). Na opisanem geografskem območju se je Zaria, eno izmed večjih mest v nigerijski zvezni državi Kaduna, prej znano kot Zazzau, razvilo v eno izmed sedmih havških mestnih držav. Po podatkih nigerijskega popisa prebivalstva je imelo mesto leta 2006 406.099 prebivalcev (Federal Office of Statistics, 2006). V mestu, v katerem prevladujejo Havsi, so razne ustanove in tržnice, njegovo gospodarstvo pa temelji na kmetijstvu (Ma'aruf, 2019).

3.2 Pojav značilne zasnove havških naselij

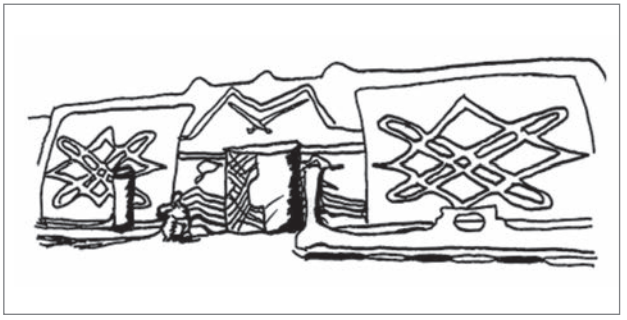
V 14. stoletju sta imela trgovina čez Saharo in širjenje islama iz malijskega cesarstva ogromen vpliv na obliko havških naselij. Iz hierarhije podeželskih naselij se je razvila edinstvena zasnova, ki temelji na sistemu razširjenih družin, razdeljenem na več gospodinjskih enot s pripadajočimi funkcionalnimi površinami. Na sliki 2 je prikazana značilna prostorska ureditev havškega naselja s posameznimi gospodinjskimi enotami (domačijami) in dvorišči. Naselje je ograjeno in sestavljeno iz več strnjenih domačij. Pri odločanju o notranji ureditvi naselja je bila ključna varnost. Zaria je dober primer havškega mesta, obdanega z obrambnim zidom, ki je bil zgrajen v 18. stoletju (Adeyemi, 2008). Zgoščenost gospodinjstev blizu tržnice kaže na obrambni slog havških naselij in prostorsko ureditev, ki omogoča druženje.

3.3 Vpliv tradicionalne havške arhitekture na obliko naselij

Povezava med tradicionalno havško arhitekturo in sodobno obliko naselij temelji na treh odločilnih dejavnikih: kulturi Havsov, okolju in podnebnem vplivu. Kultura Havsov temelji na zgodovini in tradiciji. Osredotoča se na sorodstvene vezi in družbeno strukturo ljudi (Madaua, 1968). Njihov način gradnje kaže vplive islama, pri čemer so prevladovali objekti ukrivljenih in stožčastih oblik s kupolasto streho iz blata (slika 3). Rapoport (1969) ugotavlja, da je avtohtona havška arhitektura znana po rebrastih obokih in kupolastih zunanjih zidovih stavb, ki omogočajo hitrejše odtekanje vode med nalivi. Poleg tega so bila posamezna bivališča včasih sestavljena iz enot jajčaste oblike, imenovanih *tubali*, s katerih je dež dobro odtekal. Med terenskimi opazovanji je bilo ugotovljeno, da so kupolaste strehe zgrajene iz blata, posušenega na soncu in na koncu ometanega, da je vse skupaj videti kot iz enega kosa (Beer in Higins, 2000). Posamezna domačija je sestavljena iz okroglih objektov, včasih so med temi tudi objekt z ravnimi robovi,



Slika 3: Havški način gradnje z značilnimi ukrivljenimi in stožčastimi oblikami (ilustracija: avtorja, na podlagi Rapoport, 1969)

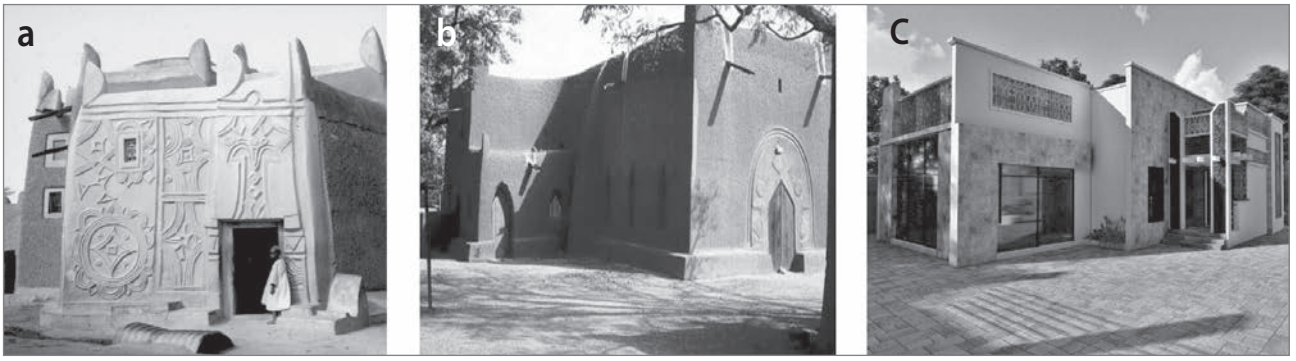


Slika 4: Značilne poslikave na vhodnem zidu (ilustracija: avtorja)

ki pa vseeno ne tvorijo popolne kvadrataste oblike. Objekti so med seboj povezani, vse pa obdaja zid (Friedrich, 1982).

3.4 Vpliv podnebja in britanske kolonialne vladavine na tradicionalno zasnovo havških naselij v Zarii

Zaria je na savanskem območju Zahodne Afrike, za katero je značilno tropsko podnebje s toplim vremenom skozi vse leto. Deževna doba traja od marca do septembra, sušna pa od oktobra do februarja. Leta 2016 je povprečna dnevna temperatura znašala 25,6 °C, s povprečno količino padavin 117,6 mm in 69-odstotno povprečno relativno vlažnostjo. Zaradi takega podnebja je treba zasnovati tako gradnjo, ki blaži dnevno vročino in omogoča nočno hlajenje. Slamnate strehe se na primer uporabljajo kot okras in za zaščito zidov iz blata pred vročino in nalivi, v odprtinah pod hišami in kaščami pa v vročini in nalivih najdejo zavetje kokoši, psi in mačke. Opisani načini gradnje se v nekaterih tradicionalnih havških naseljih uporabljajo še danes (Beer in Anne, 1982). Drugo okrasje vključuje poslikave na vhodnem zidu (slika 4). Na delu obzidja, kjer je glavni vhod, je raznovrstno, močno poudarjeno okrasje, kar je še danes značilno za mnoga havška mesta, kot so Kano, Kazaure in Zaria. Tovrstna okrasna umetnost je del arhitekturne dediščine in jo je mogoče opaziti v številnih predelih Zarie.



Slika 5: (a) primer tradicionalne havške arhitekture (foto: Isaac Samuel), (b) primer kolonialne havške arhitekture (foto: Isaac Samuel), (c) primer sodobne havške arhitekture (foto: Kalifa Rabiu)

Vključuje preproste trikotnike ter navpične, vodoravne in včasih okrogle like in vzorce. Začetki britanske vladavine v Nigeriji segajo v 18. stoletje, vrhunec pa je dosegla v 20. stoletju. V kolonialnem obdobju so se začele graditi stavbe sodobnih oblik, hkrati pa se so začeli spreminjati tudi pogledi na načrtovanje mest (slika 5).

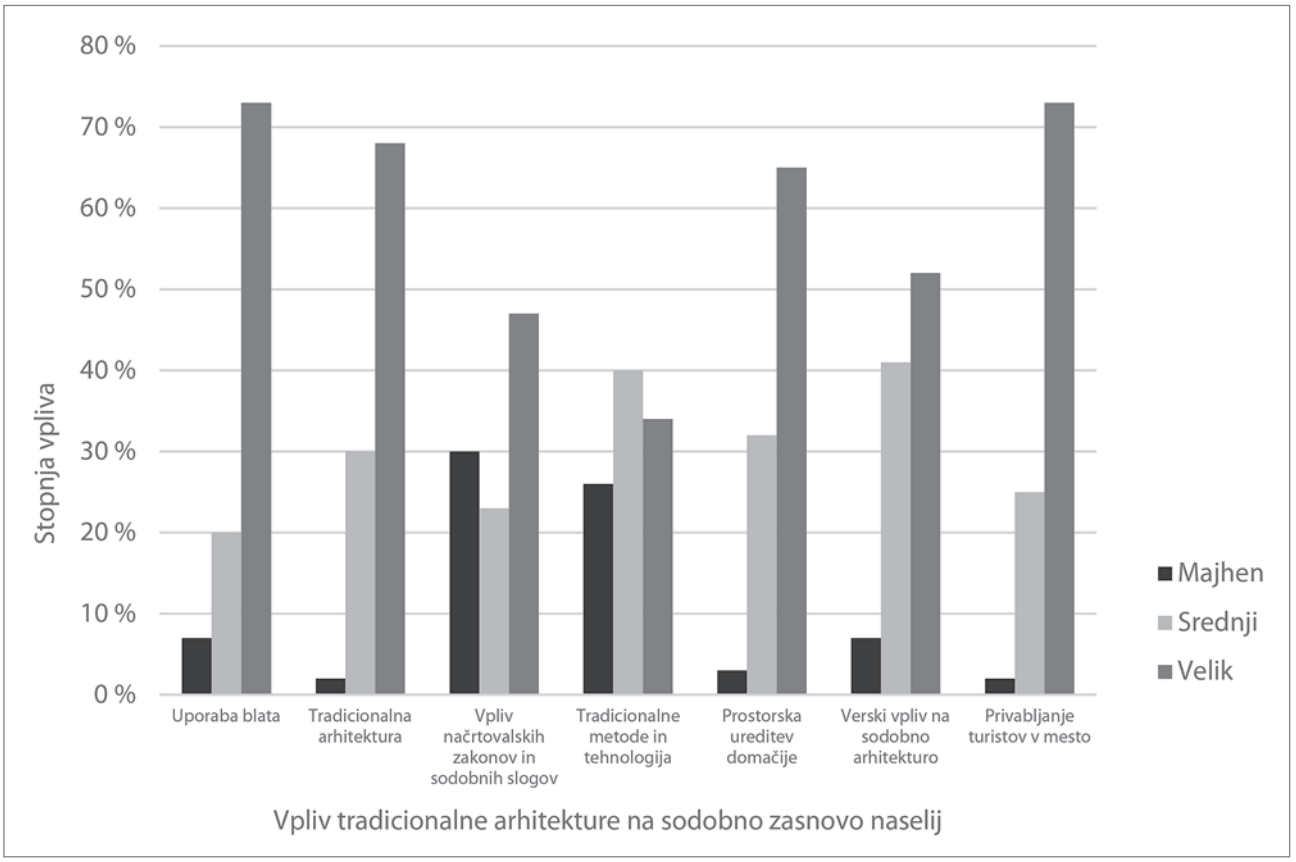
Kolonialne oblasti so poleg tega v novih naseljih zunaj ograjenega mesta začele graditi posebna vladna stanovanjska območja za belce, ki so spodbujala sodoben način življenja in v katerih so prevladovali sodobni, obstojni gradbeni materiali, kot so cement, beton in jeklo. Zaradi tega so tudi prebivalci Zarie začeli drugače gledati na uporabo blata kot gradbenega materiala in pomen arhitekture v prostorski ureditvi domačij. Tako so tudi v Zarii začele nastajati betonske stavbe in tlakovane ceste. Z vidika zunanjega opazovalca je tradicionalna havška arhitektura razpeta med spremembami in sodobnim življenjem na eni strani ter kulturo in dediščino na drugi. V Zarii ni več moderno graditi hiš iz blatnih opek, še vedno pa je moderno okraševati vhode stavb v tradicionalnem havškem slogu (Adedokun, 2014).

V kolonialnem obdobju so Havsi začeli kolovoze in zidove iz blata, ki so obdajali bivališča, nadomeščati z ulično zasnovo. V tradicionalnem havškem naselju je vsak prostor ločen glede na rabo. Na primer, hiše muslimank, ki so morale bivati v ločenih prostorih in si ob izhodu zakrivati obraz, so bile urejene tako, da je imela vsaka ženska, ki je bila podrejena svojemu možu, svojo sobo. Vzorec je značilen tudi za druga afriška naselja, vendar so v Zarii sobe okrog dvorišča razporejene tako, da so moški in ženske med sabo ločeni. V naselje se vstopi skozi preddverje (*zaure*) – običajno je to koliba, v kateri sedijo moški in se pogovarjajo. Vsak družinski član ima neomejen dostop do dvorišča, kjer se lahko igrajo tudi otroci. Na robu dvorišča so kolibe za neporočene mlade moške in moške goste. Žena svoje prostore okrasi z darili, ki jih je prejela za doto, in drugimi osebnimi predmeti. V teh prostorih tudi spi skupaj s svojimi najstniškimi otroki, kar velja še danes. Ko je odraslemu moškemu dodeljen kos zemlje, najprej zgradi obzidje, vhodno kolibo ali preddverje in več kolib za spanje, odvisno od potreb. Ti objekti stojijo znotraj obzidja. Z obzidjem ograjene gospodinjske enote družin, povezanih s sorodstvenimi vezmi, običajno stojijo skupaj. Mreža obzidij ustvarja značilno zasnovo naselja, ki se na koncu spremeni v mesto. Oblikovanje mesta je proces, pri katerem kulturne, družbene, gospodarske, politične in fizične prvine vplivajo druga na drugo. Lynch in Rodwin (1958) ugotavljata, da urbane oblike nastajajo na podlagi izkušenj in so osnovne prvine človeških naselij, kulture in družbe. Razporeditev urbanih prostorov je torej ključni dejavnik družbenih in prostorskih ureditev. V Zarii urbane prvine običajno fizično in prostorsko vplivajo na družbena in gospodarska okolja, kar je značilno za sodobna mesta.

4 Rezultati in razprava

4.1 Prehod iz tradicionalne Zarie v sodobno mesto

Avtorja sta opravila intervjuje s 63 anketiranci, vključno s ključnimi posamezniki iz Zarie, da bi ugotovila, kaj menijo o vplivu tradicionalne havške arhitekture in zasnove naselij v mestu. Po mnenju 68 % vprašanih (glej sliko 6) se je vloga tradicionalne havške arhitekture na sodobno zasnovo naselij zmanjšala, še vedno pa vpliva na obliko stavb in naselij. 32 % vprašanih pa je navedlo, da na obliko stavb in naselij vplivajo drugi dejavniki, kot so sodobna načela urbanističnega oblikovanja in načrtovanja. V zvezi z verskim vplivom na sodobno arhitekturo jih 52 % meni, da je vera tako ali drugače vplivala na način gradnje v preteklosti, danes pa je njen vpliv manjši. 41 % jih meni, da na obliko havških naselij vplivajo arhitekturni slogi zahodnega sveta, 7 % pa, da nanjo vpliva mednarodna arhitektura, kar zmanjšuje tamkajšnji tradicionalni verski vpliv na obliko stavb in naselij. Z vidika prostorske ureditve in funkcionalne rabe prostora 65 % vprašanih meni, da ima tradicionalna arhitektura še vedno velik vpliv, 32 % jih je navedlo, da je njen vpliv zmeren, 3 % pa, da je velik. To temelji na mnenju, da se pri sodobnem načrtovanju mest uporabljajo arhitekturni in urbanistični koncepti, kot so novi



Slika 6: Mnenja anketirancev glede vpliva tradicionalne havške arhitekture (grafični prikaz: avtorja)

urbanizem, nova mobilnost, nova regionalizacija in pametna mesta. Izsledki se ujemajo z ugotovitvami raziskave, ki jo je opravil Akintoye (2010), in kažejo, da imajo glavne etnične skupine v Nigeriji bogato tradicijo, pri kateri kultura vpliva na obliko stanovanjskih stavb. Vpliv se izraža v različnih prvinah tradicionalnih hiš, vključenih v sodobno arhitekturno oblikovanje in načrtovanje mest (Bailey idr., 1977). Husukić in Zejnilović (2017: 17) ugotavljata, da »lahko arhitekturni ostanki ali razvaline v mestnem tkivu namesto nestabilnih enot postanejo gonilo kontinuitete«. To nakazuje potrebo po vključevanju stare in nove arhitekture v urbanistično oblikovanje in načrtovanje.

Raziskava je pokazala še, da se lahko tradicionalna prostorska ureditev havških naselij vključi v ureditev novih mestnih predelov, saj se tudi sodobno urbanistično oblikovanje in načrtovanje osredotočata na gospodarno rabo zemlje in materialov ter funkcionalno uporabo prostora. Zdi se, da je islam ključni dejavnik za ohranjanje tradicionalne havške arhitekture in naselij (Aluko, 2011). Pojav sodobne podobe mestnega prebivalca in dejstvo, da je vlada poskušala vključiti tradicijo v gradbene predpise, med anketiranci nista bila dobro sprejeta. Kljub temu je z vidika toplotnega udobja, oblike in podnebja blato še vedno pogosto uporabljen gradbeni material v Nigeriji (Evans, 1995; Danja idr., 2017). Večina anketirancev (73 %) se je strinjala, da sta tradicionalna arhitektura Havsov in zasnova njihovih naselij vplivala na obliko stavb v mestu. Okraševanje pročelij in vhodov s podobami mečev in polmeseca je značilna prvina ljudske arhitekture in dediščine, vidna na nekaterih stavbah v Zarii.

65 % anketirancev meni, da so na obliko stavb v Zarii vplivali kolonialni slog, uvedba sodobne gradbene zakonodaje v 19. in 20. stoletju ter naslednje okoliščine:

- zmanjšanje števila velikih tradicionalnih havških družinskih bivališč zaradi uvedbe prostorske zakonodaje, ki je dajala prednost manjšim nuklearnim družinam s hišo ter urejenim dvoriščem in parkiriščem;
- zaradi sodobne stanovanjske gradnje in prednosti ekonomije obsega se je v novem delu mesta zmanjšal vpliv havške arhitekture in zasnove naselij;
- upad rabe tradicionalnih oblik havških naselij zaradi uvedbe sodobnih gradbenih materialov, kot so cement, beton in jeklo, in ulične zasnove;
- manjša uporaba tradicionalnega okrasja, oblikovanega iz blata, in večja naklonjenost sodobnim materialom zaradi njihove lažje uporabe;
- slamnate strehe se nadomeščajo s strehami iz valovite pločevine, saj je uporaba sodobne strešne kritine veliko preprostejša od napornega pokrivanja streh s slamo.

Preglednica 2: Dejavniki, ki podpirajo združevanje starih in novih oblik naselij, in njihov pomen

Dejavnik	Pomen
Prostorska strnjenost mestnih območij	Več območij za pešce, manjša poraba energije, visoka kakovost življenja z vidika družabnih stikov, dostop do komunalnih storitev, večji občutek pripadnosti skupnosti, manjša potreba po prevozu.
Mobilnost	Manjša potreba po prevozu, dostop do storitev, prikladno naravno okolje in površine, prijazne pešcem, boljši javni prevoz.
Gostota	Dobra povezanost urbanih funkcij in prostorskih dejavnosti, strnjena gradnja, učinkovita raba prostora in mestnih zemljišč, manj lastnikov avtomobilov in manjša potreba po prevozu.
Mešana raba prostora	Varnost na ulicah, večja dostopnost, privlačne ulice, več ustvarjalnih stikov med sosedi.
Raznolikost	Bogate družbene in kulturne dejavnosti ter različna tradicionalna in verska prepričanja, ki spodbujajo hodljivost in oblikovanje privlačnih mestnih krajin v bližini.
Zeleni mestni razvoj	Spodbujanje prilagoditev mikroklimatskim razmeram, zelene površine za otroke, odprti prostori za druženje in spodbujanje participativnih metod prostorskega načrtovanja.

Vir: Dhingra in Chattopadhyay (2016)

4.2 Prehod iz havških blatnih kolib v betonske stavbe

Človek je pri gradnji blato zamenjal z betonom in jeklom zaradi njune trpežnosti, prikladnosti in prožnosti (Taylor, 1998; Chokor, 2005). Edinstvenost havške stanovanjske gradnje temelji na dostopnosti materialov in prostorski ureditvi domačij. Blato ni umetelno obdelano, kot so cementni zidaki. Havsi, zlasti tisti v Zarii, so najraje uporabljali drevesne veje, rdeči laterit in savansko travo, ki so bili dostopni v bližini. Ker pa laterit ni tako plastičen kot glina, so mu tradicionalni havški zidarji začeli dodajati travo, gnoj in zmlete plodove rožičevca, da bi izboljšali plastičnost blatnih zidakov. Ker je bilo blato povsod na voljo in zlahka dostopno, se je uporabljalo za gradnjo hiš, vendar je imel ta način gradnje številne slabosti, kot so neprožnost, nestabilni temelji in neodpornost proti eroziji. Navedene težave se zdaj rešujejo z uporabo gradbenih materialov, kot je beton, cementni zidaki ali lomljen kamen (Rudofsky, 1964; Yiftachel, 1989). Zamenjava tradicionalnih gradbenih materialov ima vpliv na kulturno dediščino prebivalcev Zarie, ki se danes kaže v združevanju starih in novih oblik stavb.

4.3 Vpliv zunanjih dejavnikov

Na preobrazbo stavb in zasnove naselij v Zarii so delno vplivali tudi zunanji dejavniki, kot so vera (džihad), vsakdanje življenjske potrebe, okolje in potreba po varnosti. Zaradi preteklih in sedanjih družbenogospodarskih dejavnikov so začeli prebivalci Zarie značilnosti bivališč in oblike naselij dojemati z vidika sprememb in sodobnega načrtovanja mest. Podobno sta ugotovila tudi Kuvač in Schwai (2017: 11) v raziskavi o (re)konstrukciji prostorske identitete v soseskah Mađir v Banjaluki (Bosna in Hercegovina) in Ilsvika v Trondheimu (Norveška), v kateri sta podarila potrebo po upoštevanju »zgodovinskih in osnovnih odnosov med ljudmi in krajem«.

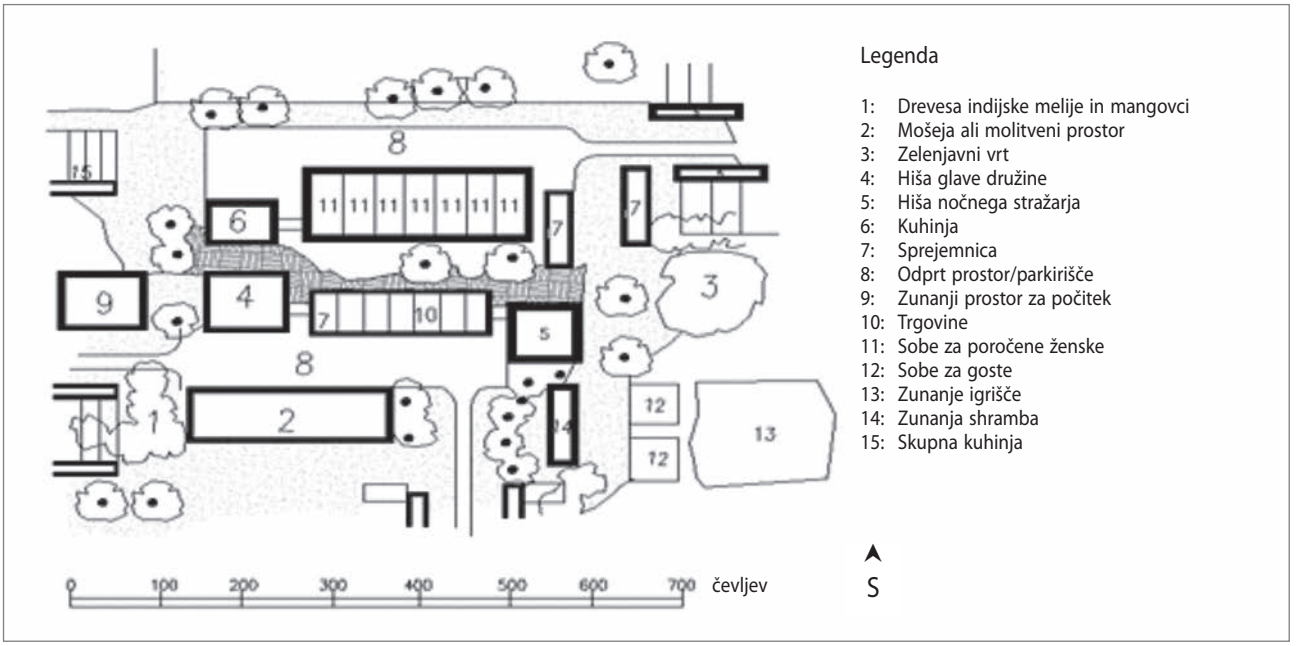
4.4 Vpliv prostorske ureditve tradicionalnih havških naselij

Raziskava je pokazala, da sta tradicionalna havška arhitektura in zasnova naselij v Zarii uspevali zaradi okolja, ki je to omogočalo. Na havškem ozemlju sta bili razširjeni zaradi lokalno razpoložljivih in cenovno dostopnih gradbenih materialov ter njunega družbeno-kulturnega pomena. To je potrdila tudi večina anketirancev (73 %). Vpliv tradicionalne havške arhitekture in zasnove naselij je viden v ureditvi prostora in funkcij v sedanjih havških soseskah v Zarii, med drugim v ločenosti objektov in prostorov na posamezni domačiji, kar je družbenogospodarska posebnost. Urejenost domačij v sklenjene enote s pripadajočimi funkcionalnimi površinami izraža značilno zasnovo tradicionalnega havškega naselja, ki bi se lahko vključila v sodobne mestne gradbene projekte in načrte.

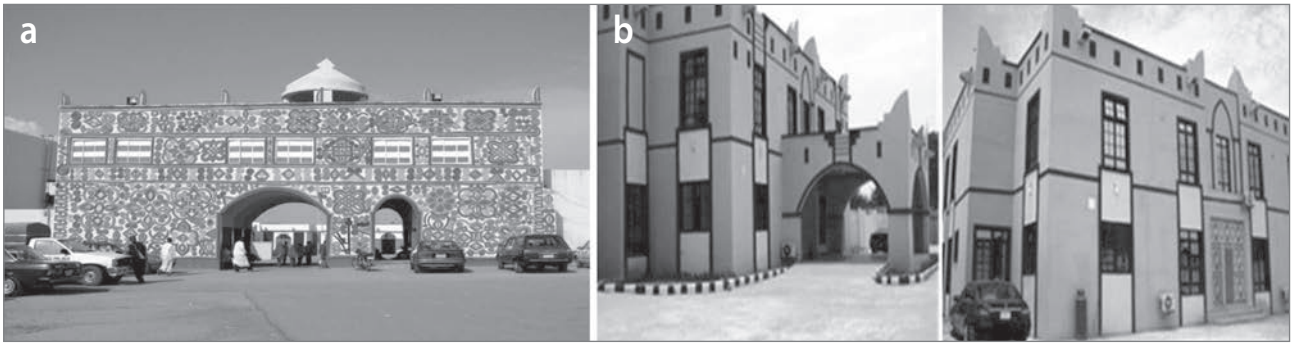
4.5 Dejavniki, ki podpirajo združevanje starih in novih oblik naselij v Zarii

Študija o Zarii se osredotoča na dejavnike, ki podpirajo združevanje tradicionalnega in sodobnega načrtovanja naselij. Njeni izsledki so pokazali, da se lahko prvine prostorske ureditve tradicionalnih naselij v Zarii delno vključijo v sodobno urbanistično oblikovanje in načrtovanje. Proučevani dejavniki vplivajo na trajnostni razvoj z družbenega, gospodarskega in okoljskega vidika (glej preglednico 2).

Zaria se je iz preprostega mesta z obzidjem razvila v konglomeracijo, sestavljeno iz treh glavnih delov: 1) starega dela mesta, obdanega z obzidjem, 2) nehavških stanovanjskih območij, zgrajenih v evropskem slogu, ki vključujejo tudi vladne urade in tržnice, ter 3) novega dela mesta, v katerem živijo druge, nehavške, etnične skupine. Kot navaja Ma'aruf (2019), je bil vsak del ločena upravna in načrtovalska enota. Mestni načrt iz



Slika 7: Vključitev tradicionalne zasnove naselja v zasnovo sodobnega mestnega predela (ilustracija: avtorja)



Slika 8: (a) tradicionalna havška arhitektura v severni Nigeriji, (b) sodobna havška arhitektura z zašiljenimi zaključki (*zanko*) na vrhu, ki dajejo tradicionalen videz (foto: Shiraz Chakera).

leta 1917 je nastal na podlagi niza načrtov, ki jih je leta 1914 predlagala kolonialna uprava, nato pa je bil leta 1918 in nato še leta 1939 znova popravljen in dopolnjen. Vse različice načrta so se osredotočale na glavna stanovanjska območja v evropskem slogu in z njimi povezano rabo zemljišč (Yigitcanlar idr., 2015).

4.6 Uporaba tradicionalne zasnove naselij, značilne za Zario

V tem poglavju je ponazorjeno, kako se lahko tradicionalna zasnova naselij, značilna za Zario, vključi v zasnovo novih mestnih predelov. Tradicionalni havški odprti prostor, imenovan *dadali*, je primerljiv z zelenimi ali parkovnimi površinami v novih mestnih predelih. Poleg tega se lahko sklenjene havške gospodinjske enote s pripadajočimi funkcionalnimi površinami (domačije) v Zarii – zlasti njihov vhod ali preddverje, kjer za varnost prebivalcev skrbi vratar ali nočni stražar – primerjajo z zasnovo slepih ulic. Na sliki 7 je prikazan poskus vključitve prvin tradicionalnih havških naselij v zasnovo novih mestnih predelov (Jackson, 2005). To se sklada z ugotovitvijo predhodne raziskave, da sta urbanistično oblikovanje in načrtovanje »večdimenzionalna in kompleksna prvina, ki se lahko presoja simbolno ali z vidika oblike (forme), pri čemer je treba hkrati s posameznikovimi izkušnjami, vedenjskimi vzorci ter subjektivnimi vidiki in pomeni proučiti tudi fizične značilnosti, naravno okolje, rabo zemljišč, prometne tokove in grajene oblike« (Rezafar in Turk, 2018: 24). Iz vpliva tradicionalnih naselij v Zarii se lahko veliko naučimo glede podobnosti in razlik v prostorski ureditvi naselij. Opaziti je mogoče mnoge sodobne primere vključevanja tradicionalnih oblik havških naselij in načrtovalskih načel v gradnjo, ti primeri pa se lahko uporabljajo tudi na splošno pri načrtovanju mest in upravljanju trajnostnega razvoja. Razlike in podobnosti z vidika dejavnikov, ki vplivajo

Preglednica 3: Dejavniki, ki vplivajo na tradicionalno in sodobno zasnovo naselij v Zarii

	Razlike		Podobnosti	
Dejavniki	Tradicionalna oblika	Sodobna zasnova	Tradicionalna oblika	Sodobna zasnova
Prilagojenost okolju	Gradnja na primerni lokaciji.	Izbrana lokacija mora izpolnjevati gradbene zahteve.	Primernost lokacije za stanovanjsko rabo, poplavno varno območje.	Stanovanjska gradnja na poplavno varnih območjih.
	Lokalni gradbeni materiali.	Uvoženi ali obdelani gradbeni materiali.	Les iz bližnjih gozdov.	Brušen uvožen les.
	Upoštevanje sezonskih temperaturnih sprememb.	Primernost lokacije je lahko odvisna od konstrukcijskih zahtev.	Sezonske temperature, padavine in vetrovi lahko vplivajo na orientacijo stavb.	Na orientacijo stavb vplivajo osončenost, prevladujoči vetrovi in temperatura.
	Drevesa se ohranijo zaradi sence.	Drevesa se posadijo, kjer je treba.	Gradnja okoli obstoječih dreves.	Drevesa so posajena zato, da opravljajo točno določeno funkcijo.
Oblika naselja	Kultura posamezne etnične skupine.	Povezovanje ne glede na etnično skupino.	Kulturni dejavniki družbenega povezovanja.	Povezovanje ljudi iz najrazličnejših okolij.
	Na velikost stavb vplivata funkcija in raba.	Stavbe imajo lahko več nadstropij.	Na velikost stavbe vpliva njena raba.	Velikost stavbe je odvisna od razpoložljivih sredstev.
	Strnjene stanovanjske stavbe.	Stanovanjska gradnja na podlagi coniranja.	Bolj postopna kot spontana urbanizacija.	Urbanizacija na podlagi gradnje novih sosesk in mestnih predelov.
Arhitekturni slog	Podoben način gradnje za vse vrste stavb.	Način gradnje je prilagojen vrsti stavbe.	Osnovne gradbene metode.	Gradnja z uporabo tehnologije.
	Lokalni materiali.	Uvoženi ali industrijski materiali.	Lokalni gradbeni materiali.	Uvoženi ali lokalni materiali.
	Stavbni okras temelji na običajih ali kulturnih praksah.	Stavbni okras temelji na raziskavah in inovacijah.	Stavbni okras kot izraz družbe in kulture.	Stavbni okras kot izraz popularne kulture in informacijske tehnologije.
Prostorska ureditev	Razporeditev odprtih prostorov in funkcij na podlagi družbenih in kulturnih potreb.	Razporeditev odprtih prostorov na podlagi znanstvenih izračunov.	Razporeditev odprtih prostorov na podlagi družbenih potreb in dejavnosti.	Razporeditev odprtih prostorov na podlagi rabe zemljišč in coniranja.
	Ureditev bivališč na podlagi klanov, zakonskega stana in potreb.	Odprt prostor, namenjen otrokom.	Razporeditev bivališč na podlagi trenutnih bivalnih potreb.	Razporeditev bivališč na podlagi gostote prebivalcev.
	Razporeditev bivališč na podlagi velikosti razširjenih družin.	Razporeditev bivališč na podlagi potreb.	Razporeditev bivališč na podlagi stanovanjskih potreb.	Razporeditev bivališč na podlagi razvojnih in poslovnih predlogov.

Vir: avtorja

na tradicionalno in sodobno zasnovo mestnih predelov v Zarii, so podobne tistim v raziskavah od drugod (Mandanipour, 1996; Boerefijn, 2016).

5 Sklep

Raziskava je pokazala, da tradicionalna havška arhitektura in zasnova naselij vplivata na prostorsko ureditev stanovanjskih sosesk v Zarii (Falahat, 2013). Ob upoštevanju dejavnikov, ki so podobni pri načrtovanju tako tradicionalnih kot novih mestnih predelov, se lahko tradicionalna oblika naselij vključi v zasnovo novih mestnih območij. Izsledki so poleg tega pokazali, da uporaba cenejših gradbenih materialov, kot so mešanica laterita in ilovice, les, kamen in slama, ter oblikovalskih načel, ki omogočajo več zasebnosti in večje udobje, izvira iz tradicionalne havške arhitekture in zasnove naselij. Kljub temu tradicionalne zasnove naselij ni mogoče v celoti vključiti v načrte novih mestnih območij, saj morajo biti zemljišča formalno pridobljena. V preteklosti so se zemljišča v glavnem pridobivala na podlagi tradicionalnih sistemov, pri katerih uradna registracija lastninskih pravic ni bila potrebna, danes pa to ni več mogoče. Da bi se arhitektura in oblika naselij, značilna za Zario, lahko uporabljali tudi drugod, morata ustrezati posameznemu družbeno-kulturnemu okolju. Pri tem se ne sme zanemariti vpliva modernizacije, zavedati pa se je treba tudi pomena me-

šanja tradicionalnih in sodobnih konceptov arhitekture in načrtovanja naselij. Za boljše razumevanje okvira za povezovanje obeh modelov so potrebne nadaljnje raziskave. Tradicionalna naselja, tudi naselja Havsov v Zarii, izražajo želje ljudi, te želje pa temeljijo na družbenih, gospodarskih, izobraževalnih, verskih in kulturnih vrednotah. Urbanisti, arhitekti in investitorji bi lahko proučili, kako lahko tradicionalno arhitekturo in druge oblike kulturne dediščine vključijo v načrte novih naselij, da bi okrepili povezanost skupnosti in pomen dediščine ter zagotovili primere dobre prakse pri urbanističnem oblikovanju in načrtovanju.

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Zagotavljanje trajnostne kulturne dediščine z učinkovito javno politiko

Trajnostnost kulturne dediščine je kompleksno vprašanje, ki se zlasti na projektni ravni redko meri. Razlog za to je predvsem pomanjkanje splošnih kazalnikov, zaradi česar so številni projekti s področja dediščine samo delno trajnostni. V članku avtorici opredelita pojem trajnostne dediščine ter predstavita metode za njegovo ugotavljanje in presojo. Raziskava, ki sta jo opravili, se je osredotočala na analizo izbranih primerov dobre prakse v Grčiji, Italiji in Španiji ter na Poljskem, Portugalskem in Nizozemskem, ti so bili kot strateški projekti vključeni v posamezne instrumente regionalne ali lokalne politike Evropske unije. Metode, s katerimi sta proučevali kazalnike, ki bi se lahko uporabili za vrednotenje trajnostnih naložb v kulturno dediščino, so vključevale kabinetno raziskavo in naknadno analizo izbranih projektov s področja dediščine, financiranih v okviru posameznih instrumentov politike EU, intervjuje z upravitelji kulturne dediščine, fokusne skupine in primerjalno analizo proučevanih primerov dobre prakse. Iz izsledkov je razviden ključen pomen naslednjih dejavnikov: sodelovanje in široka vključenost raznih deležnikov, dobro kulturno upravljanje, razvejani viri financiranja, vključenost lokalne skupnosti, ki kulturno dediščino vzame za svojo, upoštevanje strokovnih standardov, inovativne rešitve in skrbno prostorsko načrtovanje pri zagotavljanju trajnostne dediščine. Primeri dobre prakse so težko prenosljivi, saj je uspeh prenosa odvisen od značilnosti lokalnega okolja. Za opredelitev trajnostne dediščine na projektni ravni je predlagan splošen nabor kazalnikov trajnostnosti, na podlagi katerih bi bile lahko v okviru instrumentov politike opredeljene prihodnje prednostne naloge in upravičene naložbe.

Ključne besede: kulturna dediščina, kazalniki trajnosti dediščine, politike s področja dediščine

1 Uvod

Pomen dediščine je nesporen in splošno priznan, v praksi pa se pogosto izkaže, da zagotavljanje njene trajnostnosti ni lahka naloga, saj je odvisna od številnih dejavnikov (npr. financiranja, upravljanja in človeških virov). Najpomembnejši okvir za zagotavljanje tega so politike s področja dediščine. Če te ne zajemajo ustreznih ukrepov, je lahko trajnostnost dediščine ogrožena, kar ima številne negativne posledice, vključno s propadanjem kulturnih objektov in neuspelimi naložbami.

Trajnostna rast je prednostna naloga strategije Evropa 2020 (Evropska komisija, 2010) in kohezijske politike EU (Evropska komisija, 2014), katere ukrepi naj bi imeli dolgotrajen vpliv na regionalni razvoj. Trajnostni razvoj je tudi glavni cilj projektov s področja kulturne dediščine, ki so bili izdatno financirani iz številnih evropskih virov. Razpisi v okviru raznih programov financiranja projektov s področja kulturne dediščine običajno zahtevajo pojasnila ali dokazila, da prijavljeni projekti zagotavljajo trajnostne načrtovane rezultate. Večina projektov to nalogo v teoriji dobro opravi, včasih pa to težko dokaže v praksi, kar na koncu pripelje do sramotne, a pogoste prakse v smislu »ko se projekt konča, se vse konča« (Steckiewicz, 2017: 34). Čeprav po védenju avtoric do zdaj ni še nihče proučil, koliko projektov s področja kulturne dediščine je trajnostnih tudi po koncu financiranja, sta sami spremljali številne projekte, pri katerih so bila razpisana sredstva uporabljena brez pravega razmisleka o tem, kako to zagotoviti. Čeprav je opisana praksa splošno znana, se o njej redko javno razpravlja. Navedeno tudi kaže, da so pri presoji projektov najverjetneje nekatere vrzeli, zaradi katerih bi bilo treba razmisliti o spremembi vzpostavljenih mehanizmov presoje.

1.1 Cilji

V članku avtorici predstavita splošna priporočila za učinkovito javno politiko s področja kulturne dediščine, ki bi zagotavljala trajnostne projekte in hkrati upravičila vložena sredstva. V nadaljevanju so najprej predstavljeni pojem trajnostne dediščine in načini ugotavljanja te trajnostnosti, nato pa je predlagan splošen nabor kazalnikov trajnostnosti.

Pojem trajnostnega razvoja je predmet številnih razprav že od sedemdesetih let 20. stoletja, kultura pa je šele v zadnjih letih postala prepoznana kot pomemben steber navedenega razvoja (Vecco in Srakar, 2018). Kljub temu trajnostnost kulturne dediščine same po sebi ali z vidika njenih lastnih vrednot ni pogosto obravnavana. Čeprav poznamo številne razloge za ohranjanje kulturne dediščine (npr. okrepitev identitete, večja povezanost lokalne skupnosti ter estetska, izobraževalna in znanstvena vrednost), je najočitnejši in običajno največji razlog upravičevanje javnih naložb v kulturno dediščino. Izboljšanje javnih politik ter posledično zagotavljanje obstojnosti kulturne dediščine nista lahki nalogi, saj dediščina ni samo predmet kulturne politike, ampak je pogosto vključena v različne instrumente javnih politik (npr. s področja prostorskega načrtovanja, turizma, regionalnega razvoja itd.), kar zahteva celostno upravljanje kulturne dediščine.

V nadaljevanju so navedeni izzivi, ki se običajno pojavljajo pri opredelitvi pojma trajnostne kulturne dediščine in proučevanju te trajnostnosti. Sledita predstavitev rezultatov raziskovanja primerov dobre prakse s proučevanega področja in razprava. Na koncu so predlagana priporočila za izboljšanje javnih politik.

1.2 Opredelitev pojma trajnostne dediščine

Trajnostni razvoj je opredeljen kot razvoj, ki izpolnjuje potrebe sedanjosti, ne da bi pri tem ogrožal sposobnost prihodnjih generacij, da izpolnjujejo svoje potrebe (World Commission on Environment and Development, 1987: 16). Z vidika trajnostnega razvoja je kultura prišla v ospredje na podlagi prizadevanj organizacije United Cities and Local Government (UCLG) in njene Agende 21 za kulturo, sprejete leta 2009. S tem je bil narejen velik korak naprej, ki je poudaril pomen kulture kot četrtega stebra trajnostnega razvoja (poleg gospodarskega, socialnega in ekološkega). Običajno se govori o kulturnem vidiku trajnostnega razvoja, ki pa se močno razlikuje od trajnostne kulture, ki se nanaša na ohranjanje kulture, praks, prepričanj in identitete, vključno z dediščino, ter prihodnji obstoj posamezne kulture. Pojem trajnostne dediščine ima podoben pomen, v praksi pa je jasno, da se javne razprave običajno bolj osredotočajo na instrumentalne kot pa lastne vrednote dediščine. V tem članku je obravnavana trajnostnost kulturne dediščine, ki jo lahko razumemo v smislu ohranjanja za prihodnje generacije ob hkratnem iskanju ravnovesja in harmonije med kulturno dediščino in ljudmi, ki bi jo radi spoznali (Jelinčić in Glivetić, 2020). V raznih agendah politike so njene lastne vrednote v primerjavi z instrumentalnimi močno zapostavljene. Agenda trajnostnega razvoja do leta 2030 tako bežno omenja potrebo po varovanju kulturne dediščine, niti besede pa ni o njenem vrednotenju ali prenovi (Vecco in Srakar, 2018). Kljub temu se številni projekti, ki jih financira EU, z navedeno tematiko ukvarjajo s praktičnega vidika, cilj pa sta izpolnjevanje standardov trajnostne dediščine in zagotavljanje učinkovitih evropskih naložb.

Pojem trajnostne dediščine je zelo zapleten, saj poznamo mnogo vidikov trajnostnega razvoja, na podlagi katerih se lahko presoja vzdržnost dediščinskih projektov. Običajno se razume v družbenem, kulturnem, gospodarskem in okoljskem smislu,

Preglednica 1: Običajni izzivi, povezani s trajnostnostjo kulturne dediščine, in rešitve zanje

Splošni vplivi	Izzivi	Rešitve
Gospodarski	Pomanjkanje sredstev	Neposredno financiranje (subvencije, podedovana sredstva, sponzorstva/donacije, soznamčenje, množično financiranje, prodaja, gostinstvo, dogodki, zasebni najem, predstavitve, uporabnina)
	Pomanjkanje vodstvenih sposobnosti	Dejavnosti, ki krepijo vodstvene sposobnosti, razvoj programov usposabljanja, usposabljanje vodij usposabljanj, izmenjava izkušenj, prenos znanja, priprava načrtov upravljanja dediščine
Družbeno-kulturni	Modernizacija	Ustrezna uporaba objekta, uporaba tehnologije, sklepanje kompromisov
	Standardizacija	Uporaba ustvarjalnih in inovativnih metod, prilagojenih izbranemu okolju
	Javno mnenje	Ozaveščanje in izobraževanje, prostovoljstvo, živa dediščina
	Politični pritiski	Politično sporna dediščina, ozaveščanje in izobraževanje, vključitev zunanjega, objektivnega strokovnjaka
	Družbeni pritiski (prevelik obisk, plenjenje)	Uporaba orodij za upravljanje števila obiskovalcev, tehnologije, mednarodnih pravnih podlag zoper plenjenje, dronov za nadzor nad plenjenjem, satelitskih posnetkov
Okoljski	Podnebne spremembe	Digitalno ohranjanje dediščine, dolgoročni strateški načrti zmanjšanja negativnih okoljskih vplivov, izobraževanje
	Zeleno gospodarstvo	Uporaba okolju prijaznih materialov in opreme pri obnovi in vzdrževanju, načela krožnega gospodarstva (npr. uporaba ekoloških sistemov in obnovljive energije)
	Naravne nevarnosti (npr. potresi, invazivne vrste, poplave)	Redno opazovanje, nadzor, upravljanje, zatiranje in iztrebljanje invazivnih vrst ter njihova zamenjava z neinvazivnimi vrstami, digitalno ohranjanje dediščine

Vir: Jelinčić in Glivetić, 2020; Boromisa idr., 2016

kar zahteva celostni pristop. Teoretično izhodišče za razumevanje trajnostne dediščine so raziskave aktivnosti številnih akterjev s področja kulturne dediščine z vidika političnih, gospodarskih in družbenih interesov (Čeginskas, 2018). V razpravah o kulturni politiki se pojavljajo trije ključni izzivi: omejena možnost presoje vpliva dediščine na razvoj, vprašanje dolgoročnih učinkov dediščinskih projektov in težko dokazovanje obstoja tovrstnih učinkov. Zato se raziskave osredotočajo na iskanje novih metod za presojo projektov in upravljanje kulturne dediščine (Azevedo, 2016).

Trajnostnost kulturne dediščine je povezana z vrednotenjem kulturnih, tehničnih, ekonomskih in okoljskih rezultatov projektov (ICOMOS, 2019), pri čemer se ekonomski rezultati običajno vrednotijo z vidika vzpostavljanja in vzdrževanja trajnostnega turističnega razvoja, pomembnega za lokalne skupnosti (Pepe, 2018). Družbeni rezultati se pogosto nanašajo na vpliv dediščine na lokalne skupnosti (Labadi, 2007; Carra 2016), v zadnjem času pa se v raziskavah med pristopi k upravljanju kulturne dediščine poudarja pomen vrednot, ki jih določa skupnost (Kajda idr., 2018). Okoljski vidik se po eni strani izraža prek vpliva podnebnih dejavnikov na dediščino (Gruber, 2008), po drugi pa prek izvajanja načel krožnega (Foster, 2020) in zelenega gospodarstva (Hoff, 2011).

Pri presoji trajnostnosti kulturne dediščine je še vedno veliko vrzeli, povezanih z opredelitvijo vpliva in učinkov projektov. Med drugim ni jasne opredelitve vrednot (Garcia in Cox, 2013), poudarek je na ekonomskih meritvah, manj pa je kazalnikov, ki se nanašajo na kulturni, sociološki in okoljski vidik, ob tem se pogosto poudarjajo pozitivni učinki, negativni pa se prezrejo. Uporabljajo se kvantitativne metode proučevanja trajnostnosti, ki večinoma temeljijo na ekonomskih kazalnikih, kvalitativne metode, ki ponujajo odgovore na vprašanji kako in zakaj, pa se ne uporabljajo dovolj. Za omogočanje trajnostne kulturne dediščine je poleg tega pomembno doseči soglasje, ki lahko zagotovi uspešno izvajanje projektov s področja kulturne dediščine in vzdrževanje rezultatov teh projektov. Ob upoštevanju vsega navedenega je zelo težko ugotoviti pomen številnih vidikov trajnostnega razvoja in izbrati, kateri so pomembnejši. Zagotavljanje ustreznih in zanesljivih konservatorskih metod, ki poskrbijo za to, da se ohranja umetniška, estetska in zgodovinska vrednost dediščine, je lahko stroškovno zelo neučinkovito, hkrati pa lahko prihaja v nasprotje z okoljskim vidikom. K trajnostnosti dediščine je zato treba pristopiti celostno, na podlagi česar se lahko sprejmejo učinkoviti ukrepi. Pri zagotavljanju, da se k njej pristopa z različnih vidikov, se lahko pojavijo raznovrstne težave, kar dokazuje, da trajnostnost in obstojnost kulturne dediščine nista neodvisna pojma, ampak sta pogosto povezana s številnimi vidiki dediščine (Jelinčić in Glivetić, 2020).

Največji izziv pri zagotavljanju ekonomskih vidikov trajnostnosti dediščine je pomanjkanje sredstev, med družbeno-kulturne izzive pa spadajo modernizacija in standardizacija varstva dediščine, politični pritiski (npr. sporna dediščina) in javno mnenje o vrednotah dediščine. V zadnjem desetletju so se povečali tudi okoljski vplivi na dediščino, zlasti tisti, povezani s podnebnimi spremembami, zelenim gospodarstvom in naravnimi nevarnostmi (glej Preglednico 1).

V literaturi, v kateri se obravnava trajnostnost kulturne dediščine (npr. Torre 2002; ICOMOS, 2013), se običajno poudarjajo njena edinstvenost, umetniška, znanstvena, estetska, kulturna, zgodovinska, izobraževalna in krajinska vrednost ter njen pomen za lokalno skupnost. Težave, ki se pojavljajo pri ohranjanju kulturne dediščine, vključujejo slabo vzdrževanje (ki lahko vpliva na njeno estetsko, izobraževalno in znanstveno vrednost), čezmerno izkoriščanje v turistične namene (zaradi česar so možne poškodbe ali celo propadanje dediščine in gentrifikacija), uporabo napačnih zgodovinskih podatkov ali nepristne dediščine (kar vpliva na njeno izobraževalno, znanstveno, kulturno in zgodovinsko vrednost), spore glede edinstvenosti registrirane dediščine ter izgubo povezave med lokalno skupnostjo in kulturno dediščino (Jelinčić in Glivetić, 2020).

Eden največjih današnjih izzivov pri zagotavljanju trajnostne dediščine je njeno slabo upravljanje, in sicer v vseh fazah, od načrtovanja in izvedbe do spremljanja in vrednotenja. Na trajnostnost dediščine lahko vplivajo tudi konkretni izzivi, povezani z njenim ohranjanjem in vzdrževanjem, ki pa zahtevajo posebno strokovno znanje in v tem članku niso obravnavani.

1.3 Ugotavljanje trajnostnosti dediščine

Eden izmed načinov doseganja trajnostnosti dediščine je vpeljava konkretnih ukrepov ali ustreznih aktivnosti v okviru posameznih instrumentov politike. Ni pa nujno, da navedeno pripelje do učinkovitega rezultata, kot je na primer veliko trajnostnih dediščinskih projektov. Zaradi raznih dejavnikov, ki vplivajo na trajnostnost dediščine, so za ugotavljanje uspešnosti doseganja njene trajnostnosti potrebni številni kazalniki. Čeprav čedalje več znanstvenih del proučuje kulturne kazalnike, je literature o kazalnikih trajnostnosti dediščine zelo malo (npr. Noca, 2018). Če že, se raziskave osredotočajo na dediščinski turizem (UNWTO, 1996) ali pa proučujejo trajnostnost dediščine s kazalniki, ki se nanašajo na točno določene okoliščine in območja, kot so vojna območja (Vecco in Srakar, 2018).

Znanstvena obravnava kulturnih vidikov se osredotoča na sedem prvin: dediščino, vitalnost, finančno vzdržnost, raznovrstnost, kraj, ekološko-kulturno prožnost in kulturno civilizacijo. Navedene prvine se delno prekrivajo, v nekaterih vidikih, odvisnih od posameznega primera, pa se razlikujejo (Soini in Inger, 2014: 213). Čeprav se lahko uporabljajo tudi pri proučevanju kazalnikov dediščine, je treba pri doseganju kulturnih vidikov trajnostnosti poudariti pomen dediščine kot nosilke kulturnega kapitala, ki ga je treba prenesti na prihodnje generacije. Pri izvajanju ukrepov za zagotavljanje trajnostne dediščine na ravni instrumentov politike je uporaben nabor kazalnikov za presojo kulturnih politik, ki ga je razvil Colin Mercer (2002) in vključuje naslednje štiri kategorije kazalnikov: kulturna vitalnost, raznovrstnost in živahnost; kulturna dostopnost, participacija in potrošnja; kultura, življenjski slog in identiteta ter kultura, etika, upravljanje in obnašanje. Prva kategorija se nanaša na dinamiko kulturnega gospodarstva, druga na kulturno angažiranost, tretja se osredotoča na to, kako kultura vpliva na posameznikov življenjski slog in identiteto, četrta pa je povezana z vlogo kulture v osebnem razvoju ali razvoju skupnosti. Predlagani kazalniki naj bi izboljšali kakovost življenja, ta je lahko posredno povezana s trajnostnostjo in bi se lahko uporabljala tudi kot eden izmed kazalnikov trajnostnosti dediščine. Vse predlagane kategorije bi lahko prilagodili področju kulturne dediščine, kar so leta 2013 delno že poskušali storiti Axelsson idr. na primeru 290 švedskih občin. Mercerjevi kazalniki so bili poleg izsledkov navedene raziskave podlaga priporočilom za izboljšanje politike.

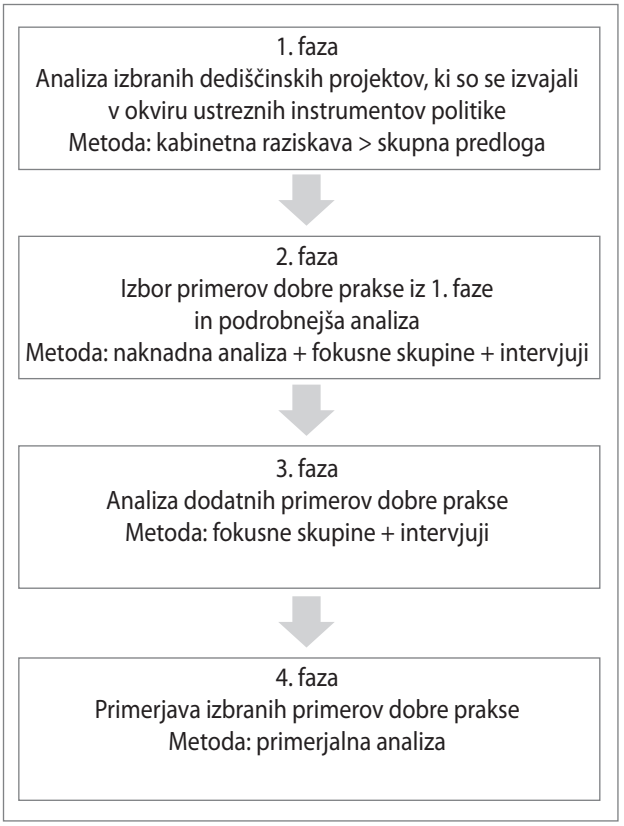
Ugotavljanje trajnostnosti dediščine dodatno otežuje to, da se vplivi merijo na več ravneh, lahko se merijo na ravni politike ali na ravni posameznih projektov, programov in ustanov. Običajno se presojajo predlagani ukrepi (projekti, programi, načrti ali politike) (Pope idr., 2017), pri čemer se ugotavlja, ali predhodno opredeljeni cilji morebiti niso bili izpolnjeni. V resnici je kljub razpoložljivim kazalnikom trajnostnosti težko najti neki univerzalni model (Agol idr., 2014). Še v okviru ciljev trajnostnega razvoja do leta 2030, ki jih je sprejela OZN, pomen dediščine skoraj ni priznan, poleg tega niso zagotovljeni ustrezni kazalniki. Podobno je tudi pri strategiji trajnostnega razvoja, ki jo je sprejela EU. Nekateri raziskovalci (Vecco in Srakar, 2018) so jo poskušali popraviti z dodajanjem tém, povezanih s trajnostjo območij kulturne dediščine, in opredelitvijo kazalnikov za vsako izmed njih. Predlagali so naslednje glavne kazalnike: ohranjanje kulturne dediščine, kulturna kohezija in povezanost lokalne skupnosti, varovanje naravnega in kulturnega ekosistema, kakovost upravljanja območij kulturne dediščine, gospodarski pomen kulturnega dediščinskega turizma za skupnost in destinacijo, družbena nosilna zmogljivost destinacije, ohranjanje zadovoljstva turistov, nadzor nad razvojem in načrtovanjem območja kulturne dediščine, sezonskost turistične dejavnosti, zaposlovanje v turizmu in turistični prevozi.

Čeprav so predlagani kazalniki smiselni, niso dovolj celoviti. Na splošno se zdijo primerni za vertikalno ugotavljanje na

višjih ravneh (npr. na mednarodni in nacionalni ravni), znamenitosti na ravni posameznih območij kulturne dediščine pa se redko proučujejomerijo in za to ni na voljo celovitih kazalnikov (Ren in Han, 2018).

2 Raziskovalna metoda

Da bi ocenili trajnostnost dediščine na lokalni ravni, sta avtorici proučili tovrstne primere dobre prakse, na podlagi katerih sta oblikovali priporočila za izboljšanje instrumentov politike, ki podpirajo projekte s področja kulturne dediščine. Raziskava je potekala v okviru projekta, ki ga je financirala EU (Internet 1), na podlagi predpostavke, da so lahko javne politike pobudniki kakovostnih projektov, ki imajo dolgotrajen vpliv na regionalni razvoj. Osredotočala se je na šest držav: Grčijo, Italijo, Poljsko, Portugalsko, Španijo in Nizozemsko. Vsaka država uporablja drugačen pristop k financiranju kulturne dediščine v okviru ustreznih instrumentov politike (lokalna, regionalna ali evropska sredstva) in k zagotavljanju ekonomskih, okoljskih ali socialnih vidikov trajnostnosti dediščine. Analizirani so bili izbrani projekti, financirani v okviru različnih instrumentov politike. Za ugotavljanje dejavnikov, ki vplivajo na trajnostnost dediščine, sta avtorici analizirali še dodatne primere dobre prakse. Posamezne faze raziskave so prikazane na Sliki 1.



Slika 1: Faze raziskave in uporabljene metode (ilustracija: avtorici)

Uporabljene raziskovalne metode so vključevale kabinetno raziskavo in naknadno analizo izbranih projektov s področja kulturne dediščine, ki so bili financirani v okviru posameznega instrumenta politike, intervjuje z upravitelji kulturne dediščine, odgovornimi za izbrane projekte, fokusne skupine, vzpostavljene kot svetovalno telo, in primerjalno analizo izbranih primerov dobre prakse.

V prvi fazi sta avtorici izvedli opisno analizo trinajstih izbranih projektov (Internet 1). Zanjo sta oblikovali skupno predlogo, ki je zajemala opis konteksta, zasnove, upravljanja in finančne vzdržnosti posameznega projekta ter končne opombe. V drugi fazi sta na podlagi naknadne analize in fokusnih skupin izbrali sedem primerov dobre prakse. Člani fokusnih skupin so pregledali in ovrednotili projekte ter na podlagi skupnega števila točk, ki ga je posamezni projekt dosegel pri vrednotenju, izbrali najboljše. Z naknadno analizo sta avtorici proučili, ali so projekti dosegli zastavljene cilje in ali je bila vrednost doseženih rezultatov enakovredna porabljenim sredstvom. Izbrane primere dobre prakse sta analizirali z vidika njihove učinkovitosti, relevantnosti, vpliva in trajnostnosti (npr. dejansko stanje v primerjavi z načrtovanimi aktivnostmi, prispevek k družbi, trajnostnost in revizija računovodskih izkazov). Fokusne skupine sta uporabili zato, da bi v okviru njih izbrali najboljše pretekle kulturne projekte na podlagi ovrednotenja njihove trajnostnosti, dediščinskih vrednot in prenosljivosti. V tretji fazi sta na podlagi intervjujev z upravitelji kulturne dediščine izbrali dodatnih deset primerov dobre prakse, te sta nato analizirali, da bi ugotovili, kateri dejavniki vplivajo na trajnostnost dediščine. Skupaj sta tako opravili 17 intervjujev. V ta namen sta oblikovali posebno predlogo, ki je vključevala enaka merila kot pri fokusnih skupinah v drugi fazi. Za izhodišče sta uporabili predlogo za analizo primerov dobre prakse, ki se uporablja v okviru programa Interreg Europe, ob tem pa sta jo prilagodili potrebam svoje raziskave. Merila za analizo primerov dobre prakse so temeljila na uveljavljenih strokovnih modelih presoje vrednosti dediščine, vendar sta jih avtorici v skladu s sodobnimi načeli ohranjanja in upravljanja dediščine dopolnili z novimi. Povzeli sta jih iz številnih virov, kot so načrti upravljanja dediščine, dokumenti mednarodnih organizacij, ki se nanašajo na dediščino, in poročila vrednotenj kulturne dediščine (npr. Rampton in Carlberg, 2015), ter jih razdelili v tri skupine: trajnostnost v smislu že znanih štirih vidikov (varovanje kulturne dediščine, finančna vzdržnost, okoljski in družbeni vpliv), dediščinske vrednote (znanstvena, estetska, kulturna, zgodovinska, krajinska, izobraževalna in ekonomska vrednost, edinstvenost, pomen za lokalno skupnost) in prenosljivost (organizacijski model, oblikovanje politik, posebna orodja, kot so usposabljanje, financiranje in upravljanje, ter upravljanje tveganj). Poleg tega sta oblikovali sklop vprašanj za intervjuje z upravitelji kulturne dediščine, ki je bil podlaga za analizo primerov dobre prakse po prej oblikovani predlogi. S tem sta lahko opredelili ključna vprašanja

pri zagotavljanju trajnostne dediščine. V četrti fazi sta avtorici primerjali izbrane primere dobre prakse in opredelili glavne izzive, te pa podrobneje analizirali. Na tej podlagi sta opredelili kazalnike trajnostnosti.

Fokusne skupine so bile organizirane na dveh ravneh: v vsaki proučevani državi in na ravni raziskovalnega partnerstva. Cilj fokusnih skupin po posameznih državah je bil podpreti celoten proces zbiranja podatkov ter pridobiti strokovna mnenja, na podlagi katerih sta avtorici izbrali primere dobre prakse za analizo, ter strokovna mnenja glede raziskovalnih orodij (npr. predlog za zbiranje podatkov) in končnih rezultatov (izsledkov posameznih faz raziskave). Število članov in sestava fokusnih skupin sta se po državah razlikovala, odvisno od lokalnega okolja, običajno pa so bili v te skupine povsod vključeni upravitelji kulturne dediščine, predstavniki upravnih oblasti, občin, turističnih organizacij, lokalnih akcijskih skupin, univerz ali raziskovalnih centrov in kulturnih ustanov ter svetovalci. Poleg teh so fokusne skupine vključevale predstavnike posamezne države in raziskovalce, ki so imeli vlogo upravljavcev znanja in so vodili celoten proces. Cilj je bil razpravljati o raziskovalnem procesu v vsaki državi in v skladu s podanimi mnenji prilagoditi njegov potek.

Raziskava je potekala od junija 2018 do februarja 2020. Največji izziv je bila raznovrstnost analiziranih primerov dobre prakse, kar je zahtevalo poseben upravljavski pristop. Navedeno je nekoliko oteževalo proučevanje primerov dobre prakse, saj se trajnostnost ugotavlja na podlagi zelo različnih meril. Posledično je bilo težko ugotoviti, ali gre v posameznem primeru za trajnostno prakso. Težavo sta avtorici omilili z uporabo fokusnih skupin, v katerih so strokovnjaki razglabljali o tem, kaj bi bil lahko primer dobre prakse. Raznovrstnost analiziranih primerov dobre prakse je bila potrebna za to, da je bil lahko v raziskavo zajet čim širši nabor kazalnikov, povezanih s trajnostno dediščino, na podlagi česar sta lahko avtorici opredelili končni nabor kazalnikov.

Med vsemi merili vrednotenja je bila prenosljivost največji izziv, saj je močno odvisna od lokalnega okolja, ki pa ni bil predmet raziskave. Manjše omejitve raziskave, povezane z različnimi ravnmi strokovnega znanja s področja oblikovanja politik, strateškega razvoja in upravljanja kulturne dediščine, sta avtorici rešili z uporabo fokusnih skupin na ravni raziskovalnega partnerstva.

3 Rezultati

Rezultati analize trinajstih izbranih dediščinskih projektov, ki so se izvajali v okviru različnih instrumentov politike, kažejo pozitivno povezavo z raznimi vidiki. Vse proučevane projekte lahko opredelimo kot trajnostne, bodisi s finančnega, okoljskega ali družbenega vidika, hkrati pa vplivajo na varovanje kulturne dediščine.

Pri presoji primerov dobre prakse ali projektov, izvedenih v okviru različnih instrumentov politike, sta avtorici ugotovili, da je bila trajnostnost zagotovljena samo z nekaterih vidikov, ne pa vseh (Preglednica 2).

Podrobnejša analiza nekaterih projektov in dodatnih primerov dobre prakse v okviru sedemnajstih intervjujev je pokazala, da noben projekt ne izpolnjuje vseh meril. Nekateri ohranjajo ali krepijo dediščinske vrednote, a ne izpolnjujejo meril, povezanih z upravljanjem dediščine, ali pa zagotavljajo odličnost pri interpretaciji dediščine, a niso finančno vzdržni. Kljub temu izbrani primeri izpolnjujejo večino meril. Poleg tega niso vsa merila enako pomembna pri zagotavljanju trajnostnosti in obstojnosti kulturne dediščine, kar je močno odvisno od specifik in razvojnih ciljev.

Analiza intervjujev je razkrila ključen pomen sodelovanja in široke participacije (v smislu vertikalnega in horizontalnega sodelovanja, v katero so vključeni številni sektorji in stroke) pri projektih s področja kulturne dediščine. Poleg tega lahko na trajnostnost kulturne dediščine močno vplivata dobro upravljanje območij kulturne dediščine in razvejanost virov financiranja. Čustvena navezanost lokalne skupnosti na dediščino in njena vključenost v projekt sta dobri podlagi za uspeh projektov. Upoštevanje strokovnih standardov pri obnovi objektov dediščine zagotavlja njihovo kakovost, ne nazadnje pa tudi trajnostnost. Ob ustrezni uporabi imajo inovativne rešitve pomembno vlogo pri zagotavljanju trajnostne dediščine, s skrbnim prostorskim načrtovanjem in vključenostjo lokalne skupnosti (ponovno vključevanje dediščine v mestno tkivo in družbo) pa začnejo ljudje dediščino ceniti, saj postane del njihovega vsakdana. Vsi analizirani primeri dobre prakse so prenosljivi, težava bi se lahko pojavila samo v zvezi s spreminjanjem namembnosti verske dediščine, ker se tovrstna dediščina v različnih državah različno dojema in zaradi tega prenosljivost dobre prakse morda ne bi bila mogoča.

4 Razprava

Raziskava je potrdila, da je zagotavljanje trajnostnosti težka naloga, saj je treba upoštevati najrazličnejše vidike ter njihove družbeno-kulturne, okoljske in ekonomske ravni. Med dejavniki, ki opredeljujejo pojem trajnostnosti dediščine, so bili kot ključni prepoznani dobro kulturno upravljanje, razvejani viri financiranja, čustvena povezanost, vključenost lokalne skupnosti in sodelovanje najrazličnejših deležnikov. V skladu z ohranjanjem umetniških, estetskih in zgodovinskih vrednosti dediščine

Preglednica 2: Vrednotenje projektov, izvedenih v okviru različnih instrumentov politike

Država	Projekt	Področja, na katerih je trajnostnost zagotovljena
Grčija	MELINA: izobraževalni in kulturni projekt	Izobraževalna in kulturna vrednost, posebna orodja: usposabljanje, finančna vzdržnost
Italija	Lovske poti v Stupinigiju*	Družbena, zgodovinska, kulturna, okoljska, izobraževalna in krajinska vrednost, edinstvenost in pomen za lokalno skupnost
	Obnova palače v Venarii Reale	Kulturna, zgodovinska, krajinska in izobraževalna vrednost, edinstvenost, pomen za lokalno skupnost, finančna vzdržnost, model upravljanja
Nizozemska	Mestno obzidje: zagotovitev parkirišč na podlagi obnove območja dediščine	Finančna vzdržnost, okoljska, izobraževalna, zgodovinska in znanstvena vrednost, urbanistično načrtovanje, zadovoljevanje potreb prebivalcev
	Obrambni zid sv. Janeza: gostinstvo in turizem na območju (vidne) dediščine	Okoljska vrednost, finančna vzdržnost, urbanistično načrtovanje, pomen za lokalno skupnost
Poljska	Širitev vaškega muzeja v Kielcah: etnografski park v Tokarniji	Pomen za lokalno skupnost, izobraževalna vrednost, finančna vzdržnost
	Kraljevi grad v Chęcinyu	Kulturna, okoljska in zgodovinska vrednost, pomen za lokalno skupnost, prostorsko načrtovanje, upravljanje tveganj, finančna vzdržnost
Portugalska	Odkrito območje nekdanje pridelave vina v občini Valpaços, z jamami za teptanje in fermentacijo grozdja, vklesanimi v skalo	Zgodovinska, izobraževalna, kulturna in znanstvena vrednost, finančna vzdržnost
	Muzej lanu v občini Ribeira de Pena	Zgodovinska, znanstvena in kulturna vrednost, pomen za lokalno skupnost, finančna vzdržnost
	Interpretacijski center Tresminas v občini Vila Pouca de Aguiar	Kulturna, zgodovinska in izobraževalna vrednost, model upravljanja, finančna vzdržnost
Španija	Natura Xurês-Gerês*	Prostorsko načrtovanje, finančna vzdržnost, okoljska vrednost
	Kulturna dediščina evropskega območja Galicija (severna Portugalska): vrednotenje in inovacije	Model upravljanja, organizacijski model
	Dinamični projekt revitalizacije naravnega rezervata Geres-Xures*	Pomen za lokalno skupnost, kulturna, okoljska in družbena vrednost, finančna vzdržnost

Opomba: *Projekti s področja naravne dediščine, ki vključujejo tudi kulturno dediščino.

je bila kot ključna prepoznana tudi uporaba strokovnih standardov. Dejavniki, ki so bili v raziskavi ugotovljeni na novo, se nanašajo na inovativne rešitve in skrbno prostorsko načrtovanje, na ravni oblikovanja politike pa se je za upravičevanje naložb kot pomembna izkazala prenosljivost dobre prakse. Analizirani lokalni primeri dobre prakse niso vključevali vseh naštetih dejavnikov, kar znova potrjuje kompleksnost pojma trajnostnosti in njegovo odvisnost od posameznega območja. Navedeno bi lahko bil razlog tudi za skromen nabor kazalnikov na lokalni ravni, kot ugotavljata Ren in Han (2018). Kljub vsemu to še ne pomeni, da proučevanje tega na lokalni ravni ni potrebno.

Izsledki raziskave so pokazali še, da je treba pri proučevanju in vrednotenju trajnostnosti dediščine upoštevati številne vidike. En kazalnik lahko kaže, da je izbrana praksa trajnostna, drugi pa, da ni. Proučevanje trajnostnosti dediščine zato zahteva širok nabor kazalnikov, ki so podlaga za zagotavljanje trajnostnih dediščinskih projektov in izboljšanje instrumentov dediščinske politike. Na podlagi teorije in predstavljene raziskave je predlagan splošen nabor kazalnikov za redno proučevanje in vrednotenje dediščinskih projektov, ki lahko upravnikom kulturne dediščine in odločevalcem pomagajo ugotavljati trajnostnost projektov in učinkovitost instrumentov politike. Oblikovanje kazalnikov je precej zapleteno, saj so v literaturi obravnavani samo delni vidiki trajnostnosti dediščine, poleg tega proučevane študije primerov ne vključujejo vedno vseh vidikov. Druga težava je prekrivanje vidikov (npr. vključenost lokalne skupnosti je lahko družbeno-kulturni vidik, povezan s pomenom, ki ga ima dediščina za skupnost, hkrati pa tudi ekonomski vidik). Avtorici sta omenjene težave uspešno rešili in predlagali tri nabore kazalnikov: družbeno-kulturne, okoljske in finančne.

Družbeno-kulturni vidik trajnostnosti vključuje teh dvanajst področij: izzivi modernizacije, standardizacija, javno mnenje, estetska ali umetniška vrednost dediščine, zgodovinska vrednost, kulturna vrednost, izobraževalna vrednost, krajinska vrednost, znanstvena vrednost, pomen za lokalno skupnost, edinstvenost dediščine ter politični in družbeni pritiski. Javna politika lahko uvede ukrepe za vsako posamezno področje. Pri zagotavljanju kulturne vrednosti dediščine se ukrepi lahko osredotočajo na spodbujanje dogodkov in praks, povezanih z

dediščino, prisotnost dediščine v umetniških delih, zgodbah, filmih in glasbi, verski ali duhovni pomen dediščine in uporabo infrastrukture za kulturno ustvarjanje. Primeri kazalnikov so število dogodkov ali aktivnosti, število njihovih udeležencev, ustvarjanje novih kulturnih proizvodov, povezanih z dediščino, število potrošnikov navedenih proizvodov, verske ali duhovne storitve in aktivnosti na območju dediščine ter število umetnikov, članov lokalne skupnosti ali obiskovalcev, ki dediščinsko infrastrukturo uporabljajo za kulturno ustvarjanje. Ta vidik je tesno povezan z lastnimi vrednotami dediščine, kar zagotavlja ohranjanje lokalne identitete in izvirnost dediščine.

Okoljski vidik trajnostnosti vključuje tri področja: podnebne spremembe, okoljska tveganja ter krožno ali zeleno gospodarstvo. Ukrepi politike, povezani z okoljskimi tveganji (npr. potresi, vulkanskimi izbruhi, invazivnimi vrstami in poplavami), lahko obsegajo redno opazovanje območja, nadzor, upravljanje, zatiranje in iztrebljanje invazivnih vrst ter njihovo zamenjavo z neinvazivnimi vrstami, poleg tega pa še dolgoročne strateške načrte zmanjševanja negativnih okoljskih vplivov. Predlagani kazalniki vključujejo opazovalne aktivnosti, posege na podlagi opazovanja, aktivnosti, namenjene iztrebljanju invazivnih vrst, zmanjšanje okoljskih vplivov, ukrepe, ki spodbujajo spremembe v mobilnosti (območja, omejena za promet, in cestnine), ter spodbujanje javnega prometa, načrtov trajnostne urbane mobilnosti, območij umirjanja prometa, hoje in kolesarjenja. Okoljski vidik zagotavlja varovanje grajene dediščine in pomaga spreminjati vedenjske vzorce lokalne skupnosti.

Finančni vidik trajnostnosti vključuje sedem glavnih kategorij: načrtovanje, razvoj proizvodov, povezanih z dediščino, finančno vzdržnost, trženje, upravljanje zaposlenih, upravljanje obiskovalcev ter spremljanje in vrednotenje vplivov. Ukrepi javne politike na tem področju se lahko nanašajo na razvoj inovativnih proizvodov, povezanih z dediščino, usmerjeno izobraževanje in usposabljanje na področju ustvarjanja kulturnih proizvodov, razpoložljivost sredstev in naložb za razvoj proizvodov, sposobnost dejavnega pretvarjanja zamisli, vsebin in vrednot v proizvode, dostop do infrastrukture in sposobnost lokalne skupnosti, da uporablja posamezne oblike dediščine. Predlagani kazalniki so novo razviti proizvodi, povezani z dediščino, vzporedni proizvodi ter povezane storitve in doživetja, usposabljanje in število usposobljenih posameznikov, kreativni strokovnjaki ter proizvodi, ki jih sprejmejo in dodatno promovirajo zaposleni, lokalna skupnost in obiskovalci. Finančni vidik je pomemben zlasti zato, ker zagotavlja ustrezna finančna sredstva, potrebna za delovanje posameznega območja dediščine, poudarja pa tudi instrumentalne vrednote dediščine, ki so močna podlaga za regionalni razvoj.

5 Sklep

Trajnostne naložbe v kulturno dediščino so eden glavnih izzivov lokalne in regionalne javne politike. Glavni vir financiranja varovanja in ohranjanja kulturne dediščine so državni proračuni in proračun EU. Naknadnih analiz izvedenih naložb je malo, poleg tega primanjkuje podatkov o uspešnosti in trajnostnosti projektov. Navedena vprašanja so pomembna zlasti za oblikovanje evropskih javnih politik in razvojnih načrtov v prihodnjih proračunskih obdobjih. Za spremljanje uspešnosti izvajanja politik na nacionalni, regionalni in lokalni ravni so potrebni kazalniki, na podlagi katerih se lahko proučujejo spremembe v lokalnih skupnostih kot posledica vloženih javnih sredstev.

Dozdajšnje raziskave so se množično osredotočale na analizo družbenoekonomskih in okoljskih vplivov, nobena pa ni zagotovila po meri oblikovanih kazalnikov za presojo trajnostnosti projektov s področja kulturne dediščine. Izsledki raziskave, predstavljene v tem članku, potrjujejo, da je proučevanje trajnostnosti dediščine zelo zapleteno, saj je treba upoštevati številne dejavnike in z njimi povezane kazalnike. Na podlagi analiziranih primerov se je izkazalo, da so projekti s področja kulturne dediščine delno trajnostnostni in da je skoraj nemogoče najti primer, ki bi izpolnjeval vsa merila trajnostnega. Zaradi izjemne raznovrstnosti analiziranih primerov sta lahko avtorici določili širok nabor kazalnikov, ki se lahko upoštevajo in uporabljajo pri oblikovanju instrumentov politike, predlaganju projektov s področja kulturne dediščine na podlagi predhodne analize ali pri izvajanju projektov. Zlasti pa so uporabni pri običajnem spremljanju in vrednotenju projektov.

Predlagani nabor kazalnikov vključuje tri glavna področja ali vidike vrednotenja trajnostnosti (ekonomsko, družbeno-kulturno in okoljsko), ki se delijo na številna podpodročja. Pomemben korak je bil narejen v smeri povezovanja podpodročij z ukrepi v okviru posameznega instrumenta politike in nato z nizom ustreznih merljivih kazalnikov. Pomembno je poudariti, da se lahko prednostne naloge določijo na podlagi potreb in zahtev vrednotenega projekta. Pri tem se lahko nekatera področja prekrivajo in se lahko vrednotijo z različnih vidikov (npr. na krajino lahko gledamo z okoljskega vidika ali pa z vidika vrednosti dediščine). Navedeno odpira vprašanje izbora kazalnikov in njihove pravilne interpretacije, kar je odvisno od posameznikov, ki izvajajo vrednotenje in spremljanje. Nadaljnje raziskave bi se zato lahko osredotočale na omenjeno dvojnost posameznih podpodročij in z njimi povezanih kazalnikov ter načine, kako jih lahko povežemo. Ne glede na težave, s katerimi sta se avtorici med raziskavo spopadali, sta oblikovali sistematičen in celovit nabor konkretnih kazalnikov, ki lahko olajšajo proces spremljanja projektov. Predlagani kazalniki se lahko poleg tega primerjajo s prednostnimi nalogami in ukrepi,

opredeljenimi v okviru instrumentov politike, na podlagi česar se lahko upravičenost naložb v kulturno dediščino preprosto izmeri z naknadnimi analizami. Hkrati predlagani nabor kazalnikov pomaga izboljšati instrumente politike in mehanizme vrednotenja, kar bi zapolnilo prihodnje vrzeli pri vrednotenju projektov. Vse navedeno pomaga krepiti trajnostnost dediščine, hkrati pa poleg najrazličnejših koristi za lokalno skupnost omogoča ustrezno prostorsko načrtovanje in razvoj.

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Vpliv ozelenjenih fasad na zaznavanje urbanih okolij – primerjava med Slovenijo in Nizozemsko

V splošni javnosti in v raziskavah v raznih strokah pridobivajo ozelenjeni fasadni ovoji stavb vse večjo pozornost. Sistemi vertikalnih ozelenitev imajo pomembno vlogo kot izrazni element stavbe, hkrati pa se obravnavajo kot poseben tip zelene infrastrukture z raznovrstnimi pozitivnimi učinki predvsem na gosto pozidanih urbanih območjih. Raziskava se osredotoča na zaznavo ozelenjenih fasad v urbanih ambientih. Poudarek je na vizualnem zaznavanju in dojemanju prijetnosti ali vizualne kakovosti raznovrstnih prostorov glede na to, ali stavba ima ozelenjeno fasado ali ne. Odnos javnosti in vrednotenje urbanega odprtega prostora s proučevanimi zelenimi elementi smo preverjali na Nizozemskem in v Sloveniji. V spletno anketo so bili vključeni prikazi prostorskih situacij, o katerih so anketiranci izrazili mnenje. Ciljni skupini sta bili širša javnost in študenti arhitekturno-urbanističnih smeri. Kljub splošnemu rezultatu o večji prijetnosti bolj zelenega mestnega okolja, ki kaže na to, da večina ljudi tudi vertikalne ozelenitve dojema kot prispevek h kakovosti urbanih ambientov, se med proučevanima skupinama v posamezni državi pojavljajo razlike.

Ključne besede: vertikalne ozelenitve, ozelenjene fasade, žive stene, zaznavanje urbanega prostora, zelena infrastruktura

1 Uvod

Zavedanje o pomenu naravnih prvin v mestih se zaradi prepoznanih okoljskih problemov in sprememb, ki vplivajo tudi na bivalno kakovost v urbanih naseljih, povečuje tako v strokovni kot splošni javnosti. Sodobne strategije načrtovanja urbanega prostora vključujejo te, vedno bolj izpostavljene tematike. Ne osredotočajo se samo na vgradnjo trajnostnih materialov, ampak je v njih zajet tudi rezultat razmisleka o predvidenih naravnih procesih, ki lahko pripomorejo k izboljšanju grajenega okolja, od zagotavljanja večjega deleža zelenih površin, uporabe drevja, do ozelenjevanja stavb, pri čemer se v obstoječih gosto pozidanih delih mest poudarja uporaba rastlinskega gradiva pri oblikovanju zunanjega ovoja stavb (Medl idr., 2017). Sistemi vertikalnih ozelenitev in zelenih streh so elementi zelene infrastrukture in del zelenega sistema mesta ali naselja (Šuklje Erjavec idr., 2020), saj izvajajo nekatere funkcije zelenega sistema (ekološke, okoljske, podnebne, oblikovne, kulturne, strukturne, gospodarske in družbene). Čeprav so se stavbe ozelenjevale že v preteklosti, postajajo zelene strehe in stene v sodobnem času sinonim za inovativno obliko urbanega ozelenjevanja, še zlasti v velikih mestih, kjer prevladuje toplejše in vlažno podnebje (Wong idr., 2010a). Predvsem v azijskih mestih se krepijo ideje o biofiličnem urbanizmu in oblikovanju vertikalnih in gozdnatih mest (Guan idr., 2018). V medijih se s predstavljanjem raznih primerov vključevanja rastlin v arhitekturo promovira uporaba teh povsod po svetu (Černigoj, 2018). Ker je uporaba biološko-tehničnih sistemov ovojev stavb pogojena s podnebnimi razmerami, rezultati raziskav niso nujno prenosljivi v druge okoliščine in primerljivi med državami. Zaznavanje zelene infrastrukture v mestih so proučevali na primer z grško javnomnenjsko raziskavo (Tsantopoulos idr., 2018). Rezultati kažejo, da je estetski vidik ozelenjevanja stavb v Atenah v zavesti ljudi veliko bolj pomemben in razširjen kot njihov vpliv na izboljšanje mikroklime in okoljskih parametrov. Z malezijsko raziskavo (Mansor idr., 2017) pa so ugotovili, da prebivalci vertikalne ozelenitve dojemajo kot del ulične umetnosti z nekim okoljskim učinkom in ga zaradi te značilnosti tudi visoko vrednotijo. Glede na ugotovitve raziskav iz krajev, kjer prevladuje toplejše podnebje, nas zanima, kakšna sta zaznavanje in splošen odnos javnosti do ozelenjenih fasad v evropskem zmerno toplem podnebnem pasu. V tej raziskavi se proučuje zaznavanje uporabnikov prostora iz Nizozemske in Slovenije.

1.1 Ozelenjene fasade kot integralni del arhitekture

Vertikalne ozelenitve se pojavljajo na različnih tipih stavb, v različnih prostorskih kontekstih in v raznovrstnih izvedbah. Način vključevanja zelenih prvin v stavbni ovoj je običajno povezan z arhitekturnim in oblikovalskim konceptom posamezne stavbe. Celotni stavbni ovoj, še posebej fasada, ima namreč izrazno vlogo. V srednjeevropskem prostoru se bolj množično ozelenijo strehe, manj fasade. Redki so primeri sodobne arhitekture s popolnoma ozelenjenim stavbnim ovojem, kot primer na Nizozemskem (Internet 4). Vgradnja primernega vegetacijskega sistema je tesno povezana s specifičnimi podnebnimi in mikrolokacijskimi razmerami, ki vplivajo na izbor materialov. V prvi fazi načrtovanja je treba za doseganje želenih oblikovalskih ciljev določiti zasnovo in tip vertikalne ozelenitve ter njeno vzdrževanje. Rezultati singapurske raziskave o ozelenjenih fasadah so pokazali, da lahko pomanjkanje tehničnih informacij, navodil za vzdrževanje in informacij o rastlinah postane ovira za izvedbo teh sistemov (Wong idr., 2010b), čeprav ti veljajo za potencial v arhitekturi in gradnji prihodnosti. Podobno jih obravnavajo italijanski raziskovalci. Perinijeva in Rosasco (2013) sta analizirala stroške in koristi ozelenjenega ovoja stavb. Proučevala sta vpliv na stavbo in okolico, predvsem z vidika okoljskih, gospodarskih in družbenih izboljšav, poleg tega sta z raziskavo opozorila na težavnost opredelitve učinkov teh gradnikov na zunanji prostor.

Opredelitev ozelenjenih fasad, ki jo uporabljamo v tej raziskavi, je bila oblikovana na podlagi pregleda terminologije številnih raziskav (Jim, 2015; Pfoser, 2016; Bustami idr., 2018) in razlaga ozelenjene fasade ali zelene stene kot vertikalne sisteme z rastlinami, neposredno ali s podpornim sistemom integrirane v zunanjo steno (ovoj) stavb. Tipologija vertikalnih ozelenitev je raznovrstna. Določajo jo konstrukcijski elementi, način vgradnje rastlin in izbor teh. Kljub različnim pristopom k opredelitvi teh elementov se na podlagi značilnosti opredeljujeta dva osnovna tipa: zelene fasade (ang. *green facades*) in žive stene (ang. *living walls*). Za zelene fasade sta značilna stik s tlemi ali izraščanje rastlin iz tal in uporaba popenjavk, ki se vzpenjajo po steni ali ob njej, za žive stene pa je značilno, da se ob steno pritrdi element, iz katerega rastline rastejo (in nimajo stika s tlemi) (Bustami idr., 2018). Ker so ti vertikalni sistemi vedno vezani na steno objekta, soustvarjajo tesno povezavo med grajenimi in naravnimi gradniki. Načelo združevanja kontrastnih prostorskih entitet ima vpliv na opazovalca ali uporabnika zadevnega prostora.

1.2 Zaznavanje urbanega prostora

Proučevanje urbanega okolja in izkušnja mestnega prostora sta predmet mnogih raziskav. V primeru proučevanja ozelenjenih fasad stavb se sociološko-psihološki vidik prepleta z drugimi vidiki, ki vplivajo na zaznavanje in javno mnenje (Köhler, 2008). Zaznavanje je postopni (fazni) proces, ki vključuje vsa čutila. Bell navaja tri faze zaznavanja. Prva je zaznavna faza prejemanja dražljaja, v kateri se vzpostavi povezava z dražljajem, druga je faza obdelave in organiziranja informacij, pri čemer imajo

pomembno vlogo izkušnje prejemnika dražljaja, tretja je faza kognitivnega procesa ali osmišljanja ter vključuje interpretacijo in vrednotenje, poleg tega je povezana s kulturološkim in socialnim ozadjem posameznika (Bell, 2001). Zaznavanje arhitekture, grajenega okolja in odprtega prostora temelji na intermodalnem zaznavanju, pri katerem poteka zaznavanje v kombinaciji več čutil. Velika večina informacij, približno 70 % vseh, je pri tem pridobljena z vidom (Fieandt, 1966). Avtorji trdijo, da je treba prostor in arhitekturo osebno izkusiti (Rasmussen, 2001), naše zaznavanje prostora je namreč večplastno, povezano tako s fizičnimi in funkcionalnimi prostorskimi značilnostmi kot pomeni. Kompleksno razlago sta na podlagi Relphovega dela (1976) razvila Punter (1991) in Montgomery (1998) (v Carmona idr., 2003). Za potrebe urejanja mestnega prostora sta opredelila tri vidike, ki opišejo t. i. kraj – ta se vzpostavi kot rezultat odnosa med fizičnimi značilnostmi prostora, dejavnostmi, ki potekajo v njem, in simbolnimi pomeni, ki mu jih pripisujejo uporabniki. Preplet teh vidikov pomembno vpliva na dojemanje hierarhične umeščenosti posameznega odprtega javnega prostora v mestno strukturo.

Kulturološki vidik dojemanja prostora dokazujejo številne študije. Passini (1992) izpostavlja povezavo med vzorci dojemanja okolja in potrebo ali zmožnostjo ljudi, da se okolju prilagodijo – če je (mora biti) zadevna kulturna sredina v stiku z naravo ali naravnimi procesi, je njeno dojemanje prostora kompleksnejše. Evropski avtorji ugotavljajo, da je v evropski kulturi dojemanje prostora vezano predvsem na fizično ureditev prostora (Jackson, 1994; Nikšič, 2008), kar razlagajo z večplastno fizično zgradbo evropskih mest, ki so se v stoletjih razvijala z različnimi in prepoznavnimi morfološkimi oblikami. Ameriške študije pa kažejo, da prebivalci nekega kraja ne povezujejo toliko z njegovo arhitekturno podobo ali oblikovanostjo prostora, ampak bolj z dogajanji in dogodki v njem. Podobno Rapoport (1977) razlikuje med t. i. zahodno in prvobitnimi kulturami, ko ugotavlja, da v zahodni kulturi prostor dojemamo predvsem na podlagi njegovih fizičnih in funkcionalnih značilnosti, pripadniki prvobitne kulture, npr. avstralski aborigini, pa prostor dojemajo na podlagi mitoloških pomenov in simbolov. Na Slovenskem je na področju urbanističnega oblikovanja temeljnih zaznavnih študij zelo malo. Nikšič (2008) ugotavlja, da na zaznavo javnih odprtih prostorov mest najbolj vplivajo fizične značilnosti prostora, pomemben vpliv imajo tudi funkcijske značilnosti, vloga simbolnih pomenov pa je majhna.

1.3 Zelene prvine v urbanih ambientih

Zaznavanje zelenih prvin v sklopu urbanističnega oblikovanja težko obravnavamo zunaj prostorskega konteksta. Namen te raziskave je proučitev odnosa ljudi do urbanih ambientov glede na prisotnost ozelenjenih fasad v njih. Sklepamo, da ozelenjene fasade vplivajo na zaznavanje prostora, v katerega so umeščene. Kot zeleni gradnik s svojimi fizičnimi značilnostmi vplivajo na odnos med volumni in prazninami, merilom, proporci, ploskvami, teksturami, ritmi v prostoru in materialno (ne)enotnostjo ipd. Hkrati so pomembni pomenska razmerja med naravnim in grajenim ter različne interpretacije trajnostnega vidika in splošnega odnosa do naravnih prvin v urbanem okolju.

Zaznavanje urbanega okolja in naravnih prvin v njem se v raziskavah proučuje na različne načine. Raziskave o integraciji narave v oblikovanje se osredotočajo na človeka in njegovo potrebo po zaznavanju naravnih procesov v prostoru in času (Hayles in Aranda-Mena, 2018) ter povezanost vplivov naravnih prvin, predvsem rastlin, v vsakodnevnem doživljanju okolja, s stopnjo uporabe tega prostora. Ozelenjenost ulic ima na primer dokazano velik vpliv na hodljivost v mestih in s tem na telesno aktivnost prebivalcev (Lu idr., 2018). Velik pozitivni učinek rastlin na zaznavanje ugotavljajo tudi v raziskavi problematike hrupa v urbanem okolju (Van Renterghem, 2019). Vizualno zaznavanje rastlin namreč omili zaznavo neprijetnega zvoka, zato so ozelenjeni prostori kljub hrupu zaznani kot bolj prijetni kot tisti brez rastlin. Glede ozelenjenosti stavbnega ovoja sta Whitova in Gaterslebnova (2011) proučevali, ali so ozelenjene stavbe (z zelenimi strehami in stenami) bolj cenjene od neozelenjenih, in ugotovili nekaj prednosti v korist ozelenjenih stavb. V raziskavah zaznavanja in mnenja javnosti se tudi na področju prostorskega načrtovanja pogosto uporabljajo vprašalniki s pripravljenimi primeri prisotnosti in odsotnosti nekega dražljaja. Podobno se uporabljajo dražljaji (negativni in pozitivni) tudi v drugih strokah, na primer pri proučevanju zaznavnih fizioloških procesov, pri merjenju možganskega odziva ali aktivnosti v hemisferah (O'Hare idr., 2017).

Hipotetično izhodišče te raziskave je, da ljudje urbane prostore, ki vključujejo rastline, zaznavajo kot bolj prijetne (všečne). Namen raziskave je preveriti tezo na podlagi obravnave zelenih sten kot elementov zelene infrastrukture v urbanem okolju. Ključna vprašanja, ki se v zvezi s tem pojavljajo, so:

- Ali na zaznavanje prijetnosti ambientov vpliva prisotnost rastlin na fasadah?
- Ali ima količina ozelenjenosti vpliv na oceno prijetnosti ambienta?
- Ali imajo ljudje preference do nekaterih tipov fasadne ozelenitve?

Osrednji del te raziskave je namenjen proučevanju odziva ljudi in razlik med njihovimi odgovori. Poleg mnenj javnosti obravnavamo tudi mnenje izbranih skupin. Z raziskavo se ne odpirajo le vprašanja o zaznavanju vertikalnih ozelenitev, ampak tudi o tem, katere posamezne tipe odprtih prostorov in katere njihove fizične značilnosti, ki vplivajo na to, ali so bolj ali manj privlačni, bi ljudje prednostno izbrali.

2 Raziskovalne metode

2.1 Oblikovanje vprašalnika

Za zbir mnenja javnosti smo uporabili metodo anketiranja. Pri oblikovanju vprašalnika in pripravi materiala za anketo so se upoštevali načeli čim večje merljivosti odgovorov (pridobitev neodvisnih ocen) in ustrezne reprezentativnosti predstavljenega materiala ter zagotavljanje jasnega razumevanja vprašanj in uporabnikom čim bolj prijazna uporaba (obseg ankete). Pripravljen je bil javno dostopen spletni vprašalnik v slovenskem in angleškem jeziku. Spremno besedilo v uvodu je anketirance seznanilo z anonimnostjo ankete, namenom zbiranja podatkov ter vsebino in obsegom ankete, podano je bilo priporočilo o uporabi računalniškega zaslona, med drugim funkcij povečave za prikaz slik v primeru uporabe na manjših napravah (npr. pametni telefon). Anketo so sestavljala vprašanja, vezana na prikaze urbanih situacij (vizualne dražljaje), in vprašanja za zajem splošnih socialno-demografskih podatkov. Poleg splošnih vprašanj (spol, starost, izobrazba, država bivanja, poklic) so bila vključena dodatna vprašanja za razumevanje možnega vpliva na presojo preferenc anketirancev, na primer njihovo bivalno okolje.

Anketiranci so za vsak slikovni prikaz podali oceno privlačnosti urbanega ambienta na lestvici od -10 (neprivlačno) do 10 (zelo privlačno), odgovore so označili z drsnikom. Slikovno gradivo obsega prikaze dvajsetih prostorskih situacij (raznovrstnih urbanih prostorov) v treh različicah istega prostora. Vseh šestdeset slik (dražljajev) je bilo v vprašalniku razvrščenih po vnaprej določenem mešanem vrstnem redu. Sosledje različnih urbanih prostorov in variant ozelenitev je bilo vzpostavljeno tako, da je bilo možno čim manjše medsebojno sovplivanje posameznih dražljajev. Ne glede na zavedanje o učinku začetnih in končnih prikazov pri uporabi anket s slikovnim gradivom (Strumse, 1994) niso bile dodane dodatne slike, ki bi se pozneje v analizi izključile, saj je bilo skupno uporabljenih zelo veliko slik (dodatni prikazi bi povečali obseg ankete).

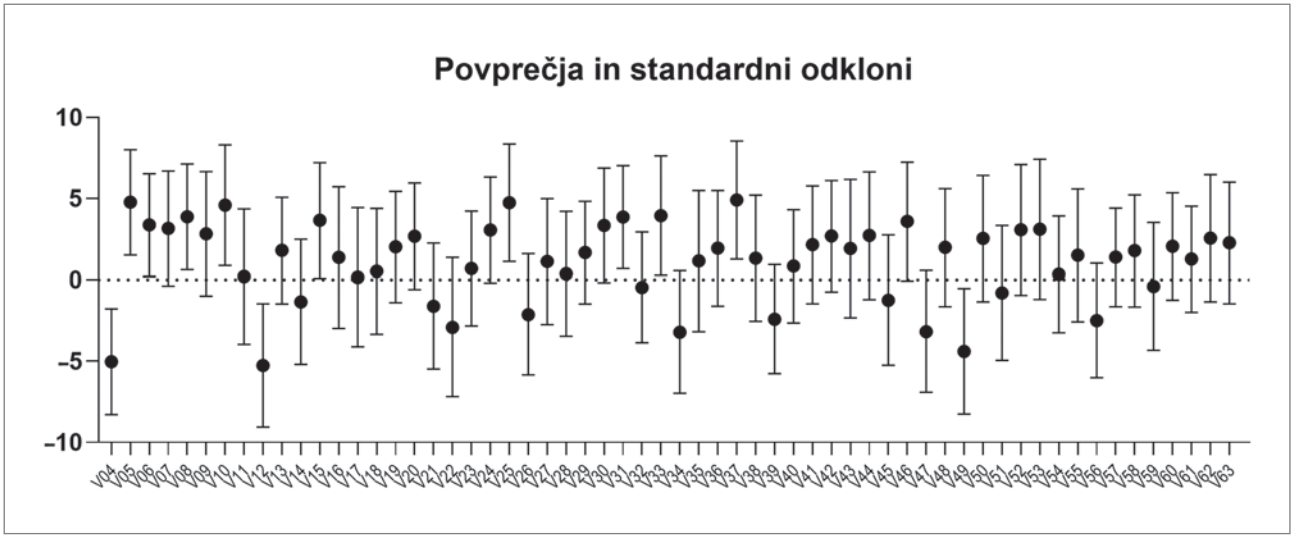
2.2 Vizualni dražljaji

Slikovne prikaze prostorskih situacij smo pripravili tako, da bi bili v prihodnje lahko uporabni tudi za obdelavo z drugimi metodami in primerjanje rezultatov. Pripravljeno slikovno gradivo smo obdelali na enoten način in ga v vprašalnik vključili tako, da so se anketiranci lahko osredotočili na posamezen dražljaj. Raziskava se ni ukvarjala s spreminjanjem grajenega okolja in arhitekture na prikazih, simulacije so prikazovale le spremembe proučevanih elementov – ozelenjenih fasad. Z vidika proučevanja urbanega prostora smo izbrali različne urbane ambiente in možnosti vertikalnih ozelenitev v njih. Posamezni odprti prostor je bil prikazan v treh različicah: (A) brez ozelenitve, (B) z zmerno - delno ozelenitvijo fasad(-e) in (C) z gosto – polno ozelenitvijo fasad(-e). Slike z vertikalnimi ozelenitvami so glede na tipologijo prikazovale tip zelene fasade (22 prikazov) ali tip žive stene (18 prikazov).

Za prikaz raznovrstnih urbanih prostorov so se uporabile fotografije realnega stanja in obdelane fotografije teh realnih stanj v dveh različicah. Malo so bile uporabljene tudi 3D-vizualizacije. Glede na proučevani vidik uporabnika prostora smo uporabili slike z očišča pešca ali v merilu uporabnika prostora. Namensko smo izbrali prikaze z vidnim prostorskim kontekstom, ki je ključen za razumevanje prostora, proučevanega gradnika in prostorskih razmerij (npr. bližnji prikazi in prikazi od daleč), da se lahko anketiranec vrednostno opredeli do zadevnega ambienta (poda mnenje o pojavnosti zelene stene v tem okolju). Izbrane so bile slike, na podlagi katerih lahko opazovalec sklepa o rabi zunanjega prostora (npr. prisotnost ulice, parkirišča, igrišča itd.) in tipu stavbe ali rabi stavbe (glede na njeno pojavnost: stanovanjska, industrijska, trgovska, javni program). Izbrani primeri, vključeni v anketo, so bili: javni odprti prostori (6 primerov), prostori ob stavbah z javnim programom (7 primerov), stanovanjska območja (5 primerov) in poslovno-industrijska območja (2 primera). Glede na fizične in programske značilnosti prikazanega prostora smo te primere prostorov obravnavali kot podrobnejše prepoznavne tipe:

- odprti prostori kot ulični prostori (primarno pretočni ambienti) in večnamenski prostori z drugimi vrstami rabe odprtega prostora, vezanimi na aktivnosti in zadrževanje ljudi (npr. trg, igrišče),
- prostori ob javnih objektih različnega tipa (prikaz stavbe z javnim programom, upoštevana je tudi možnost druge interpretacije), prikaz obšolskega prostora ali prostora ob izobraževalni ustanovi ter v posebni skupini prikazi vizualizacij načrtovane gradnje,
- prostori območij stanovanjske gradnje (realne situacije in vizualizacije večstanovanjskih stavb),
- prostori nakupovalnih središč (tipični objekti večjega merila).

Osnova slikovnega gradiva so bile terenske avtorske fotografije in vizualizacije (3D-prikazi) drugih avtorjev, pri tem so bile uporabljene tudi spletne fotografije (Vogelnik, 2013; Internet 1; Internet 2; Internet 3; Haesevoets, 2015). Pri pripravi obdelanih slik ali slikovnih simulacij (fotomontaž) smo uporabili program za digitalno obdelavo rastrskega slikovnega gradiva Adobe Photoshop CS3. Pri obdelavi slik je bil poudarek na spreminjanju fasadnega ovoja osnovnega slikovnega gradiva. Za namen izključevanja vpliva drugih dejavnikov na presojo posameznih slik se z njihovo obdelavo ni posegalo v prikazovanje drugih prostorskih prvin niti se ni posegalo v arhitekturo stavbe (niso se prilagajali nobeni drugi arhitekturni elementi), prikaz oseb na slikah je bil poenoten (ljudje so bili na vseh slikah v približno enakem številu).



Slika 1: Prikaz povprečij ocen in SD za vseh 60 slik anketi (*n* = 223) (izdelala: Jana Kozamernik)

2.3 Potek zbiranja informacij

Anketiranje je potekalo s spletnim orodjem 1KA spletne ankete Centra za družboslovno informatiko Univerze v Ljubljani. Anketa je bila izvedena na Nizozemskem in v Sloveniji v poletnih mesecih leta 2019 (od junija do septembra). Da bi pridobili čim večji reprezentativni vzorec, je bilo povabilo k sodelovanju v anketi po e-pošti poslano na številne e-naslove v obeh ciljnih državah. K izpolnjevanju ankete smo vabili tudi z osebnimi vabili, tega je bilo malo in vabili smo predvsem starejše. Anketiranje se je osredotočalo na pridobitev podatkov za dve skupini – splošno javnost in mlajšo generacijo strokovne javnosti. Zajem naključnega vzorca splošne javnosti je vključil osebe, ki niso strokovno povezane z arhitekturno in urbanistično stroko. Vzorčenje druge skupine je potekalo med študenti arhitekturno-urbanističnih smeri, delno je vključevalo tudi sorodne stroke (na primer krajinsko arhitekturo). Da bi zagotovili reprezentativnost strokovne skupine, smo vanjo vključili študente različnih letnikov in študijskih smeri. Podatke smo želeli pridobiti za vse starostne skupine, čim bolj raznovrstno strukturo prebivalstva in raznovrstne profile glede na delovno področje.

2.4 Analiza podatkov

Statistične izračune smo izvedli z uporabo programa IBM SPSS Statistics za Windows v kombinaciji z Microsoft Excelom in programom GraphPad Prism 8.3.0. Pridobljene veljavne podatke obeh anket (izvorno vzorčenih v Sloveniji in na Nizozemskem) smo združili v skupno bazo, iz katere smo naknadno izločili neustrezne vprašalnike (nedokončane ankete, ankete z manjkajočimi odgovori na vprašanja in ankete z neocenjenimi slikovnimi prikazi) in napake. Pridobljenih je bilo 223 veljavnih anket, 131 slovenskih in 92 nizozemskih. V osnovni izračun prvega, slikovnega dela ankete (prikazi slik in ocenami z drsno ročico) smo vključili povprečja in standardne odklone (razpršenost porazdelitve vrednosti), natančnejšo analizo slikovnih prikazov pa smo izvedli s primerjavo frekvenčne porazdelitve ocen posamezne slike. Analizo smo izvajali na podlagi proučevanja oblikovanih kazalnikov:

- razmerje med grajenim in zelenim; tri različice variantnih prikazov ambienta smo označili kot sklope A (brez ozelenjene fasade), B (z delno ozelenjeno fasado) in C (s polno ozelenjeno fasado),
- tip vertikalnega sistema ozelenjevanja; glede na osnovna tipa zelene fasade (ZF) in žive stene (ŽS),
- tip urbanega prostora; odprti prostor z večnamensko funkcijo ali s prevladujočimi vrstami rabe, kot je trg, igrišče ipd. (Oo), ulični ali obcestni odprti prostor (Os), prostor ob javnih objektih (Pi), prostor ob javnem objektu – šoli (Ps), prostor ob javnem objektu – 3D-prikaz (Pr), stanovanjsko območje (R), stanovanjsko območje – mogoča tudi druga interpretacija (Ri), stanovanjsko območje – 3D-prikaz (Rr) in prostor v poslovno-trgovskem območju (S).

3 Rezultati

3.1 Demografske značilnosti

Na anketo je odgovorilo 58,7 % žensk in 41,3 % moških. V obeh državah anketiranja so bili vključeni ljudje različnih starostnih skupin, prevladovali so skupina delovno aktivnega prebivalstva in mladi. Največ anketirancev je spadalo v skupino do 25 let (50,6 %), številčno so sledili anketiranci starostne skupine od 26 do 35 let, katerih delež je bil 19,3 %, delež skupine od 36 do 50 let je bil 15,7 %, delež skupine od 51 in 65 let je bil 10,8 %, delež starejših od 65 let pa 3,6 %. Glede na izobrazbeno raven je 24,2 % anketirancev doseglo VI. izo-

Preglednica 1: 10 (od 60) najslabše ocenjenih prikazov glede na povprečne ocene (*n* = 223)

Slika*	V12	V4	V49	V34	V47	V22	V56	V39	V26	V21
Povprečna ocena	−5,26	−5,03	−4,40	−3,22	−3,17	−2,90	−2,49	−2,41	−2,12	−1,61
P(1–20)**	1	11	17	15	8	2	10	9	7	17
A/B/C	A	A	A	A	A	A	A	A	A	B
Urbani prostor (tip)	S	R	S	Ps	R	Os	Ps	Ps	Os	S
Zelena stena (tip)	/	/	/	/	/	/	/	/	/	ŽS

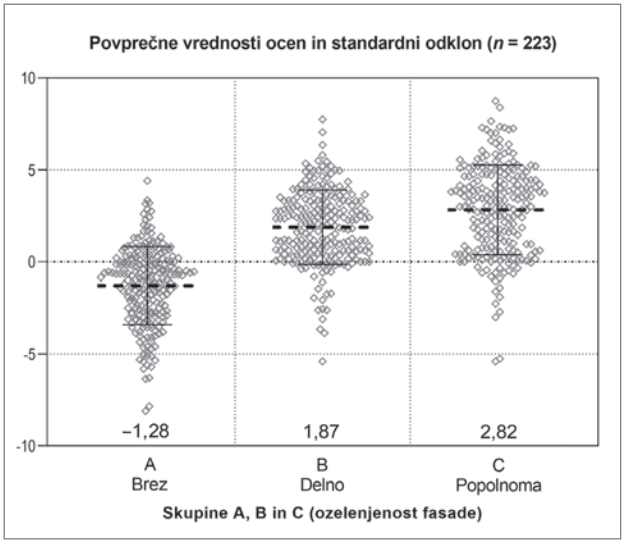
* Slika v vprašalniku (vrstni red). ** Izbrani primer (fotografija, vizualizacija).

Slika 2: Prikazi z najslabšimi povprečnimi ocenami (*n* = 223) (izdelala: Jana Kozamernik)

Preglednica 2: 10 (od 60) najbolje ocenjenih prikazov glede na povprečne ocene (*n* = 223)

Slika	V37	V5	V25	V10	V33	V8	V31	V15	V46	V6
Povprečna ocena	4,91	4,77	4,74	4,59	3,95	3,87	3,86	3,65	3,59	3,37
P(1–20)	5	18	5	14	6	18	10	2	4	10
A/B/C	C	C	B	C	B	B	C	C	B	B
Urbani prostor (tip)	Rr	Oo	Rr	Pi	Rr	Oo	Ps	Os	Ri	Ps
Zelena stena (tip)	ZF	ZF	ZF	ZF	ZF	ŽS	ZF	ZF	ŽS	ZF

Slika 3: Prikazi z najboljšimi povprečnimi ocenami (*n* = 223) (izdelala: Jana Kozamernik)



Slika 4: Povprečje ocen in standardni odklon slik, razvrščenih v skupine A (brez ozelenjene fasade), B (delno ozelenjena fasada) in C (polno ozelenjena fasada) v celotnem vzorcu (*n* = 223) (izdelala: Jana Kozamernik)

brazbeno raven in 28,3 % magisterij ali VII izobrazbeno raven. Med njimi je bilo 32,2 % anketirancev s končano V. stopnjo izobrazbe, v manjših deležih pa so bili zastopani anketiranci s IV stopnjo (5,4 % anketirancev) in nižjo, do III stopnje izobrazbe (5,4 % anketirancev) ter anketiranci z VIII, najvišjo stopno izobrazbe (4,5 %). Glede na tip naselja ali okolje bivanja anketirancev smo po zastopanosti v anketi zajeli največ ljudi, iz urbanega okolja (28,3 %), sledili so anketiranci iz manjših podeželskih naselij (23,3 %), mestnih središč (21,5 %) in primestnega območja (20,6 %), najmanj anketirancev pa je bilo s podeželja (6,3 %).

3.2 Prednostne izbire na podlagi prikazanih slik

Frekvenčne porazdelitve odgovorov anketirancev o posameznih prikazih v anketi kažejo na trend gibanja ocen v negativni ali pozitivni smeri. Na podlagi izračuna povprečij smo pridobili oceno posameznega prikaza (Slika 1) in standardne odklone povprečnih ocen, ki kažejo, da gre za dokaj veliko razpršenost ocen ali odgovorov (SD 3,1–4,3).

Pri razvrstitvi vizualnih dražljajev od najbolj pozitivno ocenjenih (privlačnih) do negativno ocenjenih (neprivlačnih) ugotovimo, da so med 10 najmanj privlačnimi slikami (preglednica 1) z izjemo ene slike vse tipa prikaza A (različica prostora brez ozelenjene fasade). Vključujejo zunanje prostore nakupovalnih središč (dva najslabše ocenjena prikaza), stanovanjskih območij (dva prikaza), javnih stavb (3 prikazi) in uličnega ambienta. Med najslabše ocenjenimi prostori se je na 10. mesto uvrstil prikaz predprostora nakupovalnega središča z delno ozelenjeno čelno fasado (tip žive stene). Najslabše ocenjene slike so prikazane na sliki 2.

Rezultati pregleda slik z najvišjimi povprečnimi ocenami kažejo na visoko vrednotenje ozelenjenega odprtega prostora - med desetimi najbolje ocenjenimi prikazi je uvrščenih pet prikazov iz sklopa C (polno ozelenjena fasada) in pet iz sklopa B (delno ozelenjena fasada). Glede na tip prikazanega odprtega prostora gre za slike stanovanjskih območij, prostorov ob javnih stavbah in druge odprte prostore s različnimi vrstami rabe (igrišče, trg) (Preglednica 2). Najbolje ocenjene slike so prikazane na slik 3, med bolj privlačnimi prikazi so bile tudi tri 3D-vizualizacije stanovanjskih blokov z ozelenjeno fasado.

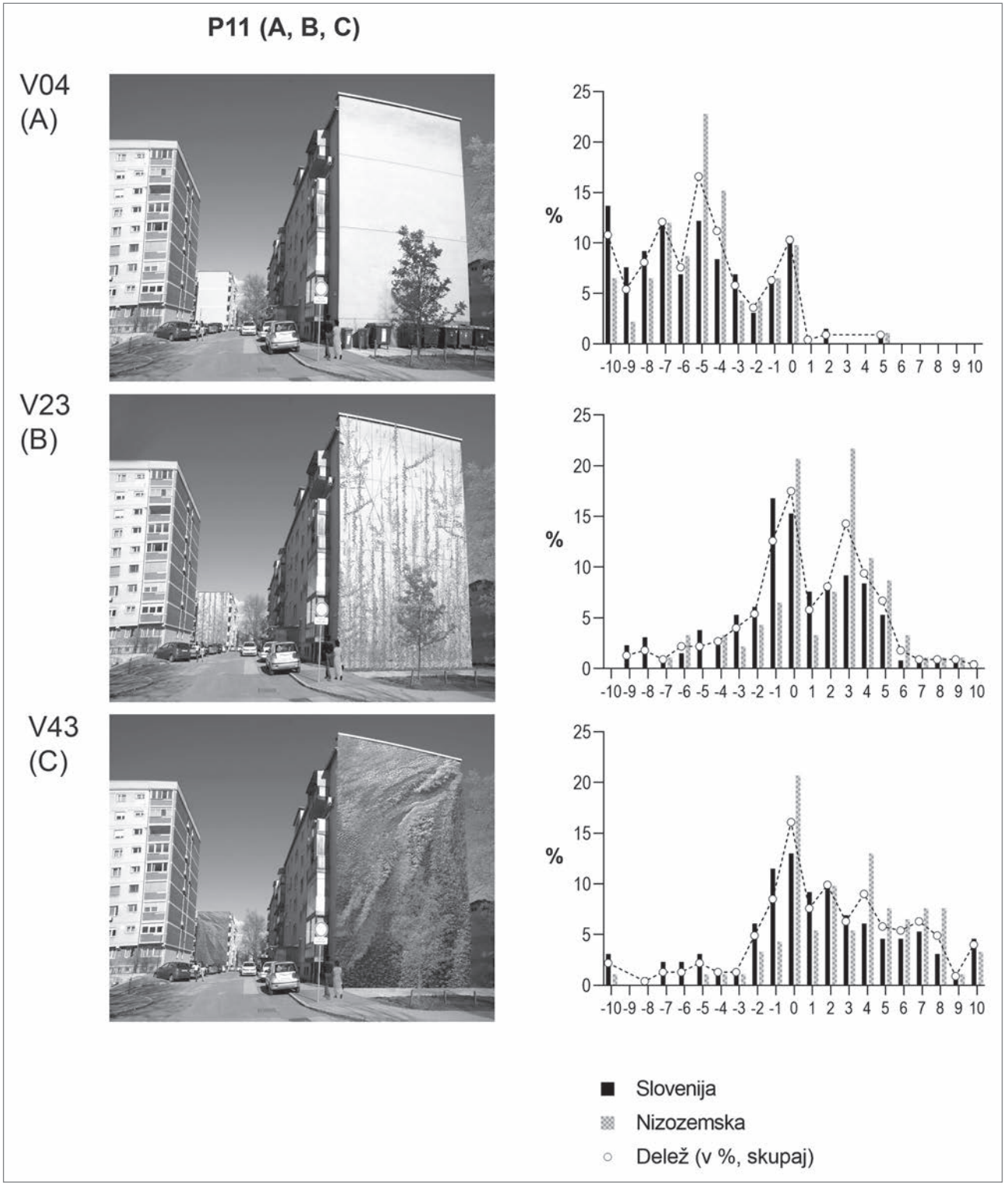
3.3 Stopnja ozelenjenosti fasad

Na podlagi združitve prikazov v skupine glede na tri različice ozelenjenosti urbanega ambienta se je preverjalo vrednotenje prostora glede na prisotnost in odsotnost stenske ozelenitve ali kako obsežna je ta ozelenitev. Slika 4 prikazuje povprečne vrednosti vseh slik, razvrščenih v sklop A, B ali C, za celotni anketirani vzorec. Rezultati kažejo, da so ocene slik urbanih prostorov brez vertikalne ozelenitve (skupina A) v povprečju za 3,15 ocene nižje kot slike z vertikalno ozelenitvijo (skupini B in C). V povprečju sta skupini B (delno ozelenjena fasada) in C (polno ozelenjena) ocenjeni kot privlačnejši, razlika je tudi med njunima srednjima vrednostma. Slike z bolj ozelenjenimi fasadami (C) so imele za 0,95 točke višjo povprečno oceno.

Ob pregledu vseh treh različic posameznega variantnega prikaza urbanih prostorov, ki smo jih vključili v anketo, ugotovimo, da je v vseh primerih 20 prikazanih prostorov ocena slike sklopa A najnižja in ocena sklopa C najvišja, pri čemer je razlika med ocenama sklopov B in C v nekaterih primerih minimalna. Na sliki 5 je primer enega od 20 obravnavanih odprtih prostorov, vključenih v anketo. Frekvenčne porazdelitve ocen posamezne slike kažejo na razlike med proučevanima vzorcema slovenskih in nizozemskih anketirancev, kljub tem razlikam pa je razviden podoben trend gibanja ocen v obeh državah.

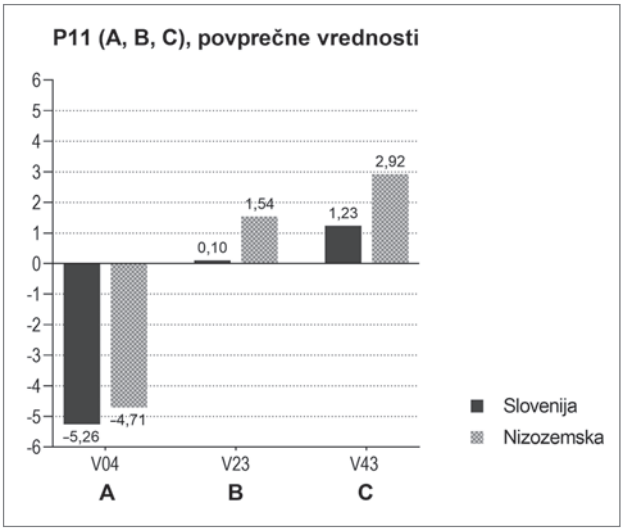
3.4 Primerjava glede na demografske značilnosti in različna vzorca

Primerjava slovenskega in nizozemskega vzorca kaže, da so slovenski anketiranci slike na splošno ocenjevali z nižjimi ocenami od nizozemskih anketirancev. Pri 17 prikazih (od 60) je bila razlika v povprečni oceni slik nižja za več kot 1 oceno, pri dveh prikazih je bila razlika za več kot 2 oceni. Tudi glede na razvrstitev slik v sklope A, B in C se je pokazalo, da so bile slovenske ocene slik nižje, in sicer za 0,64 ocene za sklop A, za 0,63 ocene za sklop B in za 0,69 ocene za sklop C. Ob pregledu razlik med posameznimi prikazi ugotovimo, da se največje odstopanje pojavi v primeru uporabe znanih motivov (npr. primer znanega objekta na Nizozemskem, ki ga nizozemski anketi-



Slika 5: Različice prikazov (A, B, C) enega od 20 primerov in frekvenčne porazdelitve ocen primerov v obeh državah (izdelala: Jana Kozamernik)

ranci ocenjujejo višje v vseh variantnih prikazih). Prikazom sklopa A (brez ozelenjene fasade) so najslabše ocene podajali moški v slovenski anketi, pri nizozemski anketi so nižje ocene dajale ženske. Prikazom sklopov B in C (z delno oziroma popolnoma ozelenjeno fasado) so ženske v slovenski in nizozemski anketi dajale višje ocene od moških, razlike med ocenami spolov so večje pri nizozemskem vzorcu. Primerjava rezultatov med slovenskim in nizozemskim vzorcem glede na starostne skupine anketirancev kaže na večje razlike. V starostni skupini 26-35 let nizozemskega vzorca se povprečje ocen prikazov giblje okrog ocene 0. Sklepamo, da tej starostni skupini grajeni ambienti brez ozelenitve (fasade) niso niti privlačni niti nepri-



Slika 6: Povprečne ocene prikazov (A, B, C) primerov v obeh državah (izdelala: Jana Kozamernik)

vlačni – so sprejemljivi. V nasprotju z njihovimi odgovori so ocene slovenskih anketirancev iste starostne skupine najnižje med vsemi proučevanimi starostnimi skupinami – sklepamo, da so ti ambienti njim najmanj privlačni. Najvišje ocene prikazom z ozelenjenimi fasadami so dajali slovenski anketiranci starostnega obdobja sredi in ob koncu delovne dobe (51-65 let) in nizozemski anketiranci delovne populacije, tj. starostne skupine med 36 in 50 let. Pri teh skupinah bi šlo lahko za večje zavedanje o pomembnosti stika z naravo v bivalnem okolju.

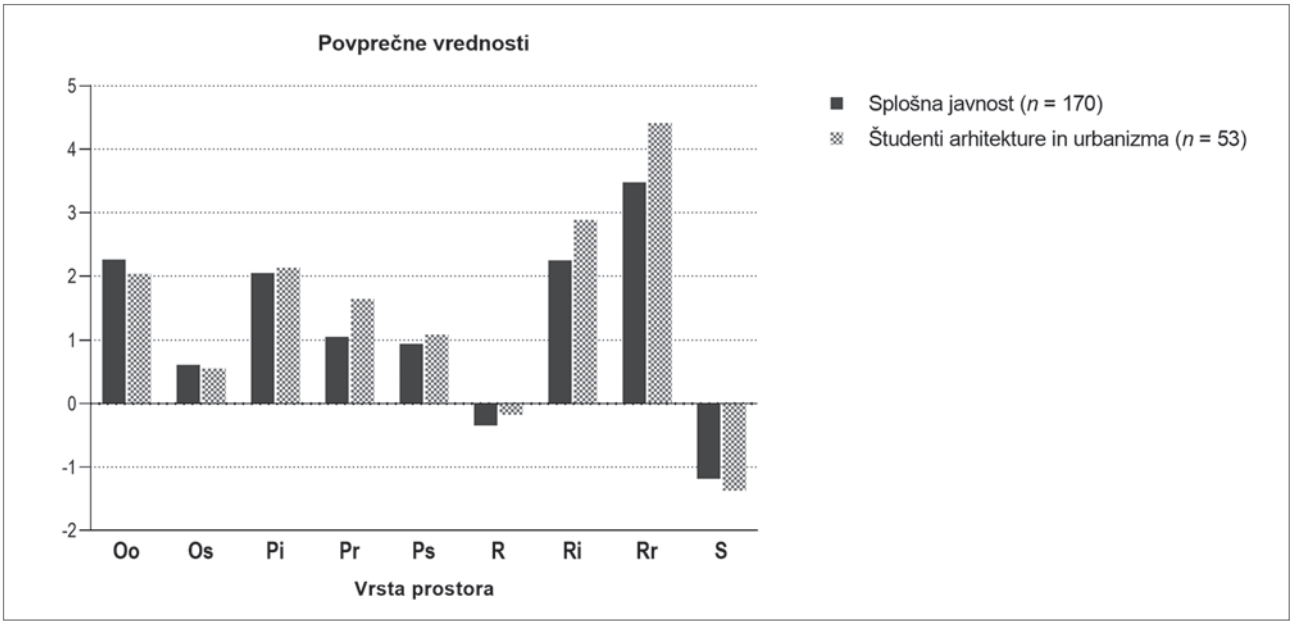
Razlika v vrednotenju odprtih prostorov se je pokazala tudi glede na kraj bivanja anketirancev. Predvsem slovenska populacija, ki živi v mestnih središčih, je v povprečju prikaze sklopa A slabše ocenila kot nizozemska, predvsem pa je zelo velika razlika pri oceni sklopov B in C. Prebivalci mestnih središč v Sloveniji so podali v primerjavi z anketiranci, ki živijo v drugih okoljih, najslabše ocene vsem sklopom prikazov (najnižje ocene glede na druge skupine). Anketiranci, ki živijo zunaj mestnih jeder, so prikaze brez ozelenjene fasade (A) ocenili manj negativno, hkrati pa tiste z ozelenjeno fasado (B in C) z višjimi ocenami, podobno kot anketiranci v nizozemski raziskavi. Razlogi za rezultate so verjetno povezani z dejstvom, da se ozelenitev fasad na Nizozemskem pojavlja v večjem obsegu kot v Sloveniji, prebivalci mestnih središč v Sloveniji niso vajeni ozelenjenih fasad.

Opredelitve splošne in strokovne javnosti glede privlačnih prostorov kažejo, da je - ne glede na državo - strokovna javnost slike z ozelenjenimi fasadami (B in C) ocenjevala v povprečju za pol ocene bolje kot splošna javnost. Ob podrobnejši primerjavi ocen mlajše, študentske populacije, ki je sodelovala v anketi, deljene na študente arhitekturno-urbanističnih in sorodnih smeri (strokovno javnost) in študente drugih strok, se je pokazal podoben rezultat, saj je skupina strokovne javnosti prikaze z ozelenjenimi fasadami vrednotila z višjimi ocenami. Prikazi tipa A (brez ozelenjene fasade) skupina splošne javnosti ocenjuje manj negativno kot strokovna javnost, prikaze v sklopih B in C pa z nižjimi ocenami kot strokovna javnost. Ob dodatni primerjavi oziroma delitvi vzorca strokovne javnosti na ločen podvzorec študentov arhitekture in vzorec študentov urbanizma (in sorodnih smeri) pa rezultati kažejo, da so študentje urbanizma (in sorodnih smeri) tisti, ki prostore z ozelenjenimi fasadami ocenjujejo z opazno višjimi ocenami kot študentje arhitekture. Največja razlika med ocenami teh dveh skupin (za približno 1 oceno) se kaže pri prikazih A (brez ozelenjene fasade), ki so prikazovali realne slike urbanih okolij - anketirani študentje urbanističnih (in sorodnih) smeri namreč ta okolja ocenjujejo z višjimi ocenami kot študentje arhitekture, kar lahko kaže na to, da se pojavljajo razlike v zaznavanju urbanih prostorov že v oblikovani skupini strokovne javnosti.

3.5 Zaznavanje različnih tipov ozelenjenih fasad

Ob pregledu vrednostnih ocen razvrščenih prikazov glede na tip ozelenjene fasade - zeleno fasado (ZF) ali živo steno (ŽS) se je treba zavedati nekaterih omejitev glede na metodološki pristop in vizualne prikaze. Večina prikazov je zajela urbani ambient, ozelenjena fasada je bila tako vidna z oddaljene perspektive, ne od blizu. Na uporabljenih prikazih so vidne razlike med tipom zelene fasade ali žive stene, ni pa viden celotni detajlni ali tehnični sistem. Ocene privlačnosti posameznega tipa se obravnavajo na podlagi širšega prostorskega zaznavnega učinka. Rezultati kažejo, da imajo slike s tipom zelene fasade ali z uporabo popenjavk, ki izraščajo iz tal, v povprečju boljše ocene kot prikazi s tipom žive stene. Povprečna ocena zelene fasade je 2,65, žive stene pa 1,98. Čeprav se pri obeh tipih ozelenjenih fasad pojavljajo v povprečju primerljive najvišje povprečne ocene privlačnosti (max. ZF = 8,23, ŽS = 8,28) je povprečje zelene fasade višje od povprečja žive stene, saj so ocene zelene fasade manj razpršene, pri živi steni pa ocene segajo tudi do spodnjih negativnih vrednosti.

Podoben rezultat smo zaznali ob primerjavi prednostne izbire anketirancev glede na državo in spol anketirancev. Razlika ocen med obema tipoma ozelenjenih fasad je v nizozemskem vzorcu manjša kot v slovenskem. Rezultat je pričakovan, saj je tip zelenih fasad edini tip, ki se pojavlja na Slovenskem, žive stene pa se pojavljajo šele v novejšem času. Primerjava odgovorov obeh spolov v anketiranih državah kaže enako sliko – bolje ocenjeni so prikazi s tipom zelene fasade. Pri moških je povprečna ocena teh tipov za 0,82 ocene višja kot tipov žive stene, pri ženskah pa je razlika nekoliko manjša, za 0,56 ocene. Rezultati primerjave starostnih skupin kažejo, da se zaznavanje glede tipov ozelenjenih fasad mlajših generacij ne razlikuje bistveno od starejših, anketiranci vseh starostnih skupin so zeleno fasado ocenili bolje kot živo steno, tudi v posamezni državi



Slika 7: Povprečne ocene posameznih tipov prostorov glede na odgovore splošne javnosti in strokovne javnosti (n = 223) (izdelala: Jana Kozamernik)

in glede na okolje, v katerem bivajo. Ne glede na najnižje ocene prebivalcev mestnih središč v Sloveniji se tudi njim zdijo bolj privlačni primeri z zelenimi fasadami. Podoben rezultat daje tudi primerjava med skupinama splošne in strokovne javnosti.

3.6 Tipi urbanih prostorov

V raziskavi je uporabljen majhen nabor tipov urbanih prostorov, saj je vanjo vključenih 20 primerov ambientov, zato lahko rezultate interpretiramo le kot mnenje anketirancev o konkretnih prikazih, težje pa te rezultate posplošimo. Primeri prostorov, ki jih ljudje dnevno uporabljajo, so bili razvrščeni v kategorije glede na funkcije prostorov in stavb (odprti prostor, v povezavi s stanovanjskimi, trgovskimi, javnimi stavbami). Ločeno od realnih primerov (fotografiranih) smo analizirali prikaze, ki izhajajo iz 3D-vizualizacij (izdelanih v realistični tehniki). Med prikazi realnih situacij so bili anketirancem najbolj privlačni javni odprti prostori z različnimi vrstami rabe, kjer se ljudje pogosto zadržujejo (npr. trg, igrišče), in prostori ob javnih stavbah, najmanj pa prikazi trgovsko-poslovnih območij. Med bolj privlačnimi primeri lahko izpostavimo 3D-vizualizacijo sodobnega stanovanjskega bloka, ki je bila ocenjena z visokimi ocenami.

Na podlagi primerjave ocen med državama je razvidno, da je kljub splošno nižjim ocenam slovenskih anketirancev v celotni anketi v primeru vrednotenja urbanih javnih odprtih prostorov (npr. trg, igrišče) povprečje ocen slovenske in nizozemske ankete skoraj enako. Splošna javnost, zajeta v raziskavi, v primerjavi s strokovno javnostjo višje vrednoti vse vključene primere javnih odprtih prostorov (predvsem tiste z večnamensko funkcijo ali kjer se ljudje zadržujejo, npr. trgi, igrišča), hkrati pa z opazno nižjimi ocenami od strokovne javnosti ocenjujejo stanovanjska območja in vse primere, prikazane kot 3D-vizualizacije (Slika 7). Rezultati kažejo še, da so urbani odprti prostori najbolje ocenjeni po mnenju prebivalcev urbanih območij, manj pa po mnenju prebivalcev podeželskih območij. Najbolj negativno so bili ocenjeni primeri prostorov poslovno-trgovinskih središč.

4 Razprava

Na zaznavanje urbanih okolij imajo velik vpliv naravne prvine. Ozelenjene fasade kot rastlinski gradnik in element zelene infrastrukture s svojo pojavnostjo na stavbah vplivajo na večjo privlačnost urbanega prostora. Vrednotenje prostorov z ozelenjenimi fasadami kot bolj privlačnih od tistih brez ozelenitve je dalo pričakovan rezultat tudi glede na dosedanje raziskave o pomenu naravnih prvin v bivalnem okolju in pozitivnem vplivu rastlin na zaznavanje prostora. Ugotovili smo, da se zaznavanje istega prostora spremeni, če so v njem ozelenjene fasade.

Dojemanje prostora (na podlagi proučevanega vrednotenja ozelenjenih fasad kot gradnikov urbanega prostora) je odvisno tudi od socialno-demografskih značilnosti anketirancev. Ugotovljene so bile razlike v ocenah skupin različnih starostnih obdobij v proučevanih državah, še posebej v skupini mladih in starejših, kar lahko nakazuje na nekatere kulturološke razlike med državama. Ob večjih odstopanjih rezultatov anketirancev mestnih središč se pojavlja vprašanje, zakaj slovenski anketiranci v primerjavi z nizozemskimi veliko bolj kritično ocenjujejo urbane ambiente. Nizka ocena te skupine anketirancev za vse

prikazane sklope (najnižje ocene glede na druge skupine) kaže, da so morda ti ljudje tudi bolj kritični do bivalnega okolja na splošno. V tem pogledu bi bilo smiselno raziskavo razširiti in pridobiti informacije drugih držav tako v obravnavi teh gradnikov fasad kot splošno zelenih prvin v urbanem okolju ter se osredotočiti na primerjavo med prebivalci mest in drugih bivalnih okolij ter dodatno vključevati v raziskave tudi mnenje strokovne javnosti.

Ena od ključnih ugotovitev je pomembnost količine rastlin, ne le njihova prisotnost v urbanem kontekstu. Na podlagi rezultatov namreč lahko sklepamo, da je javno mnenje naklonjeno večjemu deležu zelenja v urbanem okolju. Ob tem je treba poudariti, da so rezultati tesno povezani z uporabljenimi vizualnimi prikazi. Ti so prikazovali realistične scenarije izvedbe ozelenjenih fasad – z različno stopnjo ozelenitve, a vedno v smiselnem obsegu glede na arhitekturo, na katero se vežejo, ustrezno stanje vzdrževanja in v času rasti rastlin. Večji vzorec anketirancev in vključevanje dodatnih slikovnih primerov, tudi manj urejenih ali privlačnih z vidika vzdrževanosti, bi lahko izboljšalo razumevanje odgovorov, ki niso nujno povezani z razmerjem količine zelenja, ampak tudi z vrednotenjem teh prvin glede na njihovo stanje. Vseeno lahko na podlagi rezultatov sklepamo, da ljudje na splošno visoko vrednotijo bolj ozelenjene urbane ambiente, kar je ključno z vidika urbanističnega oblikovanja in smernic za načrtovanje teh prostorov.

Mnenje anketirancev o prednostni izbiri glede tipov ozelenjenih fasad se je smiselno obravnavalo v povezavi z rezultati raziskave iz leta 2011 (White in Gatersleben, 2011), katere rezultati so nakazali, da imata velik vpliv na mnenje anketirancev uporabljeni sistem in izbor rastlin. Ugotovitve naše raziskave kažejo, da je ljudem bolj privlačen tradicionalni tip zelene fasade in da so do sodobnih sistemov (živa stena) bolj zadržani. Treba pa se je zavedati, da raziskava posameznih tipov ni podrobno obravnavala, vendar so bili glede na merilo prikazov med sistemi ali posameznimi tipi vseeno vidne razlike. Sklepamo lahko, da bi glede na te ugotovitve raziskave ljudje v urbanih okoljih tip zelene fasade sprejeli z večjim odobravanjem ali z manjšim odklonom.

Za proučevanje urbanih okolij bi bilo treba dosegati večjo raznovrstnost in nabor prikazov posameznih ambientov, kar zaradi metodologije ni bilo mogoče in kaže na pomanjkljivost te raziskave. Ta se je prednostno posvečala variantnim prikazom okolij in je bila omejena v številu slik zaradi upoštevanja še sprejemljivega obsega vprašalnika. Kljub omejenemu naboru prikazov urbanih prostorov lahko ugotovimo, da imajo v zaznavanju uporabnikov velik pomen odprti javni prostori in območja ob javnih stavbah. Gre za prostore družabnega dogajanja in druženja ter običajno oblikovane – načrtovane ureditve odprtega prostora. Do prostorov v neposredni navezavi na stanovanjske objekte, tj. stanovanjskih območij, se anketiranci opredeljujejo bolj kritično. Najslabše ocenjeni zunanji prostori v območjih trgovinskih centrov pa so verjetno z vidika uporabnika kakovostno siromašna okolja. Glede na rezultate raziskave lahko opozorimo tudi, naj se pri izvajanju podobnih raziskav pri uporabi realnih motivov upošteva vidik (pre)poznavanja znanih realnih motivov in se s tem vpliva na podane vrednostne ocene, hkrati je treba pri uporabi 3D-vizualizacij ambientov upoštevati vidik idealiziranih prikazov. Ugotovljeno je bilo, da ti vplivajo na ocene anketirancev. V prihodnosti bi bilo smiselno v podobnih raziskavah omejiti prikaze na konkretne prostore, ki jih anketiranci ne poznajo. V raziskave v prihodnosti je treba zajeti tudi širši vzorec strokovne javnosti, tako študentske kot delovne populacije.

Raziskave, ki se ukvarjajo le z vizualnim zaznavanjem, bi bilo v prihodnosti smiselno nadgraditi s primerjalno metodologijo ali izvesti na način, ki bi vključeval tudi zaznavanje z drugimi čutili. Opomniti velja, da je omejitev te raziskave povezana s pripravljenimi prikazi, delno pa tudi s količino zajetih podatkov in njihovo uporabo pri podrobnejši analizi. Omejitve glede prikazov so povezane s številom slik in fizičnimi značilnostmi prostora na slikah ter presojo po prikazovanju stanja - ozelenjene fasade so se pojavljale v sprejemljivih količinah in vedno v zadovoljivem vzdrževanem stanju. Poglavitni vzrok omejitev je bil obseg vprašalnika. Zaradi velike količine prikazov in načina spremljanja proučevanega gradnika je bil v anketo vključen majhen nabor posameznih tipov prostorov. Posledica te omejitve je majhna zanesljivost ugotovitev glede vrednotenja tipov urbanih prostorov. Kljub prilagoditvam obsega vprašalnika je bil zaznan velik osip v izpolnjevanju anket, veliko vprašalnikov je bilo izpolnjenih nepopolno (na primer le polovično), zato so bili izvzeti iz analize. Raziskava tako sloni tudi na omejeni zanesljivosti rezultatov glede na posamezne podskupine anketirancev, na primer manjšega števila anket zadevne skupine (npr. najstarejše populacije in glede na bivalno okolje tistih, ki živijo v ruralnem okolju). Kot manjša omejitev z vidika proučevanja kulturoloških razlik pa je primerljivost raziskave na mednarodni ravni, saj je raziskava omejena na razlike med Slovenijo in Nizozemsko in ne vključuje drugih držav.

5 Sklep

Razumevanje odnosa ljudi do urbanega okolja in naravnih prvin v njem je ključno za opredelitev meril kakovosti in usmeritev pri načrtovanju teh prostorov. Raziskava osvetljuje vpliv ozelenjenih fasad na zaznavanje odprtih prostorov v urbanem okolju. Z metodološkega vidika se je v njej zajel širok krog anketirancev dveh evropskih držav, s pripravo raziskovalnega materiala pa se omogočata povezava in uporaba z drugimi metodologijami v prihodnosti. Na podlagi ugotovitev o vplivu zelenih sten na zaznavanje urbanih ambientov lahko sklepamo

o veliki pomembnosti zelene infrastrukture v zaznavanju uporabnikov prostora na splošno. Ugotovitve kažejo, da bi bilo smiselno več pozornosti nameniti tudi drugim raziskavam zelene infrastrukture v mestih, v okviru proučevanega gradnika (ozelenjenih fasad) pa njihovo vlogo v primerjavi z drugimi elementi zelenega sistema. V konkretnih odločitvah za njihovo uporabo je treba pozornost posvetiti lokacijam in arhitekturni sprejemljivosti ter upoštevanju okoljske odgovornosti. Ključno je, da se načrtovalci urbanega prostora zavedajo pomena prisotnosti zelenih prvin in jih obravnavajo kot ene od nosilcev prostorske kakovosti, tako v novo nastajajočih kot v obstoječih in manj privlačnih urbanih okoljih.

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Kakovost življenja v soseskah, ki se prenavljajo: primer iranskega mesta Mašad

Propadanje mestnih predelov je eden najbolj perečih izzivov v razvoju mest, zaradi katerega se stara mestna območja spopadajo z resnimi družbenimi, gospodarskimi in prostorskimi težavami. Mestne uprave zato izvajajo projekte prenove, s katerimi želijo oživiti in obnoviti objekte, območjem povrniti družbenogospodarsko zmogljivost in izboljšati kakovost življenja njihovih prebivalcev. Neupoštevanje kompleksnosti prostorskih posegov v stare mestne predele pa ima lahko neželene posledice, kot je dodatno poslabšanje kakovosti življenja. Avtorja v članku na primeru iranskega mesta Mašad proučujeta kakovost življenja v soseskah, vključenih v projekte prenove, pri čemer uporabljata kombinacijo kvantitativnih in kvalitativnih metod, vključno z vprašalniki, polstrukturiranimi intervjuji, georeferenciranimi podatki in neposrednim opazovanjem. Izsledki kažejo, da ima pomanjkanje trajnostnega financiranja projekta prenove okrožja Samen neželene prostorske, družbeno-kulturne in gospodarske vplive na staro jedro mesta Mašad ter občutno zmanjšuje kakovost življenja tamkajšnjih prebivalcev na račun zadovoljevanja interesov turistov, romarjev in zlasti zasebnih investitorjev.

Ključne besede: kakovost življenja, urbana preobrazba, urbana prenova, propadanje mestnih predelov, Iran

1 Uvod

Tradicionalni razvoj mest se v zadnjih letih spopada s kompleksnimi izzivi, od krčenja mest do propadanja mestnih predelov ter težav, povezanih z upravljanjem okoljskih tveganj, ohranjanjem dediščine, varnostjo, prometom, zdravjem in družbeno neenakostjo (El Din idr., 2013; Marra idr., 2016). Propadanje mestnih predelov je eden najbolj perečih izzivov v razvoju mest, pri čemer nekdaj delujoče mesto ali njegov del začne propadati in se spopada z resnimi težavami, kot so upad prebivalstva, zapuščene stavbe in infrastruktura, visoka stopnja brezposelnosti, revščina, opustela mestna krajina, kriminal, nizek življenjski standard in slaba kakovost življenja (Dale, 1999; Deng in Ma, 2015; Andersen, 2019). Navedeno je zlasti značilno za nenačrtovana tradicionalna središča mest v državah v razvoju, kjer so ta središča običajno tudi najstarejši del mest (Ibem, 2013). V mestnem razvoju so stara mestna jedra običajno zapostavljena in se spopadajo s težavami, povezanimi s propadanjem stavb, slabenjem gospodarske funkcije in izseljevanjem prebivalcev na boljša in sodobnejša območja (Munoth idr., 2013). S propadanjem stara mestna območja ne morejo več učinkovito zadovoljevati potreb prebivalcev, mestu pa lahko povzročajo težave na družbenem, kulturnem in gospodarskem področju (Dale, 1999).

Izkušnje po svetu kažejo, da lahko naložbe v stara mestna jedra pospešijo urbano revitalizacijo in razvoj turizma, ustvarijo nova delovna mesta, prekinejo izčrpavanje javnega proračuna, izboljšajo privlačnost za bivanje in socialno kohezijo ter zmanjšajo kriminal (Bigio in Licciardi, 2010). Mestne uprave zato rade posegajo v stara mestna jedra v okviru projektov urbane prenove, revitalizacije in preobrazbe (Bianchini in Parkinson, 1994; Leary in McCarthy, 2013). Namen obsežnih posegov je običajno zaustaviti propadanje z izboljšanjem prostorske zgradbe, družbene vključenosti, socialnih storitev in zlasti gospodarstva posameznih območij (Leary in McCarthy, 2013; Roberts idr., 2016). Ob upoštevanju načel spodbujanja participacije, krepitve pripadnosti skupnosti, izboljšanja enakopravnosti in okolja ter oživljanja gospodarstva (Ng, 2005; von Hoffman, 2008; McCormick idr., 2013) je lahko mestna prenova učinkovit način za krepitev trajnostne preobrazbe mest in izboljšanje kakovosti življenja na mikro- in makroravni. Navedeno se lahko doseže na podlagi številnih mehanizmov upravljanja, ki izhajajo iz dveh dokaj različnih usmeritev: tradicije univerzalizma in neoliberalističnega pogleda na urbana vprašanja (McCarthy, 2007; Leary in McCarthy, 2013). Pomanjkanje celostnega pristopa pri izvajanju tovrstnih projektov prenove pa lahko negativno vpliva na kakovost življenja prebivalcev, saj lahko povzroči netrajnostne spremembe, kot so zvišanje cen nepremičnin in življenjskih stroškov, družbena izključenost, gentrifikacija in razselitev prebivalcev z nižjim družbenoekonomskim položajem (Atkinson, 2000; Bacqué idr., 2011).

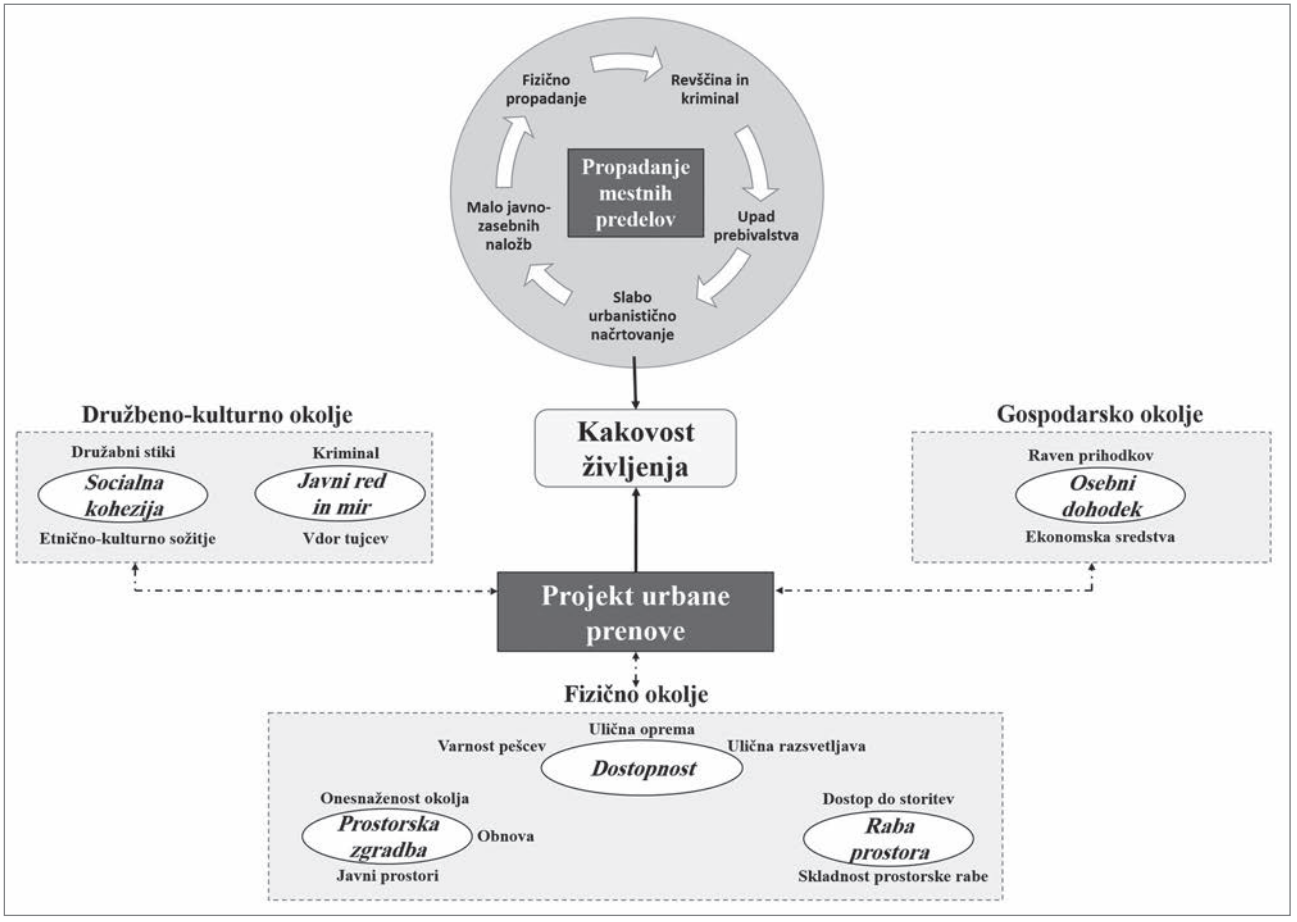
V zadnjih desetletjih je bilo razmerje med kakovostjo življenja in raznimi značilnostmi mest, kot so družbenoekonomski položaj prebivalcev (Mielck idr., 2014; Rokicka in Petelewicz, 2014; Bielderman idr., 2015), okoljski dejavniki (Lo in Faber, 1997; Li in Weng, 2007), gostota prebivalstva (Cramer idr., 2004), gostota gospodinjstev (Carnahan idr., 1974) ter javne dobrine in gospodarska uspešnost (Deller idr., 2001), predmet številnih raziskav, kakovost življenja v stanovanjskih soseskah med izvajanjem projektov prenove pa je bila le redko proučevana, še zlasti na lokalni ravni. Ker lahko projekti prenove močno vplivajo na različne spremenljivke kakovosti življenja, kot so dejavniki prebivalstva, infrastrukture in okolja (Johansson, 2002; Li in Weng 2007; Lee, 2008), lahko proučevanje kakovosti življenja v soseskah, ki se preobražajo v okviru projektov prenove, prinese svež pogled na obravnavano tematiko.

V starem jedru iranskega mesta Mašad zadnjih 25 let poteka najdaljši in najobsežnejši vladni projekt prenove. Glavni cilj projekta prenove okrožja Samen je izboljšati kakovost življenja prebivalcev ter povečati uspešnost in konkurenčnost turizma v središču mesta na podlagi obsežnih prostorskih posegov. Tovrstni posegi v zgodovinsko mestno jedro imajo lahko najrazličnejše vplive in posledice, med katerimi je med najpomembnejšimi tudi spremenjena kakovost življenja. Avtorja se v članku osredotočata na staro jedro Mašada, ki je idealno za proučevanje kakovosti življenja v soseskah, ki se preobražajo v sklopu obsežnih projektov prenove.

2 Metode

Ker imajo lahko projekti prenove različne kvantitativne in kvalitativne vplive, je za proučevanje teh vplivov potrebna kombinacija kvantitativnih in kvalitativnih metod. Raziskava je zato potekala v dveh fazah, pri čemer so bili v prvi fazi zbrani in analizirani kvantitativni podatki, v drugi pa kvalitativni. Navedena mešana metoda se uporablja za razlago in interpretacijo kvantitativnih rezultatov na podlagi kvalitativnih podatkov in njihove analize (Creswell, 1999). Avtorja sta uporabila omenjeno mešano metodo ocenjevanja vplivov ob hkratnem upoštevanju načel participativnega vrednotenja (Roche, 1999; Morris idr., 2011; Catley idr., 2014; Forouhar, 2016).

Da bi proučila kakovost življenja v starem jedru Mašada ter vplive in posledice projekta prenove okrožja Samen, sta se avtorja oprla na konceptualni model kakovosti življenja (Slika 1), ki sta ga povzela iz literature (Day, 1987; Cummins, 1996; Musschenga, 1997; Seik, 2001; Johansson, 2002;

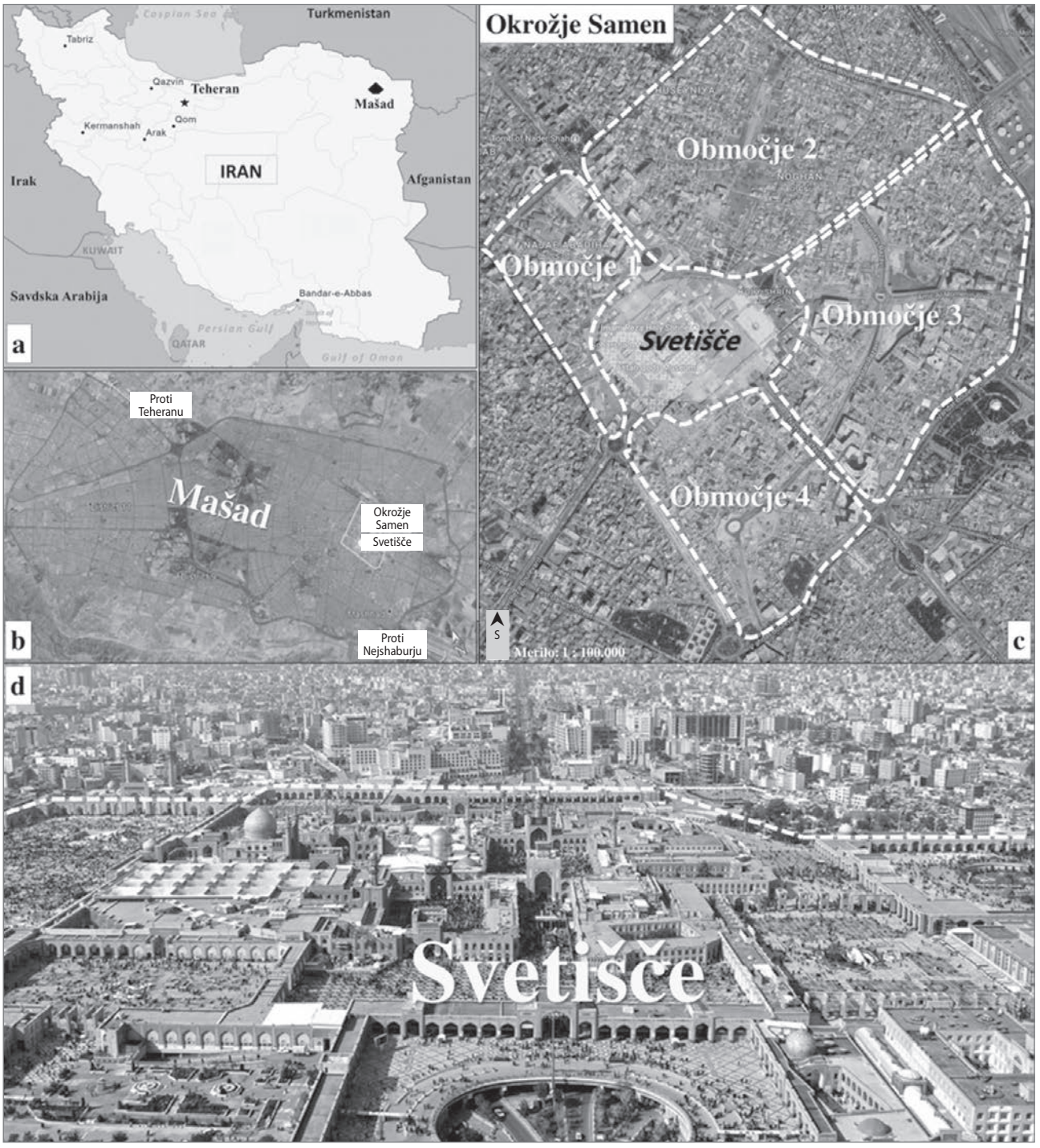


Slika 1: Konceptualni model kakovosti življenja (ilustracija: Amir Forouhar)

Costanza idr., 2007; Marans in Stimson, 2011). V skladu s tem modelom je propadanje mestnih predelov sociološki proces, za katerega so značilni neustrezna urbanistična politika, gospodarska stagnacija, zapuščene stavbe in infrastruktura, visoka stopnja brezposelnosti, revščina, kriminal, upadanje prebivalstva, nizek življenjski standard in slaba kakovost življenja (Dale, 1999; Deng in Ma, 2015; Andersen, 2019). Projekti prenove običajno poskušajo ustaviti propadanje z izboljšanjem prostorske zgradbe, družbeno-kulturnega okolja in zlasti gospodarstva posameznih območij. Kolikšen je poudarek na družbenem, gospodarskem in okoljskem vidiku, je odvisno od posameznega primera (Ibem, 2013; Leary in McCarthy, 2013; Tallon, 2013; Roberts idr., 2016; Andersen, 2019).

Avtorja sta v raziskavi uporabila vprašalnike, polstrukturirane intervjuje, georeferencirane podatke in metodo neposrednega opazovanja. Velikost vzorca za vprašalnike sta določila z uporabo programa IBM SPSS Sample Power 3.0.1, v katerem sta za merila izbrala največ 5-odstotno verjetnost napake prve vrste, največ 20-odstotno verjetnost napake druge vrste (ob najmanj 80-odstotni moči testa) in najmanjšo velikost učinka 0,2. Na podlagi navedenih meril je bila izračunana velikost vzorca 265. V polstrukturirane osebne intervjuje je bilo na podlagi teoretične zasičenosti vključenih 35 prebivalcev proučevanega območja, 20 lastnikov trgovin, 10 turistov in 5 predstavnikov nepremičninskih agencij. Uporabljeno je bilo naključno vzorčenje z metodo sprehoda, pri kateri se število korakov med vzorčnimi točkami določi na podlagi naključnih števil, običajno vzetih iz tabel naključnih števil, pravokotni zavoj iz vsake vzorčne točke pa določi smer naslednje točke (Roche, 1999; Forouhar in Hasankhani, 2018).

Namen vprašalnikov in osebnih intervjujev je bil ugotoviti, kako zadovoljni so prebivalci s prostorskimi, družbeno-kulturnimi in gospodarskimi razmerami v svojem bivalnem okolju ter kako dojemajo spremembe v soseski in njihove vzroke. V okviru metod participativnega vrednotenja, kot so analiza trendov in zgodovinske časovnice (Roche, 1999; Morris idr., 2011; Catley idr., 2014; Forouhar, 2016), so bili anketiranci pozvani, naj opišejo potek nekaterih glavnih dogodkov v svojih soseskah skozi čas in se spomnijo, kaj je bil vzrok zanje; tako so lahko z logičnim dodajanjem drugih dogodkov in procesov izvajanja projekta prenove okrožja Samen rekonstruirali zgodovino. Za analizo kvalitativnih podatkov (tj. vseh posnetih intervjujev) je bil uporabljen sistem odprtega kodiranja, pri čemer so bili izbrani koncepti in oblikovane kategorije glede na informacije, pridobljene z intervjuji.



Slika 2: a) lokacija Mašada v Iranu (ilustracija: avtorja), b) Mašad, c) okrožje Samen z označenim območjem raziskave (oboje Map data, 2020), d) svetišče (foto: Mohammad Khoshneshin, ILNA News Agency)

3 Študija primera

Mašad je drugo največje iransko mesto in drugo največje šiitsko sveto mesto na svetu. Vsako leto ga obišče več kot 30 milijonov turistov in romarjev, med katerimi se pridejo mnogi poklonit v svetišče imama Reze, osmega šiitskega imama (Mashhad Municipality, 2017). Mesto je že od srednjega veka izjemno privlačno za romarje in turiste (Kafashpor idr., 2018). Po britansko-sovjetski invaziji na Iran leta 1941 je zaradi razmeroma negotovih razmer na podeželskih območjih prebivalstvo v Mašadu začelo naraščati. V naslednjih letih se je hitra rast prebivalstva nadaljevala predvsem zaradi večjih državnih prihodkov od prodaje nafte, zatona fevdalnega družbenega reda, agrarne reforme, verskih znamenitosti in razvoja zdravstvenega sistema (Kheyroddin idr., 2014; Abrahamian, 2018; Rabbani idr., 2018).

Preglednica 1: Zadovoljstvo prebivalcev z bivalnim okoljem

Prvina	Vidik	Kazalnik	Zadovoljstvo (v %)				
			1	2	3	4	5
Fizično okolje	Dostopnost	Ulična razsvetljava	35,1	31,3	28,1	3,7	1,8
		Ulična oprema	31,3	38,2	21,8	5,8	2,9
		Varnost pešcev	26,4	37,5	26,3	6.1	3,7
	Prostorska zgradba	Obnova	30,5	39,3	21,9	7,2	1,1
		Javni prostori	38,2	34,2	20,1	5,2	2,3
		Onesnaženost okolja	28,7	43,3	24,0	4,0	0,0
	Raba prostora	Dostop do storitev	29,3	40,0	26,0	4,0	0,7
		Skladnost prostorske rabe	22,9	51,1	19,0	4,0	3,0
Družbeno-kulturno okolje	Javni red in mir	Kriminal	38,0	41,3	16,7	4,0	0,0
		Vdor tujcev	32,4	41,5	21,3	4,7	0,1
	Socialna kohezija	Družabni stiki	15,4	36,2	36,7	8,7	3,0
		Etnično-kulturno sožitje	24,9	33,2	29,3	9,2	3,4
Gospodarsko okolje	Osebni dohodek	Raven prihodkov	47,3	34,7	14,7	3,3	0,0
		Ekonomska sredstva	41,3	37,2	17,2	2,5	1,8

Legenda: 1 = zelo nezadovoljen, 2 = nezadovoljen, 3 = niti zadovoljen niti nezadovoljen, 4 = zadovoljen, 5 = zelo zadovoljen

Preglednica 2: Opisna statistika kakovosti življenja na proučevanem območju

	Opisna statistika									
	Povprečje	Spodnja meja	Zgornja meja	Mediana	Modus	Varianca	Standardni odklon	Min.	Maks.	Razpon
Skupaj	3,2100	2,8866	3,5182	3,0000	2,00	3,567	1,83014	1,00	9,00	8,00
Moški	4,1432	3,6581	4,3648	4,0000	3,00	3,003	1,67712	2,00	9,00	7,00
Ženske	2,2768	2,0148	2,7400	2,0000	2,00	2,651	1,57602	1,00	8,00	7,00

Preglednica 3: *t*-test za en vzorec

Statistika *t*-testa					
t	*df*	Stat. znač. (dvostranski test)	Razlika od hip. povpr.	Spodnja meja	Zgornja meja
−12.670	146	.000	−2.19000	−2.5132	−1.8868

V zadnjih desetletjih je bilo središče Mašada, ki vključuje tudi staro mestno jedro v okolici svetišča (okrožje Samen), v mestnem razvoju potisnjeno na rob, pri čemer se je spopadalo z resnimi težavami, povezanimi s propadanjem objektov in njihovih funkcij. Leta 1965 je vlada dala pobudo za pomemben projekt prenove okolice svetišča, pri katerem bi se zamenjale razpadajoče stavbe in infrastruktura. Čeprav je bil projekt leta 1968 uradno potrjen in so bile nekatere soseske porušene, so ga po iranski revoluciji leta 1978 opustili (Sarkheyli idr., 2016; Kafashpor idr., 2018; Forouhar in Forouhar, 2020). Zaradi pomembnosti svetišča in njegovega turističnega potenciala ter čedalje večjih družbeno-kulturnih, gospodarskih in političnih težav, s katerimi se je spopadalo staro mestno jedro, je vlada leta 1992 začela izvajati megaprojekt prenove okrožja Samen. Njegov glavni cilj je izboljšati kakovost življenja prebivalcev, zadovoljiti potrebe turistov in romarjev, izboljšati urbane storitve ter okrepiti gospodarsko uspešnost in konkurenčnost mestnega jedra na regionalni in svetovni ravni (Hosseyni, 2008; Sarkheyli idr., 2016). Projekt prenove okrožja Samen je danes največji in najdlje trajajoč projekt prenove v Iranu. Obsega približno 366 ha, vodi pa ga Organizacija za obnovo okrožja Samen (Slika 2). Ker je v 25 letih dosegel samo 50 % zastavljenih ciljev, se je spremenil v enega najspornejših megaprojektov v Iranu, ki povzroča resne težave pri upravljanju mesta.

4 Rezultati

Skupno je anketo izpolnilo 140 moških (52,8 %) in 125 žensk (47,2 %; količnik: 1,12). Njihova povprečna starost je bila 34 let (v razponu od 15 do 78 let). 49 % anketirancev se je na proučevano območje priselilo, kar kaže, da je zanj značilna visoka stopnja priseljevanja. Poleg tega jih je 37,3 % tam živelo manj kot pet, 69,1 % pa manj kot deset let, kar pomeni, da

Preglednica 4: Korelacije med prvinami/vidiki in kakovostjo življenja na proučevanem območju

	Kakovost življenja	
	Pearsonov koeficient	Stat. znač. (dvostranski test)
Fizično okolje	0,755*	,000
Dostopnost	0,696*	,000
Prostorska zgradba	0,719*	,000
Raba prostora	0,657*	,000
Družbeno-kulturno okolje	0,751*	,000
Javni red in mir	0,746*	,000
Socialna kohezija	0,625*	,000
Gospodarsko okolje	0,624*	,000
Osebni dohodek	0,624*	,000

Opomba: *p = ,01.

se starejši prebivalci iz soseske odseljujejo. V preglednici 1 so navedeni podatki o zadovoljstvu lokalnih prebivalcev s prostorskimi, družbeno-kulturnimi in gospodarskimi razmerami v njihovem bivalnem okolju.

Iz Preglednic 2 in 3 je razvidno, da so v povprečju anketiranci kakovost svojega življenja ovrednotili z oceno 3,21 na lestvici od 1 do 10, kar je nižje od hipotetičnega povprečja (5,50). Primerjava med spoloma razkrije, da so v povprečju ženske kakovost svojega življenja ocenile slabše kot moški. Poleg tega so rezultati *t*-testa za en vzorec pokazali, da je kakovost življenja v statistični populaciji slabša od hipotetičnega povprečja (interval zaupanja: 99 %). Pearsonov koeficient korelacije kaže, da je med vsemi proučevanimi prvinami fizično okolje najmočneje povezano s subjektivno kakovostjo življenja. Bolj zadovoljni ko so z njim prebivalci, večja je njihova kakovost življenja in obratno. Med proučevanimi vidiki posameznih prvin pa je s kakovostjo življenja najmočneje povezan javni red in mir (Preglednica 4).

4.1 Prostorski vplivi

Eden glavnih ciljev projekta prenove okrožja Samen je bil prebivalcem in romarjem zagotoviti dostop do trgovin, rekreacijskih in nastanitvenih objektov ter svetišča po celotnem zgodovinskem jedru Mašada. Glavni poudarek je bil na gradnji dveh avenij in več servisnih cest okrog novih poslovno-trgovskih stavb in hotelov (Samen Renewal Organization, 2002). Zaradi omenjene gradnje so bile v okrožju uničene številne starejše ceste, zaradi česar morajo prebivalci in romarji že dve desetletji uporabljati druge ali začasne poti. Več kot 65 % anketirancev je bilo nezadovoljnih ali zelo nezadovoljnih z razsvetljavo pločnikov in drugih površin za pešce. Samo 2,9 % jih je bilo zelo zadovoljnih z ulično opremo, več kot dve tretjini pa jih je bilo (zelo) nezadovoljnih z varnostjo pešcev.

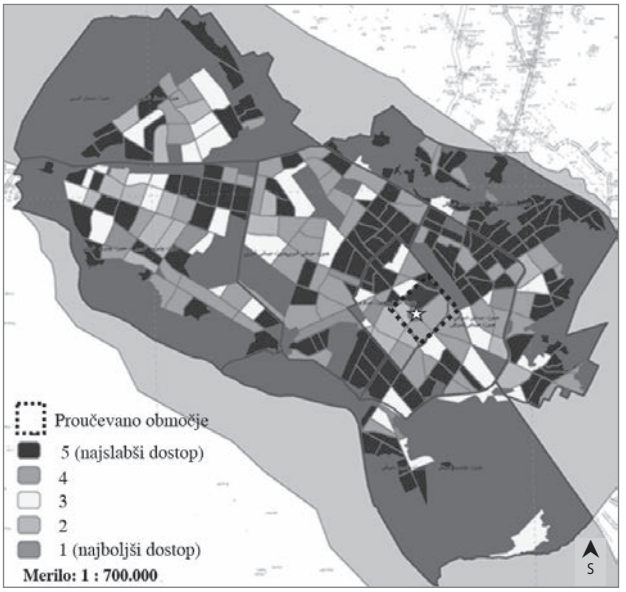
Terenska raziskava je pokazala, da so samo servisne ceste do novih poslovno-trgovskih stavb in nastanitvenih objektov (nakupovalnih središč, luksuznih hotelov in drugih oblik nastanitve) dobro zasnovane ter imajo primerno razsvetljavo in ulično opremo. Začasne ceste, večino katerih uporabljajo tudi pešci, niso primerno osvetljene ali prilagojene ranljivim skupinam ter nimajo dobro zasnovane in skladne ulične opreme (Slika 3). Poleg tega na njih ni poskrbljeno za varnost pešcev v prometu. Organizacija za obnovo okrožja Samen daje prednost dostopu do dobičkonosnih poslovno-trgovskih in hotelskih kompleksov, zanemarja pa potrebe po izboljšanju začasnih lokalnih cest, ker je to predrago. »Projekt prenove prebivalcem te soseske ni prinesel drugega kot razdejanje. Mnoge lokalne ulice so bile uničene, da so lahko zagotovili dostop do nakupovalnih središč, hotelov in hostlov, mestne oblasti pa so uredile začasne poti za pešce, po katerih je ponoči težko hoditi, tudi če imaš žepno svetilko.« (38-letni prebivalec območja)

Projekt prenove okrožja Samen naj bi izboljšal kakovost okolja s stalnim obnavljanjem, izboljšanjem opremljenosti javnih prostorov in zmanjšanjem onesnaženosti okolja. Več kot 60 % anketirancev je bilo nezadovoljnih ali zelo nezadovoljnih z doseženimi rezultati. Med letoma 2013 in 2015 je bilo število gradbenih dovoljenj, izdanih v okrožju Samen, zelo nizko v primerjavi s številom dovoljenj, izdanih v celotnem mestu: 60 jih je bilo izdanih leta 2013 (0,8 % vseh izdanih dovoljenj), 19 leta 2014 (0,03 %) in 19 leta 2015 (0,5 %; Samen Renewal Organization, 2002). Čeprav je bilo izdano zanemarljivo število dovoljenj, ta pokrivajo velika območja; v povprečju so dovoljenja leta 2013 pokrivala površino 8.640 m², leta 2014 4.156 m² in leta 2015 6.039 m². Statistični podatki kažejo, da so bila gradbena dovoljenja izdana za obsežne poslovno-trgovske gradbene projekte, ne za objekte lokalnih prebivalcev. Glavni cilj je komercializacija stanovanjskih območij v okolici svetišča s poudarkom na ustvarjanju dobička, ne na izboljšanju kakovo-

Slika 3: Primerjava začasnih lokalnih cest in servisnih cest do novih poslovno-trgovskih stavb in hotelov (foto: Navid Forouhar)

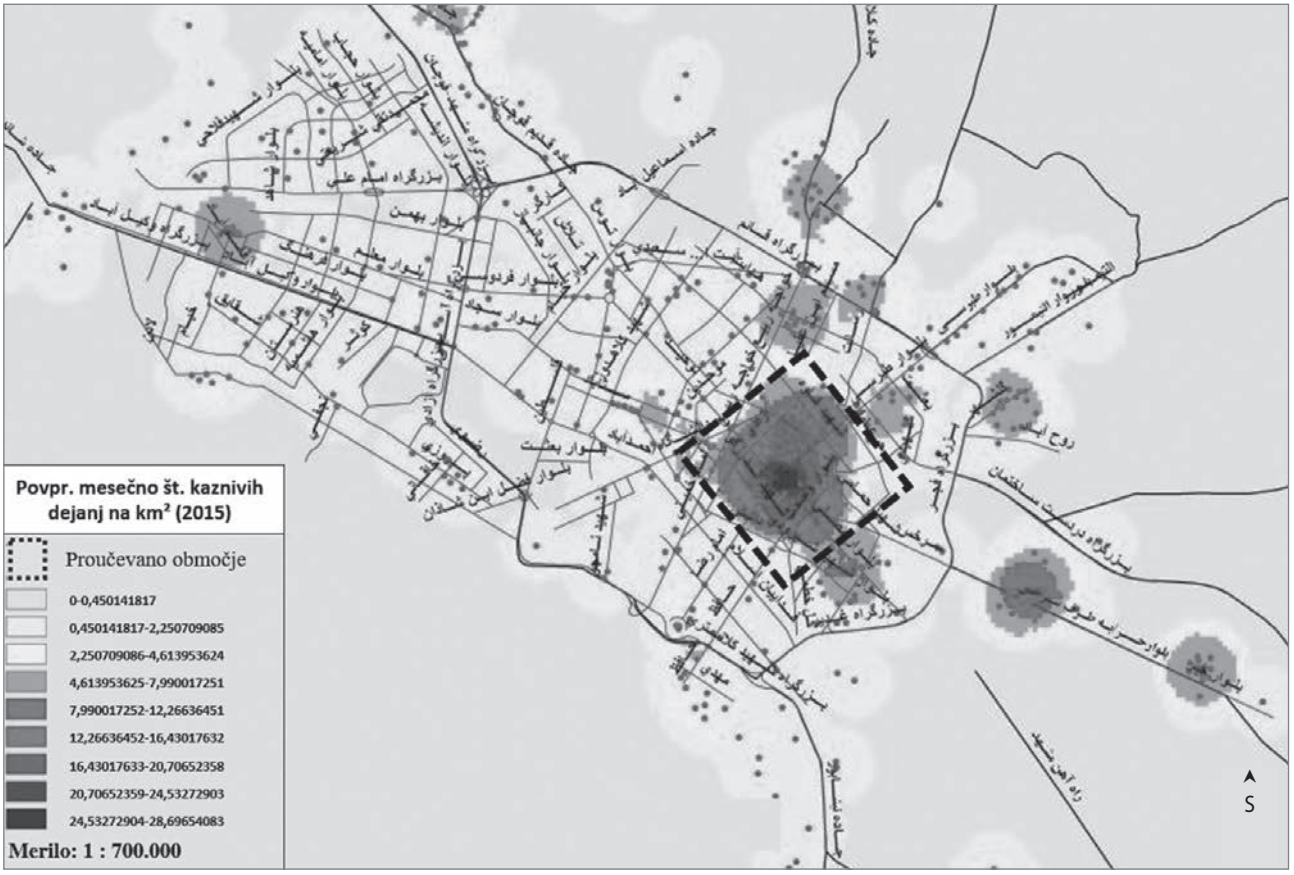
sti življenja prebivalcev. Intervjuji s predstavniki nepremičninskih agencij razkrivajo še, da je izvajanje projekta pomembno vplivalo na upad izvajanja obnov manjšega obsega med prebivalci. Takoj po začetku projekta je Organizacija za obnovo okrožja Samen začasno prekinila izdajanje gradbenih dovoljenj in prebivalcem prepovedala prodajo nepremičnin, zaradi česar sta se zasebna gradnja in obnova takoj zaustavili. Prebivalci so lahko svoje nepremičnine prodali samo navedeni organizaciji, seveda po nizki ceni, ali pa prodajo prestavili za nedoločen čas (City Council of Mashhad, 2016).

Terenska raziskava je pokazala, da se nekateri prazni prostori, ki so ostali po rušitvi starih stavb, trenutno uporabljajo kot parkirišča, nekateri pa so se spremenili v nevarna območja, ki se jim je bolje izogniti. Glavni razlog, ki je upravičeval izvedbo projekta prenove, so bile slabe sanitarno-higienske razmere (Samen Renewal Organization, 2002), vendar so intervjuji in terenske raziskave razkrili, da se je okoljska onesnaženost zdaj še bolj povečala, saj so se porušene stavbe spremenile v odlagališča gospodinjskih in gradbenih odpadkov. Leta 2016 je bilo po podatkih mestne zdravstvene organizacije v okrožju Samen največ primerov okužb s kožno lišmeniazo. Dolgotrajna gradnja poslovno-trgovskih stavb, hotelov in cest poleg tega povzroča nezaželen hrup, ki lahko negativno vpliva na telesno in psihično zdravje prebivalcev ter posledično poveča verjetnost za nastanek raznih bolezni.



Slika 4: Dostop do storitev v Mašadu (ilustracija: Amir Forouhar; vir: Mashhad Municipality, 2017)

Izsledki anket kažejo, da projektu prenove ni uspelo obdržati ravnovesja med potrebami prebivalcev in romarjev. Skoraj dve tretjini anketirancev sta bili nezadovoljni ali zelo nezadovoljni z dostopom do storitev in s skladnostjo prostorske rabe. Leta 2008 so se oblasti odločile, da bodo k projektu pritegnile nove investitorje, ki bi financirali in pospešili njegovo izvedbo.

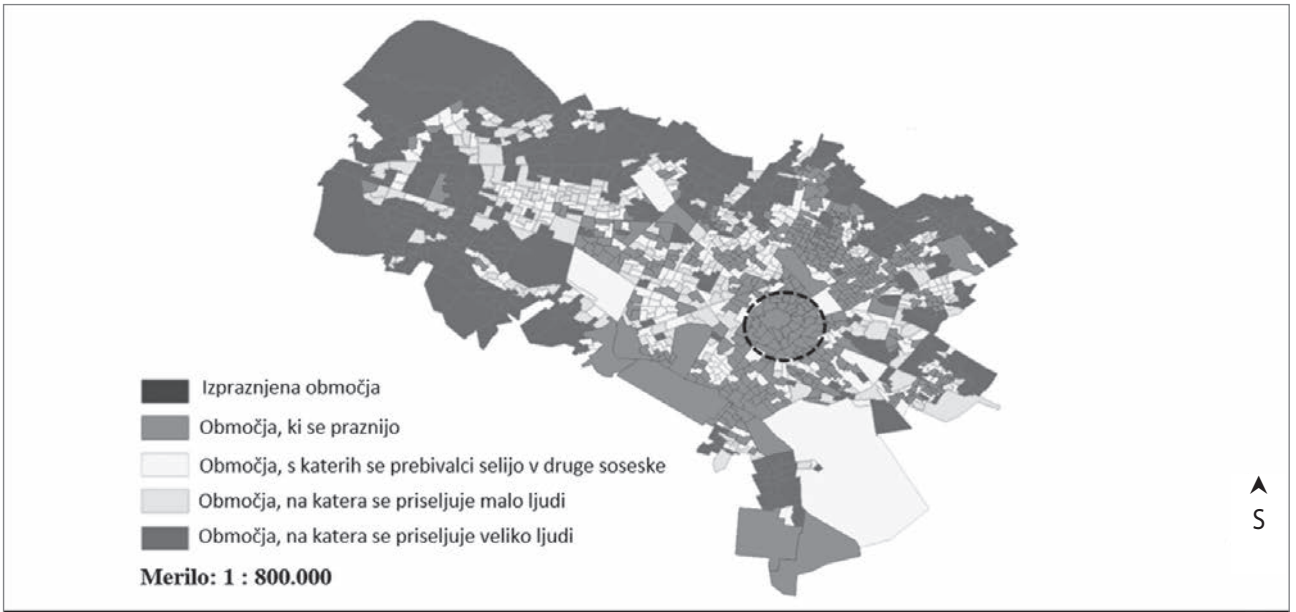


Slika 5: Stopnja kriminala v Mašadu (vir: Mashhad Police Department, 2016)

Organizacija za obnovo okrožja Samen je v prvotno predlagani načrt rabe prostora vnesla pomembne spremembe, na podlagi katerih so bile prvotno predvidene stanovanjske parcele spremenjene v velike poslovno-trgovske površine. Številne hiše so bile v skladu z zakonom kupljene po nizkih cenah, njihove parcele pa so bile nato združene v večja zemljišča, na katerih so zgradili poslovne stolpnice, nakupovalna središča in luksuzne hotele. Omenjena organizacija se je osredotočala na obsežne poslovno-trgovske gradbene projekte, namesto da bi zagotovila cenovno dostopna stanovanja, izobraževalne in zdravstvene storitve ali javne prostore. Na Sliki 4 je razvidno pomanjkanje storitev v okrožju Samen. Intervjuji z romarji so razkrili, da so veliki hoteli primerni samo za bogatejše romarje, zaradi njih pa imajo drugi romarji slabši dostop do cenovno ugodnejših storitev in nastanitvenih objektov. »V preteklosti smo prenočevali v hišah lokalnih prebivalcev. Nastanitev ni bila visoke kakovosti, a cenovno zelo ugodna za revnejše romarje. Nato pa so te hiše porušili in zgradili luksuzne hotele, ki si jih večina romarjev ne more privoščiti.« (39-letni romar)

4.2 Družbeno-kulturni vplivi

Na kakovost življenja močno vpliva občutek anomije, ki je običajno tudi razlog za nezadovoljstvo z življenjem (Genov, 1998; Western in Lanyon, 1999; Huschka in Mau, 2005). Kazniva dejanja, kot so prekupčevanje z mamili in alkoholom, izsiljevanje, nadlegovanje in prostitucija, lahko močno poslabšajo kakovost življenja v mestnih soseskah. Zaradi vdora tujcev v neustrezno zavarovane stanovanjske soseske se lahko poveča kriminal, kar lahko močno poslabša zadovoljstvo z življenjem tamkajšnjih stanovalcev (Huppert idr., 2009, Hanson idr., 2010; Kitchen in Williams, 2010). Skupno je bilo 77,3 % anketirancev nezadovoljnih ali zelo nezadovoljnih s stopnjo kriminala v svojih soseskah, 73,9 % pa jih je bilo nezadovoljnih ali zelo nezadovoljnih z vdorom neznanih ljudi v njihov življenjski prostor. Po podatkih poročila o preprečevanju kaznivih dejanj in varnosti v lokalnih skupnostih v Mašadu za leto 2016 so glavna žarišča kriminala prav v okrožju Samen (Slika 5). Pregled števila oseb, ki prestajajo kazen v osrednjem mestnem zaporu, kaže, da je okrožje Samen na prvem mestu po številu kaznivih dejanj zoper javni red in mir, goljufij in kaznivih dejanj zoper ljudi in premoženje. Poleg tega je okrožje na drugem mestu po številu drugih kaznivih dejanj, kot so zloraba mamil, prekupčevanje z mamili in tatvine (Mashhad Police Department, 2016). K porastu kriminala v okrožju so poleg neugodnih družbenogospodarskih razmer pripomogli tudi slabo prostorsko načrtovanje, zaradi česar so nekatera območja postala nevarna (vogali in območja v obliki črke L in U), in zapuščena zemljišča, ki so posledica obsežnega rušenja med projektom prenove. Intervju-



Leto	1996	2006	2011	2012	2013	2014	2015	2016	2017
Mašad	1.877.414	2.575.429	2.807.464	2.856.691	2.906.782	2.957.751	3.027.692	3.088.118	3.150.855
Okrožje Samen	46.107	32.330	21.456	19.795	18.255	16.825	15.456	14.239	13.118
Delež celotnega števila prebivalcev (v %)	2,45	1,25	0,76	0,69	0,62	0,56	0,51	0,46	0,41

Slika 6: Spreminjanje prebivalstva v Mašadu (vir: Mashhad Municipality, 2017)

ji so razkrili, da se je zaradi nenadzorovane rasti števila hotelov in hostlov, zgrajenih med prenovo, povečala tudi prisotnost tujcev v okrožju. Zaradi slabšanja kakovosti življenja v soseskah so stanovalci začeli zapuščati svoje hiše in jih nezakonito oddajati turistom in romarjem. Po uradnih statističnih podatkih se v okrožju trenutno 3.300 zasebnih hiš nezakonito oddaja romarjem (City Council of Mashhad, 2016).

V zadnjih dveh desetletjih v okrožju Samen število prebivalcev močno upada, trenutno velja za območje, ki se prazni (Slika 6). Po poročanju anketirancev so bili pred projektom prenove družabni stiki v okrožju živahnejši, sorodniki pa so običajno živeli v istih soseskah. Pa razselitvi nekdanjih prebivalcev so se tradicionalne družbene vezi v soseskah močno razrahljale. Zaradi slabe kakovosti okrožja se vanj pogosto naseljujejo revni migranti. Okrožje Samen je trenutno druga najbolj priljubljena destinacija za neiranske priseljence v Mašadu (City Council of Mashhad, 2016), zaradi česar se je etnično-kulturno sožitje stanovalcev močno poslabšalo. Več kot polovica anketirancev je bila nezadovoljna ali zelo nezadovoljna s kakovostjo družabnih stikov ter etnično-kulturnim sožitjem v svojih soseskah.

4.3 Gospodarski vplivi

Osebni dohodek ima neposreden vpliv na subjektivno kakovost življenja, pomembno pa vpliva tudi na zmožnost prebivalcev, da sodelujejo pri obnovi (Ashley in Carney, 1999; Karl, 2000). Stopnja prihodkov prebivalcev okrožja Samen je neposredno povezana z njihovo zaposlitvijo in ekonomskimi sredstvi, kot so zemljišča in nepremičnine (Saghatoleslami, 2017; Kafashpor idr., 2018). Čeprav je okrožje zaradi svetišča postalo eno najbolj dobičkonosnih turističnih območij v Iranu, je bilo manj kot 5 % anketirancev zadovoljnih ali zelo zadovoljnih s svojimi prihodki in ekonomskimi sredstvi. Pred projektom prenove se je večina prebivalcev preživljala s turizmom, pri čemer so turistom prodajali razne izdelke, imeli so trgovine s spominki ali pa so romarjem in turistom oddajali hiše in stanovanja. Lokalno trgovino so močno prizadela velika nakupovalna središča, zgrajena med projektom prenove, zaradi prepovedi zasebne gradnje in obnove pa so prihodki prebivalcev od oddajanja hiš v najem močno upadli. Anketiranci so navedli, da jim je soseska nekoč zagotavljala vir prihodka, projekt prenove pa je močno prizadel njihove službe in zmanjšal njihove prihodke. »Po uvedbi projekta je bilo veliko stavb uničenih in zamenjanih s prestižnimi nakupovalnimi središči, ki so pritegnila večino naših strank.

Nismo bili konkurenčni, zato smo izgubili stranke in ni nam preostalo drugega, kot da zapremo trgovino.« (31-letni lastnik trgovine)

Tudi intervjuji s predstavniki nepremičninskih agencij so razkrili, da se je zaradi projekta prenove zmanjšala vrednost nepremičnin v lasti prebivalcev. Nepremičnine so lahko prodali samo Organizaciji za obnovo okrožja Samen, pri čemer so se cene, ki jih je postavila organizacija, močno razlikovale od dejanske vrednosti nepremičnin na stanovanjskem trgu. Dolgotrajno izvajanje projekta je negativno vplivalo na vrednost lokalnih nepremičnin. »Svoje nepremičnine smo morali poceni prodati, drugače nam bi organizacija odklopila elektriko, plin in pitno vodo. Vrednost se je povečevala samo velikim poslovnim zemljiščem v lasti investitorjev, ne pa tudi lokalnim nepremičninam.« (43-letna prebivalka)

5 Razprava

Propadanje mestnih predelov v Iranu ima več vzrokov. Je posledica različnih med seboj povezanih družbenogospodarskih razmer in urbanističnih politik v zadnjih desetletjih, med drugim tudi namenjanja nezadostne pozornosti dopolnilni gradnji in javno-zasebnim partnerstvom (Sarkheyli idr., 2016; Abrahamian, 2018). Čeprav naj bi obsežen projekt prenove okrožja Samen izboljšal kakovost življenja prebivalcev ter uspešnost in konkurenčnost turizma, ima neželene prostorske, družbeno-kulturne in gospodarske posledice.

Že od začetka obsežnega projekta prenove imata občina in Organizacija za obnovo okrožja Samen zaradi pomanjkanja stalnih finančnih sredstev resne težave z njegovim izvajanjem. Po finančnih sankcijah, uvedenih zoper Iran po vojni z Irakom leta 1979, je iranska vlada uvedla nov finančni sistem za občine (Sarkheyli idr., 2016; Gholizadeh in Aminirad, 2018). Nova zakonodaja je občinam prekinila dostop do večine državne pomoči, ki so jo do takrat prejemale, ne da bi pri tem določila kakršne koli nove finančne vire. V skladu z navedenim vlada projektu prenove okrožja Samen ni hotela dodeliti finančnih sredstev, zato je bila organizacija, ki je projekt vodila, prisiljena stvar financirati iz lastnih sredstev in na podlagi ničelnega predračunavanja. Podobno kot pri projektih urbane prenove na Tajvanu (Hsu in Chang, 2013), Kitajskem (Chen, 2013) in v Kanadi (Zuberi in Taylor, 2013) so se zaradi spremenjenega načina financiranja prvotni cilji projekta prilagodili ciljem zasebnih investitorjev. Kot navajajo Cullingworth idr. (2013), teh ne zanima gradnja stanovanj za ljudi z nizkimi prihodki (ne glede na to, ali so subvencionirana ali ne), temveč gradnja trgovsko-poslovnih središč. Zato sta občina in Organizacija za obnovo okrožja za glavni cilj projekta določili razvoj turizma, ki bi v središče Mašada pritegnil zasebne in druge investitorje. Posledično je organizacija temeljito spremenila prvotni načrt rabe prostora, da bi upoštevala interese investitorjev in zagotovila sredstva za izvedbo projekta, pri čemer je povečala zlasti gostoto območij poslovno-trgovske dejavnosti.

Oblasti so poskušale pridobiti zemljišča in nepremičnine na podlagi odredb o prisilni prodaji. Podobno kot pri odmevnih projektih urbane prenove drugod po svetu – na primer pri prenovi londonskega pristanišča in sanaciji degradiranega industrijskega predela v Sheffieldu (Imrie in Thomas, 1997) – je bila odredba v okrožju Samen sprejeta s splošnim nasprotovanjem vseh tistih, ki so bili prisiljeni prodati svoja zemljišča. Podobno kot v več primerih v ZDA (Teaford, 2000) so bile skupine prebivalcev z nižjimi dohodki razlaščene in razseljene, njihova zemljišča in hiše pa so nadomestili prometna infrastruktura, nakupovalna središča, luksuzni stanovanjski bloki in hoteli. Nasprotovanje lokalnih prebivalcev in lastnikov trgovin je močno podaljšalo izvedbo projekta, ki je še po 25 letih le na pol dokončan.

Izsledki raziskave, predstavljene v članku, se ujemajo z ugotovitvami raziskav gentrifikacije in urbane prenove v Kanadi (Zuberi in Taylor, 2013) in Turčiji (Güzey, 2013), kjer se zaradi neoliberalistične politike urbane prenove in čedalje večjega opiranja na zasebni sektor javno dobro in potrebe lokalnih prebivalcev čedalje manj upoštevajo, prednost pa se daje interesom zasebnih investitorjev. Uporabljeni kapitalistični pristop je socialne cilje in potrebe prebivalcev stanovanjskih sosesk v okolici svetišča potisnil v ozadje, hkrati pa je zaradi negativnih prostorskih, družbeno-kulturnih in gospodarskih posledic poslabšala kakovost njihovega življenja. Zaradi družbenih napetosti, ki so posledica stalnega razseljevanja in ekonomskih pritiskov, bodo urbanisti in oblikovalci politik, ki sodelujejo v projektu prenove okrožja Samen, še naprej težko ohranjali ravnovesje med potrebami prebivalcev, turistov in zasebnih investitorjev.

6 Sklep

Projekt prenove okrožja Samen je z uporabo neparticipativnega načrtovalskega in hkrati kapitalističnega pristopa posegel v fizični prostor stanovanjskih sosesk okoli svetišča imama Reze v osrednjem predelu Mašada. Izsledki raziskave kažejo, da ima poseg na omenjene soseske negativne prostorske, družbeno-kulturne in gospodarske vplive. V povprečju je bilo 68 % anketirancev iz okrožja Samen nezadovoljnih ali zelo nezadovoljnih z dostopnostjo, 71,4 % s prostorsko zgradbo, 71,6 % z rabo prostora, 75,6 % z javnim redom in mirom, 54,8 % s socialno kohezijo in 80,2 % z osebnim dohodkom. Neželene posledice izvajanja projekta prenove močno zmanjšujejo kakovost življenja na proučevanem območju. Anketiranci so na lestvici od 1

do 10 kakovost življenja ocenili s 3,21. Poleg tega izsledki kažejo, da je prostorska ureditev sosesk najmočneje povezana s subjektivno kakovostjo življenja v okrožju (r = 0,755).

Projekt prenove okrožja se je zaradi pomanjkanja trajnostnega financiranja močno oddaljil od prvotno zastavljenih ciljev in se preusmeril k interesom zasebnih in drugih investitorjev. Zaradi kapitalistične vizije so bile potrebe lokalnih prebivalcev zapostavljene na račun interesov turistov, romarjev in zlasti zasebnih investitorjev. Treba je poudariti, da trenutne razmere v okrožju Samen niso posledica samo nepravilne zasnove in izvedbe projekta, ampak so povezane tudi z iranskim naftnim gospodarstvom, v katerem priliv prihodkov od prodaje nafte povzroča rast cen nepremičnin in gentrifikacijo, zato nacionalna vlada in mestna uprava poskušajo zapolniti vrzel v prihodkih od najemnin in pridobiti čim večje finančne koristi iz projektov urbane prenove. Prihodnje raziskave bi se zato morale osredotočiti na dinamiko preobrazbe in gentrifikacije pri projektih urbane prenove v državah v razvoju (zlasti tistih, katerih gospodarstvo temelji na nafti), na podlagi njihovih izsledkov pa bi bilo treba oblikovati strategije in politike za ohranjanje ravnovesja med kakovostjo življenja prebivalcev, potrebami turistov in interesi investitorjev. Poleg tega bi si morali urbanisti in oblikovalci politik v prihodnje prizadevati za bolj raznovrstne, vključujoče in družbeno trajnostne projekte urbane prenove, treba pa bi bilo uvesti tudi nove mehanizme, ki bi zaustavili naraščajočo družbeno izključenost, gentrifikacijo in kratenje pravic med izvajanjem projektov.

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Vloga uporabniških preferenc v urbani akupunkturi: preoblikovanje praznih javnih odprtih prostorov v Teheranu

Avtorji v članku obravnavajo pogosto krhko povezavo med javnimi prostori in širšim okoljem. S pristopom urbane akupunkture na neizkoriščenih odprtih javnih prostorih se lahko mestno tkivo revitalizira z manjšimi prostorskimi posegi, zasnovanimi v skladu s preferencami lokalne skupnosti. Avtorji na podlagi preferenc prebivalcev in mnenj strokovnjakov proučujejo posege na neizkoriščenih mestnih zemljiščih. Na primeru praznega odprtega javnega prostora v Teheranu proučujejo preference javnosti z družbenega, oblikovalskega in estetskega vidika, pri čemer uporabljajo opisno in analitično metodo. V prvi fazi opravljene raziskave so bila proučena mnenja šestih strokovnjakov, katerih vsebina je bila razvrščena v kategorije, v drugi fazi pa bile so teme in podteme, izluščene iz prve faze, vključene v anketo o javnih preferencah. Skupno število pravilno izpolnjenih (veljavnih) vprašalnikov je bilo 165. Po analizi odgovorov, pridobljenih z anketo, je bilo opravljenih 22 osebnih intervjujev. Izsledki raziskave kažejo, kateri posegi so v lokalni skupnosti bolj zaželeni.

Ključne besede: prazni javni odprti prostori, urbana akupunktura, posegi v mestni prostor, uporabniške preference, Iran

1 Uvod

Neizkoriščeni odprti prostori so del infrastrukture, ki lahko izboljša družbene in ekološke razmere (Kremer idr., 2013), in so alternativa sodobnim urejenim javnim prostorom (Kamvasinou, 2011). Večje zavedanje o vrednosti praznih mestnih zemljišč za javnost je ključno za boljše razumevanje njihovih ekoloških in družbenih koristi (Kim, 2016). Da bi krajine, ki niso varne in privlačne, lahko spremenili v okolja, ki izboljšajo družbeno-ekološke sisteme (Folke, 2006; Wals in Wals, 2015), bi bilo treba podrobneje proučiti zadevne posege v družbene in okoljske razmere, upravljavske prakse, rabo prostora in na prazna zemljišča (Kremer idr., 2013).

Glavna prednost vključenosti lokalne skupnosti v prenovo neizkoriščenih odprtih prostorov je ta, da je njihova končna oblika skladna z zamislimi in željami stanovalcev (Kim idr., 2020). Za doseganje večje javne podpore projektom prenove neizkoriščenih odprtih prostorov je zelo pomembno oblikovanje učinkovitih strategij, ob tem pa je javno mnenje o praznih zemljiščih še vedno slabo raziskano (Kim in Miller, 2017). Uporaba pristopa urbane akupunkture na praznih zemljiščih lahko zmanjša družbene težave. Sodobna mesta je pogosto treba oblikovati z makrostrukturnimi posegi (Kermani, 2016), kar lahko v mestih, ki se spopadajo z družbenimi težavami, povzroči velik delež praznih zemljišč (Zhang idr., 2019). Urbanizem se osredotoča na mikroizkušnje mestnih prostorov, urbana akupunktura pa zagotavlja makropogled nanje in zajema izvajanje manjših projektov, ki spodbujajo ekološki in družbeni razvoj v grajenem okolju (Casagrande, 2015). V prihodnje se bodo mesta spopadala s pomanjkanjem prostora in virov, zato so lahko prazna zemljišča priložnost (Németh in Langhorst, 2014; Dubeaux in Cunningham Sabot, 2018) za oblikovanje uporabnih prostorov (Newman idr., 2018), ki lahko uravnovesijo in stabilizirajo soseske. V 20. stoletju so se prazni, neizkoriščeni odprti javni prostori večinoma obravnavali kot luknje v prostorski zgradbi mest (Newman in Kim, 2017). Danes veljajo za sestavni del navedene zgradbe, vpliv manjših prostorskih posegov v okviru urbane akupunkture pa se proučuje z vidika funkcije (Kim, 2016). Izsledki raziskav opuščenih prostorov, ki se osredotočajo na ključne vloge in preference njihovih uporabnikov (Lynch, 1977; Trancik, 1986; Thompson, 2002), kažejo, da je smiselno navedene preference upoštevati pri izbiri vrste prostorskih posegov. Vrzel med teorijo in prakso je opazna že nekaj časa. Raziskava, predstavljena v tem članku, se osredotoča na primer iz Teherana, pri katerem so bili neizkoriščeni javni prostori prepoznani kot priložnost za urbano prenovo, ki lahko izboljša ujemanje značilnosti mestnih prostorskih posegov in želja prebivalcev.

V nadaljevanju je navedeno teoretično ozadje, na podlagi katerega je mogoče proučevati dejavnike, ki pomembno vplivajo na preference in želje ljudi v zvezi s posegi na praznih odprtih javnih prostorih. V članku avtorji torej proučujejo preference in želje uporabnikov, ob upoštevanju katerih se lahko doseže večje ujemanje med značilnostmi mestnih prostorskih posegov in preferencami lokalne skupnosti. Najprej je naveden pregled literature, sledita pa razlaga uporabljenega gradiva in metod ter predstavitev izsledkov. V sklepu so povzete ključne ugotovitve v povezavi z osrednjim raziskovalnim vprašanjem in so podana priporočila za prihodnje raziskave.

2 Pregled literature

Na podlagi razumevanja praznih zemljišč kot potencialno dragocenih naravnih dobrin lokalne skupnosti se lahko izboljša okoljska kakovost sosesk (Kim, 2016). Neizkoriščeni javni odprti prostori so v literaturi opredeljeni zelo različno, in sicer kot praznine v zgradbi mest (Trancik, 1986), nikogaršnja zemlja (Mariani in Barron, 2014), prazna zemljišča in nezasedeni kraji, razpoložljivi za spontano uporabo (Lokman, 2017), in urbane praznine (Newman in Kim, 2017), ki se dojemajo kot javni prostori (Kamvasinou, 2011; Kim, 2016).

Kot navaja de Sola-Morales (2014), prazna območja obsegajo nenavadne, običajno prostorsko neurejene kraje, ki lahko vseeno razvijejo nove, pozitivne prostorske lastnosti (Mariani in Barron, 2014). Povsem neurejeno okolje pa pogosto spodbuja neprimerno družbeno vedenje (Unt idr., 2014). Čedalje več objavljenih raziskav nakazuje, da lahko prenova neizkoriščenih javnih prostorov privede do logičnih in značilnih aktivnosti (Drake in Lawson, 2014; Pearsall in Lucas, 2014), povezanih z najrazličnejšo prostorsko rabo, kot so območja za rekreacijo (Johnson idr., 2014). Ker navedeni prostori ne opravljajo več svoje nekdanje funkcije, so postali prazni in dostopni vsem ter so na voljo, da se jim določi nova raba (Franck in Stevens, 2007). De Sola-Morales (2014) prazne javne prostore razume v smislu evokativnega potenciala mesta, Armstrongova (2006) pa jih dojema kot latentne kraje s posebnimi lastnostmi, ki bi jih bilo treba razumeti in upoštevati pri ustvarjanju predvidljivih ureditev.

V 21. stoletju prevladuje prepričanje, da so minimalni prostorski posegi najpomembnejša strategija urbanističnega oblikovanja (Enia in Martella, 2019). Urbana akupunktura zajema manjše posege (Colorni idr., 2017) in je nov način spodbujanja urbane prenove (Casanova in Hernandez, 2015). Je eden izmed pristopov k projektom urbane prenove ali gradnje ter omogoča upoštevanje družbenih, ekoloških in okoljskih vprašanj (Daugelaite idr., 2018) in ustvarjanje skupnih prostorov za lokalne prebivalce. Vključenost lokalne skupnosti v

Preglednica 1: Značilnosti posegov

Št.	Značilnost	Viri
1	Manjši obseg (mikroposeg)	Marzi in Ancona, 2004; Acebillo, 2006; Cheng in Niu, 2010; Radstaak, 2012; Casagrande, 2015; Aouad, 2016; Campelo in Fontenele, 2017; Colorni idr., 2017; Grifoni idr., 2017; Bugaric, 2018; Cerro, 2018; Daugelaite idr., 2018; Rau in Hutchison, 2019.
2	Natančnost	Shieh, 2006; Campelo in Fontenele, 2017.
3	Spodbujajo prenovo celotne okolice	Shieh, 2006; Cheng in Niu, 2010; de Sola-Morales 2014; Campelo in Fontenele, 2017; Colorni idr., 2017; Grifoni idr., 2017.
4	Hitra izvedba	Marzi in Ancona, 2004; Colorni idr., 2017; Enia in Martella, 2019.
5	Nizki stroški	Cheng in Niu, 2010; Rau in Hutchison, 2019.
6	Pristop od spodaj navzgor	Unt in Bell, 2014; Gadanho, 2015; Aouad, 2016; Campelo in Fontenele, 2017; Bugaric, 2018,
7	Lokalne narave	Tortosa idr., 2010; De Wit, 2014; Unt in Bell, 2014; Casagrande, 2015; Houghton idr., 2015; Aouad, 2016; Grifoni idr., 2017; Lastra in Pojani, 2018.
8	Taktičnost	Unt in Bell, 2014; Casagrande, 2015; Gadanho, 2015; Houghton idr., 2015; Aouad, 2016; Lastra in Pojani, 2018.

urbanistično načrtovanje in oblikovanje je ključna, dosedanje raziskave pa poudarjajo, da so za zadovoljevanje lokalnih potreb in želja potrebne raznolike oblikovalske smernice (Polat in Tümer Yildiz, 2019). V projekte urbane akupunkture so vključeni tudi prebivalci, zato ti projekti omogočajo zadovoljevanje družbenih potreb. Urbana akupunktura sledi strategiji ciljno naravnanih minimalnih posegov (Daugelaite idr., 2018), pri spreminjanju in izboljšanju kakovosti življenja prebivalcev pa upošteva njihove potrebe in mnenja (Bugaric, 2018). Po svetu lahko najdemo najrazličnejše primere urbane akupunkture, od uvedbe nove tradicije do spreminjanja navad (Lerner, 2014), ki jih lahko krajinski arhitekti in urbanisti uporabljajo kot model za izboljšanje kakovosti življenja mestnih prebivalcev. Cilj urbanističnega oblikovanja je ustvariti dobro organizirano strukturo in občutek mesta po meri človeka (Behzadfar idr., 2014). Številni avtorji navajajo, da lahko manjši pametni prostorski posegi na posameznem območju pozitivno vplivajo na okolico (Lydon idr., 2015). Po mnenju Kennetha Framptona imajo novi projekti kot posegi v grajeno okolje moralno nalogo, da spodbudijo obnovo svoje okolice (Shieh, 2006). Omenjeni projekti so bili prepoznani kot pomembni v mestnih okoljih, saj se z njimi poudarjajo naravna dinamika in nizki stroški izvedbe (Daugelaite idr., 2018), so koristni v državah v razvoju, kjer imajo vlade in ustanove omejene vire, in krepijo neposredno vključenost ljudi, ki v teh okoljih živijo.

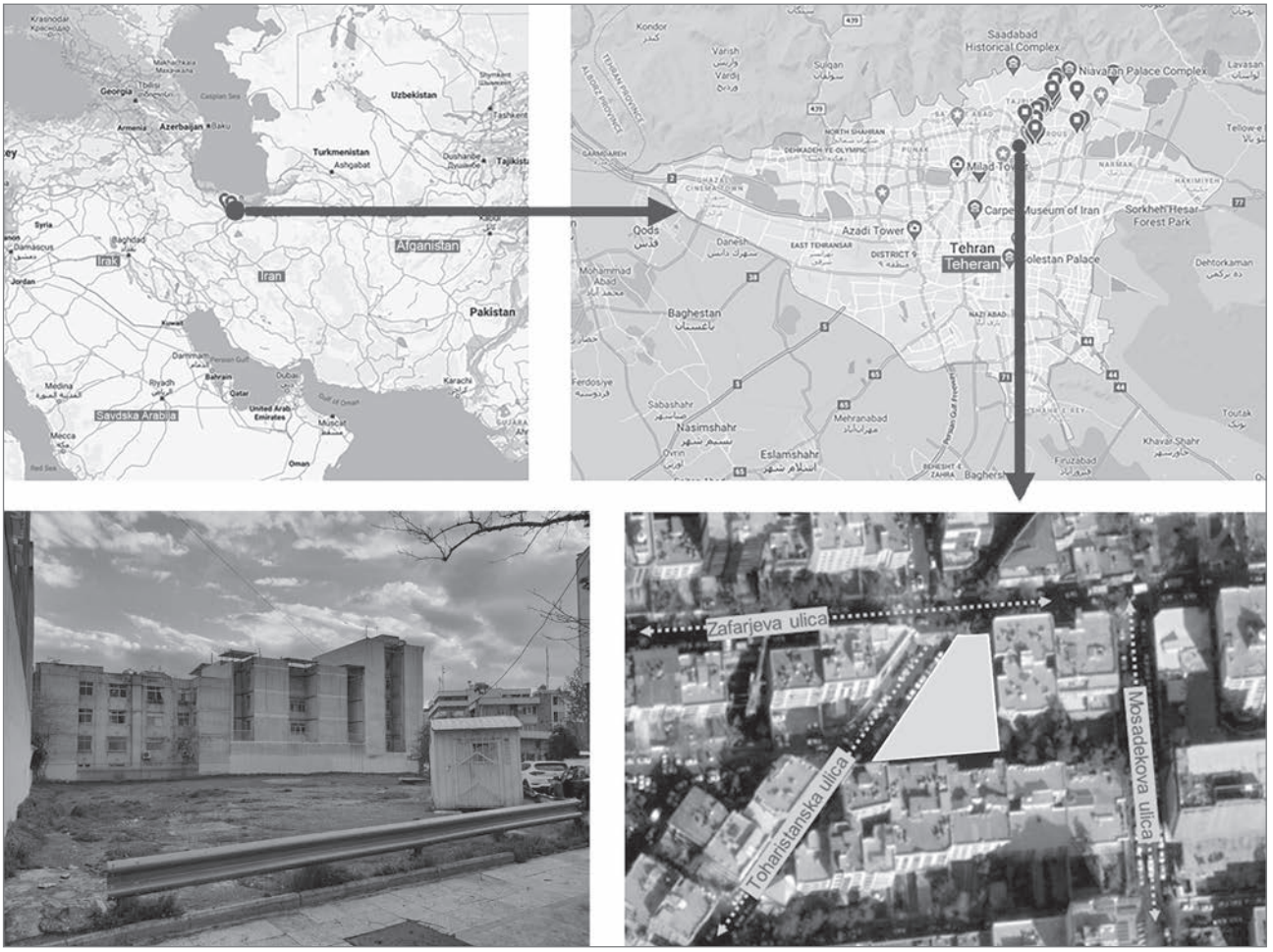
Urbane akupunkture ustvarjajo obsežnejše spremembe, kot je bilo sprva predvideno (Lydon idr., 2015; Lastra in Pojani, 2018), z arhitekturnim pristopom ravno prave mere pa se lahko pri tovrstnih posegih izvedejo ustrezne in potrebne prilagoditve kraju (Enia in Martella, 2019). V preglednici 1 so na podlagi pregleda literature navedene osnovne značilnosti, ki bi jih morali imeti manjši posegi v mestne prostore, kot so območja med uličnimi bloki, površine pred stavbami, manjši parki in manjša prazna zemljišča.

Glavna prednost vključenosti lokalne skupnosti v prenovo neizkoriščenih, praznih prostorov je ta, da njihova končna oblika izraža želje stanovalcev, zato je navedeno vključenost smiselno okrepiti (Kim idr., 2020). Čeprav je pomembno oblikovati učinkovite strategije za doseganje večje javne podpore projektom prenove, je bilo doslej opravljenih le malo raziskav javnega mnenja o praznih zemljiščih (Kim in Miller, 2017). Raziskave so se v glavnem osredotočale na okoljske značilnosti, ki vplivajo na to, kako ljudje dojemajo krajino in območja (Lafortezza idr., 2008; Hofmann idr., 2012; Svobodova idr., 2012; Ruelle idr., 2013). Nekateri raziskovalci so proučevali vizualne preference v povezavi z ekološko sanacijo krajin (Hands in Brown, 2002; Tveit idr., 2006) ter načrtovanjem in oblikovanjem krajin (Ahern, 1999; Greenberg in Lewis, 2000; Ruelle idr., 2013), podobnih raziskav, ki bi obravnavale prazne javne odprte prostore, pa je še vedno zelo malo. Vizualne preference so pomemben dejavnik proučevanja pripravljenosti in želje stanovalcev, da sodelujejo v procesu posodobitve mestnega prostora (Zhao idr., 2020). Čeprav ima uporaba fotografij nekatere omejitve (Daniel, 2001; Palmer in Hoffman, 2001; Steinitz, 2001), je to pomembna metoda za vrednotenje vizualnih preferenc javnosti.

3 Gradivo in metode

3.1 Območje raziskave

Čeprav javni prostori v Teheranu na splošno uporabniku niso najbolj prijazni, so dovolj prehodni, da omogočajo razvoj spontanih dogodkov in aktivnosti (Khorshidifard, 2014). Pristojne organizacije si prizadevajo izboljšati ekološko kakovost zelenih površin in jih primerno urediti, vendar ne morejo obnoviti mestne mreže zelenih površin, ki je zaradi nenadzorovane rasti mesta postala preveč razdrobljena (Bahrami idr., 2012). Dragocene naravne prvine v mestu se rušijo, zato nastajajo številne težave. Ker je Teheran velemesto, v katerem je prostih zemljišč



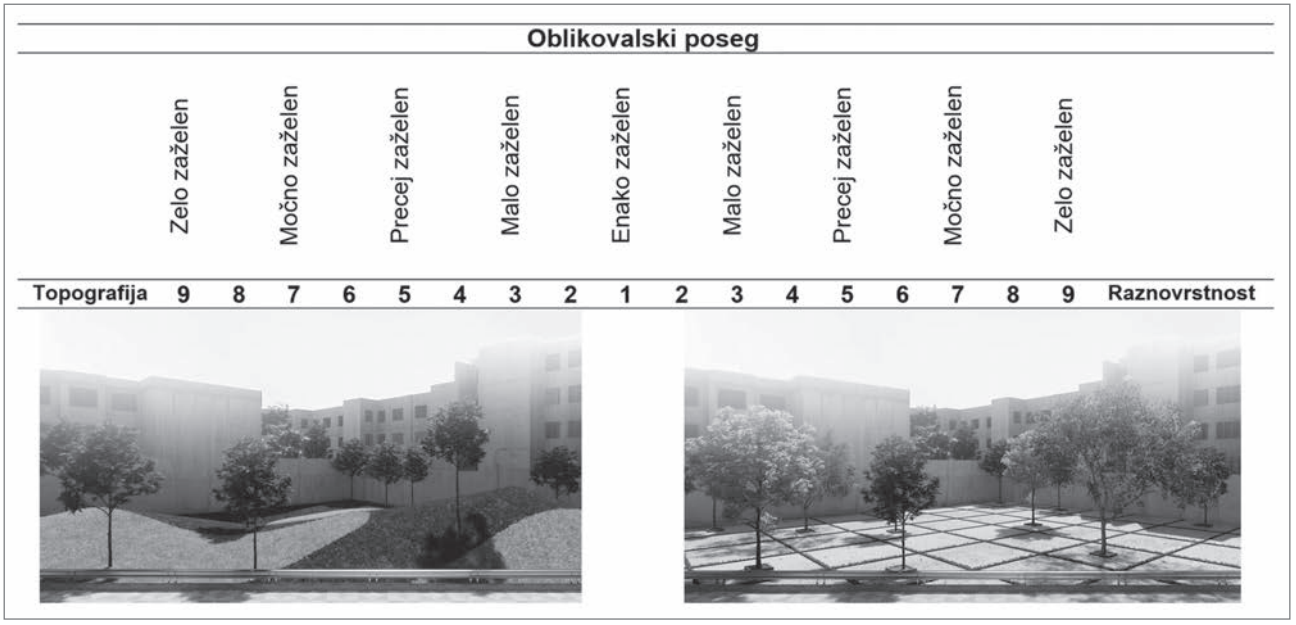
Slika 1: Lokacija območja raziskave (ilustracija: avtorji; vir: Mapdata, 2020)

zelo malo, je lahko uporaba urbane akupunkture na neizkoriščenih javnih prostorih zelo koristna. Avtorji so mesto izbrali za raziskavo prav zaradi raznovrstnosti tamkajšnjih praznih odprtih prostorov, pri čemer je bil njihov glavni cilj proučiti možnost urbanih akupunktur na mikroprostorih, ki ostajajo neizkoriščeni. Na podlagi intervjujev s stanovalci so med manjšimi odprtimi neizkoriščenimi prostori v stanovanjskih soseskah izbrali ustrezno območje za študijo primera. To je v eni izmed sosesk v severnem predelu Teherana, imenovanem Zafar, v katerem živi 70.677 ljudi. Kot je razvidno s slike 1, sosesko na severu omejuje Zafarjeva ulica, na zahodu pa Toharistanska ulica.

3.2 Raziskovalna metoda

Raziskava je potekala v več fazah, pri čemer so avtorji najprej izbrali fotografije prostorskih posegov iz različnih mestnih okolij, ki bi lahko bile podlaga za preoblikovanje izbranega območja raziskave. Nato so fotografije razvrstili v tri kategorije glede na vrsto izvedenega posega: družbeno, oblikovalsko ali estetsko. V naslednjem koraku so vsakega izmed sodelujočih strokovnjakov prosili, naj izbere po tri fotografije, ki so najbolje ponazarjale značilnosti vsake kategorije. Da bi določili preference lokalne skupnosti, so na koncu med stanovalci soseske opravili anketo po metodi analitičnega hierarhičnega procesa (v nadaljevanju: AHP), v kateri so uporabili vprašalnik s fotografijami.

AHP je metoda odločanja, ki se uporablja, ko je treba upoštevati vpliv več dejavnikov, kar lahko oteži proces odločanja. Ta proces odločevalcem omogoča, da na podlagi zbranih informacij bolje razumejo vprašanja, značilna za konkretne situacije, na tej podlagi pa lahko oblikujejo hierarhično strukturo odvisnih dejavnikov (Nekhay in Arriaza, 2016; Saaty in De Paola, 2017). Ključno je oblikovati hierarhijo med različnimi posegi na majhnih neizkoriščenih odprtih prostorih in določiti ključne dejavnike, ki vplivajo na preference stanovalcev glede javnih prostorov. S to metodo se lahko lažje merijo vplivi prostorskih izboljšav na sosesko in celotno mesto (Mondini idr., 2018). Po spletni anketi med stanovalci soseske so bili z 22 anketiranci po spletu opravljeni še osebni intervjuji.



Slika 2: Primer parne primerjave po metodi AHP (prirejeno po Peng, 2019)

Preglednica 2: Hierarhija odločanja

1. raven:	2. raven:	3. raven:
cilj	kategorija	podkategorija
Prostorski poseg	Družbeni	Sproščanje
		Igrišče
		Posedanje v kavarni
		Galerija na prostem
		Namizne igre
		Sedenje in počitek
		Šport in rekreacija
	Oblikovalski	Topografija
		Pravilna zasnova
		Raznovrstnost
		Gostota
		Nepravilna zasnova
	Estetski	Barva
		Vzorec
		Kip
		Instalacija
		Poslikava, stenski okras

3.3 Oblikovanje ankete

Raziskovalci so najprej zbrali 114 fotografij prostorskih posegov na različnih mestnih območjih, ki bi lahko bile podlaga za preoblikovanje izbranega praznega odprtega prostora. Da bi zožili izbor, so šest strokovnjakov z najmanj devetletnimi delovnimi izkušnjami z zadevnega področja (tri arhitekte, enega urbanista in dva krajinska arhitekta) prosili, naj izberejo fotografije, ki najbolje ponazarjajo značilnosti urbanih akupunktur (Shahhosseini idr., 2015), opredeljene v preglednici 1. V prvem krogu je bilo tako opredeljenih 72 fotografij, ki so jih strokovnjaki najpogosteje izbrali. Da je fotografija prišla v ožji izbor, so jo morali izbrati najmanj štiri strokovnjaki.

Preglednica 3: Demografske značilnosti intervjuvancev

		Spol		
		Ženski	Moški	Skupaj
Starost	20–40 let	9	8	17
	41–60 let	2	1	3
	> 60 let	1	1	2
Skupaj		12	10	22

Kot je razvidno iz preglednice 2, je bilo 72 izbranih fotografij razvrščenih v tri kategorije glede na vrsto prikazanega prostorskega posega (družbeni, oblikovalski ali estetski). Za simulacijo sprememb v soseski (Norouzian-Maleki idr., 2018) na podlagi prostorskih posegov, izbranih na fotografijah, so avtorji uporabili programsko orodje SketchUp. Z metodo AHP so bili izbrani primerni posegi za proučevani neizkoriščeni javni prostor. Prvi del ankete se je nanašal na demografske podatke anketirancev (preglednica 3) in njihovo trenutno prebivališče (morali so prihajati s proučevanega območja). Drugi del ankete se je osredotočal na ugotavljanje vizualnih preferenc anketirancev na podlagi metode AHP, pri čemer so morali anketiranci na 17-stopenjski lestvici oceniti 37 parov fotografij.

3.4 Zbiranje podatkov

Da bi proučili povezavo med značilnostmi prostorskih posegov in preferencami lokalne skupnosti, so avtorji izvedli spletno anketo s fotografijami, ki je temeljila na metodi AHP. Pred

Preglednica 4: Demografske značilnosti anketirancev

		Spol		Zaposlitveni status				
		Ženski	Moški	Zaposlen	Gospodinja	Študent	Upokojenec	Brezposeln
Starost	20–40 let	78	51	12	10	29	1	77
	41–60 let	10	11	2	1	1	5	12
	> 60 let	6	9	1	2	0	7	5
Skupaj		94	71	15	13	30	13	94

potrditvijo dokončne oblike ankete so jo tudi pilotno testirali. Anketiranci so bili izbrani z metodo snežne kepe, povabilo k sodelovanju v spletni anketi pa je bilo aprila in maja 2020 poslano 200 naključno izbranim stanovalcem soseske. Podatki, zbrani v anketi, so bili analizirani s programoma Excel in SPSS ter drugimi specializiranimi programskimi orodji. Rezultati so bili ovrednoteni in predstavljeni z uporabo opisne in sklepne statistike. Na koncu so bili z anketo, ki je temeljila na odprtih vprašanjih, pridobljeni še kvalitativni podatki.

Da bi avtorji še natančneje opredelili preference stanovalcev v zvezi s tremi kategorijami prostorskih posegov, so z 22 anketiranci opravili tudi spletne intervjuje. Intervjuvanci so bili izbrani z metodo slučajnih poti, podobni stratificiranemu vzorčenju, njihova porazdelitev po starosti in spolu pa je bila reprezentativna. Skupno je bilo intervjuvanih 12 žensk in 10 moških, njihova razporeditev po starostnih skupinah pa je razvidna iz preglednice 3. Intervjuji so trajali približno 15–20 minut. Njihovi rezultati so predstavljeni v nadaljevanju.

4 Rezultati in razprava

Izmed 189 vrnjenih anket, jih je bilo veljavnih 165. Izpolnilo jih je 94 žensk in 71 moških, katerih demografske značilnosti so prikazane v preglednici 4.

4.1 Rezultati prvega dela ankete

V prvem delu ankete so avtorji proučevali povezavo med izobrazbo, pogostostjo uporabe javnih prostorov in sodelovanjem v prostorskih posegih. Na podlagi stopnje značilnosti $p < 0{,}05$ je bilo ugotovljeno, da bolj izobraženi anketiranci pogosteje sodelujejo pri prostorskih posegih. V preglednici 5 so predstavljene korelacije med stopnjo izobrazbe in sodelovanjem v prostorskih posegih na mestnih območjih.

Ker se pri urbani akupunkturi uporablja pristop od spodaj navzgor, je avtorje zanimalo tudi, kako pripravljeni so anketiranci sodelovati pri prenovi svojih sosesk. Kot je razvidno iz preglednice 6, mnogi anketiranci enkrat do dvakrat tedensko preživljajo prosti čas na javnih prostorih, hkrati pa so bolj pripravljeni sodelovati pri oblikovanju teh prostorov. 86,6 %

Preglednica 5: Povezava med izobrazbo in sodelovanjem v prostorskih posegih v mestu

		Izobrazba	Sodelovanje
Izobrazba	Korelacija	1	–0,164*
	Značilnost (dvostranski test)		0,035
	n	165	165

Opomba: * Korelacija je statistično značilna pri stopnji 0,05 (dvostranski test).

anketirancev bi rado sodelovalo pri urejanju okolja, v katerem živijo, in samo 6,6 % je takih, ki s tem nočejo imeti opravka.

Kot je razvidno s slike 3, najpogostejše aktivnosti na javnih prostorih vključujejo sprehajanje (63,63 %), povezovanje z naravo (52,12 %), posedanje v kavarni ali restavraciji (48,48 %) ter sedenje in počitek (44,84 %). Da sta sprehajanje in povezovanje z naravo najpogostejši aktivnosti, se zdi smiselno, saj je večina anketirancev brezposelnih. Zaradi gneče na javnih prostorih jih stanovalci manj pogosto uporabljajo za udeleževanje dogodkov (6,66 %) in preživljanje prostega časa z otroki (9,69 %).

4.2 Rezultati drugega dela ankete

Z metodo AHP in parno primerjavo fotografij so bile utežene posamezne vrste prostorskih posegov (preglednice 7, 8 in 9). Na podlagi izbranih kriterijev in ocen *w* na 9-stopenjski lestvici so avtorji opredelili naslednjo matriko parnih primerjav:

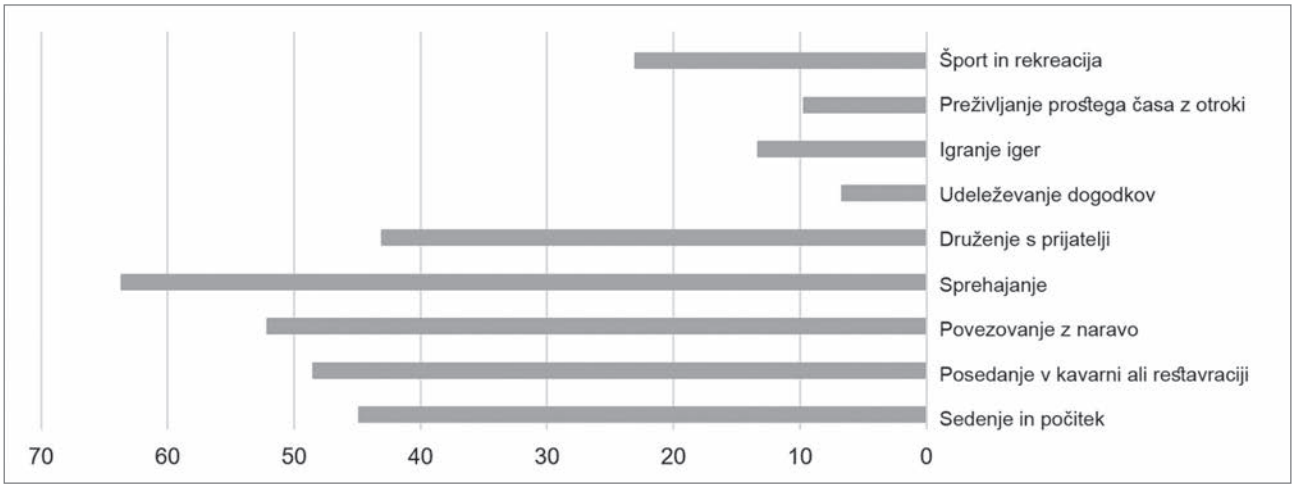
$$\begin{pmatrix} w_1/w_1 & w_1/w_2 & \dots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & \dots & w_2/w_n \\ \dots & \dots & \dots & \dots \\ w_n/w_1 & w_n/w_2 & \dots & w_n/w_n \end{pmatrix} \times \begin{pmatrix} w_1 \\ w_2 \\ \dots \\ w_n \end{pmatrix} = \begin{pmatrix} w_1 \\ w_2 \\ \dots \\ nw_n \end{pmatrix}$$

Na podlagi izračunanih lastnih vrednosti so bile ocenjene relativne uteži podkategorij, na podlagi česar sta bila določena največja lastna vrednost (λ_{max}) matrike primerjav in pripadajoči lastni vektor. Saaty (1990) je razvil tudi postopek določanja usklajenosti matrike primerjav, naveden v nadaljevanju.

Indeks usklajenosti (ang. *consistency index* ali CI) se izračuna z naslednjo enačbo:

Preglednica 6: Povezava med pripravljenostjo stanovalcev, da sodelujejo pri oblikovalskih posegih v prostor, in pogostostjo uporabe javnih prostorov

Pripravljenost sodelovati	Uporaba (v številu dni na teden)				Skupaj
	> 4	3–4	1–2	0	
Težko rečem	1	3	5	2	11
Nočem	1	3	4	3	11
Mogoče	8	7	45	13	73
Hočem	12	7	43	8	70
Skupaj	22	20	97	26	165



Slika 3: Izbrane aktivnosti na podlagi vprašanj izbirnega tipa

$$CI = \frac{\lambda_{max} - n}{n-1}$$

Usklajenostno razmerje (ang. *consistency ratio* ali CR) se izračuna z naslednjo enačbo:

$$CR = \frac{CI}{RI},$$

kjer je λ_{max} največja lastna vrednost matrike, n je rang matrike, RI (ang. *random index*) pa je slučajni indeks matrike, ki je povezan z njenim rangom.

Po Saatyju (2017) je primerjava slučajno generirana, če je vrednost CR enaka 1, usklajenost pa je večja, če je vrednost CR enaka 0. Torej, če je CR < 0,1, so primerjave dovolj usklajene, če pa je CR > 0,1, je treba matriko popraviti.

Na podlagi odgovorov, ki so jih stanovalci navedli v anketi, so bile izračunane uteži dejavnikov, ki so navedene v preglednicah 7, 8 in 9. S hierarhično analizo rezultatov vprašalnika so bili na podlagi dobljenih uteži opredeljeni najpomembnejši dejavniki, ki vplivajo na preference uporabnikov glede neizkoriščenih javnih odprtih prostorov.

4.3 Rezultati vprašalnikov in osebnih intervjujev

Kot je razvidno iz preglednic 7, 8 in 9, je bil najpomembnejši družbeni dejavnik sproščanje, najpomembnejši oblikovalski dejavnik je bila topografija in najpomembnejši estetski dejavnik je bila barva. V družbeni kategoriji (slika 4) sta bila dva dejavnika ovrednotena kot skoraj enako pomembna: namizne igre in galerija na prostem. Najpomembnejše je bilo sproščanje, nato pa posedanje v kavarni, igrišče ter šport in rekreacija.

Intervjuji z anketiranci so razkrili, da je stanovalcem soseske najmanj pomembno igrišče, bolj pomembni pa so jim prostori, na katerih se lahko sproščajo in počivajo. Primerjava fotografij prostorskega posega, ki bi omogočal sedenje in počitek, je pokazala, da je bila anketirancem pomembna tudi vrsta uličnega pohištva. Pozorni so bili na njegovo obliko in prilagodljivost. Sedenje in počitek kot način uporabe javnih prostorov stanovalcem nista bila pomembna (slika 3), sproščanje pa se je izkazalo za najpomembnejše. Morebiten razlog za to je neprimerno ulično pohištvo na javnih prostorih v Teheranu. Anketiranci so menili, da bi bila umestitev restavracije ali kavarne v sosesko povezana tudi z drugimi dejavniki, kot so površine za sedenje, zato tovrstni prostorski posegi omogočajo najboljši način spoznavanja ljudi v soseski in pritegovanja nove gostin-

Preglednica 7: Relativne uteži dejavnikov družbene kategorije

	Družbena kategorija						
	Sproščanje	Igrišče	Posedanje v kavarni	Galerija na prostem	Namizne igre	Sedenje in počitek	Šport in rekreacija
Sproščanje	1	3,436	3,527	4,506	3,235	1,744	3,091
Igrišče	0,291	1	1,453	3,392	2,868	1,928	2,098
Posedanje v kavarni	0,283	0,688	1	4,398	4,073	3,069	4,214
Galerija na prostem	0,221	0,294	0,227	1	1,126	1,601	2,254
Namizne igre	0,309	0,348	0,2467	0,888	1	1,826	2,091
Sedenje in počitek	0,573	0,450	0,325	0,624	0,547	1	3,664
Šport in rekreacija	0,323	0,476	0,237	0,443	0,478	0,272	1

Opombe: λ_{max}= 7,638; CI = 0,106; CR = 0,080.

Preglednica 8: Relativne uteži dejavnikov oblikovalske kategorije

	Oblikovalska kategorija				
	Topografija	Pravilna zasnova	Raznovrstnost	Gostota	Nepravilna zasnova
Topografija	1	3,346	1,677	2,651	1,388
Pravilna zasnova	0,298	1	1,519	1,265	1,712
Raznovrstnost	0,596	0,658	1	2,893	2,128
Gostota	0,377	0,790	0,345	1	2,134
Nepravilna zasnova	0,720	0,584	0,469	0,468	1

Opombe: λ_{max} = 5,415; CI = 0,104; CR = 0,093.

Preglednica 9: Relativne uteži dejavnikov estetske kategorije

	Estetska kategorija				
	Barva	Vzorec	Kip	Instalacija	Poslikava, stenski okras
Barva	1	3,315	3,227	2,862	3,113
Vzorec	0,301	1	2,604	2,097	3,228
Kip	0,309	0,383	1	1,322	3,245
Instalacija	0,349	0,476	0,756	1	4,420
Poslikava, stenski okras	0,321	0,309	0,308	0,226	1

Opombe: λ_{max} = 5,401; CI = 0,100; CR = 0,090.

ske ponudbe na območje. Čeprav je bila rekreacija v anketi dosledno ovrednotena kot najpomembnejša aktivnost (63 % anketirancev uporablja odprte javne prostore za sprehajanje, 23 % pa za športno aktivnost), je bila ureditev prostora za rekreacijo najmanj zaželen prostorski poseg. Stanovalci se raje sprehajajo kot pa rekreirajo na majhnih javnih prostorih. V kategoriji oblikovalskih dejavnikov (slika 5) sta bili najpomembnejši topografija in raznovrstnost, najmanj pomembna pa je bila nepravilna zasnova javnih prostorov.

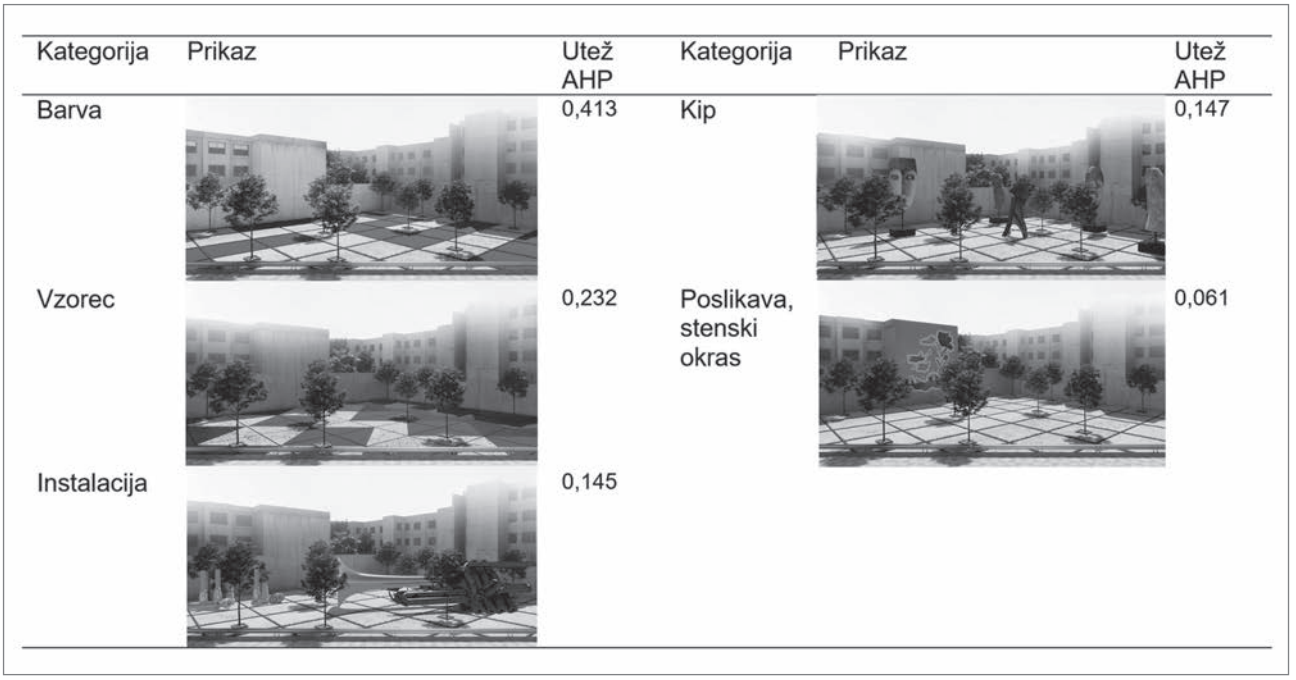
Čeprav sta bila razgibano površje in raznovrstne zasaditve ovrednotena kot pomembna oblikovalska dejavnika, je bila ureditev prostora z gosto vegetacijo najmanj zaželena. Anketiranci poleg tega niso bili naklonjeni prostorskim ureditvam pod nivojem okolice, saj so menili, da bi se takšni prostori spremenili v smetišča. V nestrukturiranih intervjujih so anketiranci navedli, da gosta vegetacija krni vidljivost, kar zmanjšuje varnost in povečuje verjetnost kaznivih dejanj. Ena izmed anketirank je opozorila na nevarne zapuščene prostore podobne velikosti v soseski, zaradi česar je vztrajala, da sta vidljivost in redka vegetacija pomembni za zagotavljanje varnosti. Drugi pa so navedli, da okoljski dejavniki, kot je gosta vegetacija, omogočajo kršenje družbenih norm. Vidljivost v prostoru je bila torej ena najpomembnejših spremenljivk za stanovalce. Druga anketiranka je izjavila, da ko se je pred nekaj dnevi s svojim možem sprehajala po soseski, sta si na proučevanem prostoru zamislila manjši park nepravilne zasnove z nekaj klopmi. Eden izmed anketirancev pa se ni strinjal z nobeno prostorsko rešitvijo, prikazano v anketi. Menil je, da so za sosesko primerni samo oblikovalski posegi, kot je ureditev postajališča za taksije ali parkirišča. Med estetskimi dejavniki (slika 6) je bila najpomembnejša barva, najmanj pomembne pa so bile stenske po-

Kategorija	Prikaz	Utež AHP	Kategorija	Prikaz	Utež AHP
Sproščanje		0,317	Namizne igre		0,0843
Posedanje v kavarnah		0,205	Galerija na prostem		0,0863
Igrišče		0,1778	Šport in rekreacija		0,0493
Počitek in sproščanje		0,0797			

Slika 4: Relativna pomembnost družbenih dejavnikov (ilustracija: avtorji)

Kategorija	Prikaz	Utež AHP	Kategorija	Prikaz	Utež AHP
Topografija		0,340	Gostota		0,137
Raznovrstnost		0,221	Nepravilna zasnova		0,115
Pravilna zasnova		0,185			

Slika 5: Relativna pomembnost oblikovalskih dejavnikov (ilustracija: avtorji)



Slika 6: Relativna pomembnost estetskih dejavnikov (ilustracija: avtorji)

slikave. Čeprav je bila prikazana poslikava anketirancem všeč, niso bili prepričani, ali si jo dejansko tudi želijo.

Razlika v pomembnosti barve in stenskih poslikav je bila razvidna tudi iz intervjujev. Na primer, ena izmed anketirank je navedla, da so vpliv barve na človekovo počutje potrdile že raziskave, stenske poslikave pa lahko vključujejo motive in koncepte, ki niso po njenem okusu. Neki moški je izjavil naslednje: »Poslikava bi bila moja prva izbira, če ne bi živel v Teheranu. Glede na trenutno zelo slabo kakovost stenskih poslikav v mestu bom ta dejavnik določil kot najmanj pomemben. Iz enakega razloga ne bom izbral kipa.« Drugi anketiranec je menil, da lahko poslikave polepšajo zunanje zidove stavb in tla, reklame in grafiti po zidovih pa so vizualno moteči in jih je težko odstraniti. Ker se kar 81,21 % anketirancev zvečer in ponoči zadržuje v manjših parkih, bi bila lahko razloga za to, da poslikav niso ovrednotili kot pomembnih, tudi tema in slaba vidljivost.

Raziskava je odličen primer uporabe metode AHP za proučevanje uporabniških preferenc, ki so lahko v pomoč pri prostorskem oblikovanju in odločanju. Urbanistično oblikovanje je interdisciplinaren proces, pri katerem morajo odločevalci in oblikovalci dobro poznati in upoštevati vse pomembne vidike. Preference stanovalcev in mnenja strokovnjakov kažejo, da je lahko odločanje o tem, kaj in koliko narediti, učinkovito samo, če temelji tako na deskriptivni kot preskriptivni analizi. Z uporabo minimalnih posegov, ki hkrati poskrbijo za varnost in preprečujejo vandalizem, lahko javni prostori ostanejo aktivni. Navedeno se sklada s pristopom urbane akupunkture. Čeprav so anketiranci pokazali zanimanje za estetske posege, jih zaradi podobnih posegov, ki trenutno potekajo v mestu, niso izbrali za najpomembnejše. Zdi se, da jih bolj kot kipi zanimajo instalacije, ker so samo začasne in jih je mogoče menjavati. S tega vidika se zdi pri izbiri posegov ključno upoštevati tudi to, ali so trajni ali začasni. Čeprav je izbrani prostor majhen, je mogoče učinkovito izbrati vrsto posega z vidika prostorske rabe. Tovrstni majhni javni prostori imajo lahko najrazličnejšo rabo in pomembno vplivajo na spreminjanje mestnega okolja.

5 Sklep

Raziskava je pokazala, da so oblikovalski prostorski posegi med stanovalci najbolj zaželeni, pri čemer je treba paziti, da vrsta in gostota vegetacije ne ogrožata varnosti. Poleg tega je pomembna uporaba raznovrstne vegetacije, zlasti kombinacija listavcev in iglavcev, ki poskrbi za raznovrstnost prostora v vseh letnih časih. Ob upoštevanju navedenih podrobnosti se lahko izvedejo minimalni posegi v prostor, ki se ujemajo s preferencami uporabnikov. Anketiranci so poleg tega pokazali zanimanje za estetske posege, ki so začasni in se lahko menjavajo. Navedeno kaže na to, da bi bilo treba pri izbiri prostorskih posegov upoštevati tudi to, ali so začasni ali trajni. Pomembna je tudi vrsta uličnega pohištva, ki lahko izboljša kakovost prostora in posledično močno vpliva na to, kako pogosto stanovalci uporabljajo prostor. Da bi novi prostorski posegi učinkovito spodbudili urbano prenovo, se morajo ujemati s preferencami

in željami lokalne skupnosti. Načrtovalci morajo zato upoštevati izkušnje, pridobljene pri prejšnjih projektih, in izbrati najboljše posege na podlagi razvrščanja in vrednotenja njihovih značilnosti.

V zadnjih desetletjih so bili neizkoriščeni odprti mestni prostori obravnavani negativno, raziskave pa so pokazale, da se lahko preobrazijo v manjše javne prostore, ki koristijo lokalni skupnosti in celotnemu mestu. Posegi na neizkoriščenih zemljiščih morajo biti prilagojeni značilnostim konkretnega mestnega okolja. V prihodnje bi bilo smiselno podobne raziskave izvesti tudi na drugih območjih z drugačno kulturo v drugem družbenem okolju, da bi ugotovili, ali so med njimi kake pomembnejše razlike. Mnenja stanovalcev in strokovnjakov bi lahko primerjali v okviru nadaljnjih raziskav in anket, pri vrednotenju preferenc stanovalcev glede različnih posegov v fazi oblikovanja pa bi bila lahko koristna uporaba virtualne resničnosti v anketah.

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Seznam recenzentov za Urbani izziv, letnik 2020, številki 1 in 2

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Influence of traditional settlement patterns on urban design and planning: A case study of Zaria, Nigeria

This article discusses the influence of traditional settlement patterns on planning new parts of towns using the case study of the old town of Zaria, Nigeria, which developed from the eleventh to nineteenth centuries. The central argument is that some elements of old settlement patterns have been integrated into Zaria's new town. The literature review traces the evolution of the city, reflecting on traditional Hausa architecture, settlement forms, and their influence on spatial organization. Maps, sketches, and tables are used to illustrate how the rich Hausa tradition has influenced urban design and planning. The study shows that some traditional settlement patterns influenced urban design because old vernacular architecture was gradually integrated into new town plans. The article concludes that architects, planners, and developers can learn from this case study of Zaria.

Keywords: traditional settlements, vernacular architecture, urban design and planning, Hausa culture

1 Introduction

Dwellings meet people's basic needs, especially shelter, security, and comfort. According to Astrolabe (2002), the practical establishment of homes through the selection of sites, planning, and construction differs from one country to another (Dobronravin, 2013; Barau et al., 2015). Regarding settlements, Dmochowski (1990), indicated that modern forms of housing developments can integrate traditional architecture and settlement patterns to blend and shape modern forms of settlements in general. Many ethnic and geographical areas, including the central, eastern, and southern regions of Nigeria, have distinct traditional architectural and settlement forms. However, the traditional architecture of Hausa settlements is unique (Buchanan & Pugh, 1995). The spatial configuration of Hausa dwellings and open space allocation systems evolved over generations, incorporating various trends in civilization, culture, and tradition. Olotuah (2000) indicates that certain forms of architecture can be specific to a certain ethnic group of people, thereby influencing settlement layouts. For example, the Egyptians, Greeks, and Romans had architecture for specific functions (Hutchison & Sterbenz, 2018). Similarly, the Hausa people of Zaria in northern Nigeria are known for their unique vernacular architecture, in which the design of buildings reflected the people's social values (Rowan, 1981). Zaria is an example of a historical Hausa settlement, in which external factors such as the climate, the site, and social needs influenced the choice of local materials, techniques, and decorations. This determined the size and relationship of the rooms and the spatial organization of the houses. According to Denyer (1978), these factors were the foundation of traditional and/or vernacular architecture specific to the Hausa people of Zaria. This article reviews the settlement forms and patterns of the Hausa people of Zaria. It analyses traditional architecture to highlight the distinct urban design and spatial planning concepts that town planners, architects, and developers can then incorporate into current urban design and planning projects.

This study explores the influence of traditional settlement patterns on planning new parts of towns using the case study of Zaria's old town, which developed from the eleventh to nineteenth centuries. The following questions are examined:

1) What is the historical narrative explaining the development of traditional Hausa settlement and architectural patterns?
2) What factors influenced the spatial arrangements, patterns, and layout of Hausa settlements?
3) What are the perceptions of the influence of traditional settlements and architecture in Zaria on integrating old and new settlements in contemporary urban design and planning?

2 Materials and methods

This section describes the choice of the study area and similar past and current studies. The rationale for the data collection method is also outlined. Zaria was chosen because it is a typical example of what town planners and others can learn from the rich Hausa tradition of architecture, settlement pattern, and spatial organization. The data collection method used is similar to that in studies by Faludi (1979), Taylor (1998), and Deckro and Hebert (2003). It "combines ethnography and the paradigm of planning theory that looks at traditional and current approaches to architecture, settlement patterns and town planning." The research method therefore shows how traditional Hausa settlement influenced urban design and planning in Zaria.

2.1 Choice of study area and data collection

Zaria's old city has most of the characteristics of a typical Hausa settlement and is one of the best examples of traditional town planning in West Africa. In line with the ethnographic methods of engaging and interacting with communities in historical settlement studies (e.g. Ibrahim, 2015 and Narayanan, 2015), residents of Zaria were consulted to collect primary data. Secondary information and primary data were needed to understand the influence of traditional Hausa settlement forms on architecture, town planning, and spatial organization. Data collection was carried out in two stages:

- Stage one: Secondary data were collected by examining oral traditions and published data. Records were consulted, particularly articles by experts on traditional Hausa architecture and settlement patterns. Library records from Zaria and Ahmadu Bello University of Zaria were also accessed.
- Stage two: Primary data were collected from key informants. These included traditional leaders, elders, traders, public officials, and researchers from the Department of Architecture at Ahmadu Bello University. The focus was on better understanding the evolution of settlements and town planning in the area.

The research method made it possible to analyse the influence of old settlement patterns on urban design and planning. This was in line with methods that emphasize the need to take into account the historical, cultural, physical, economic, and social aspects of urban systems and areas. This approach was based on the book *Field instruction: A guide for social work students* (Royse et al., 2017), which provides guidelines for research in communities.

Table 1: Research questions, methods, analysis, and outcomes.

Question	Method	Analysis	Outcome
1) What is the historical narrative explaining the development of traditional Hausa settlement and architectural patterns?	• Secondary sources (eleventh–nineteenth centuries) • Household interviews • Key informant interviews • Participatory mapping	• Descriptive statistics • Trend analysis • Historical/document analysis • Features/spatial analysis • Integration analysis	Portrait and typologies of architecture, traditional settlements, and town planning
2) What factors influenced the spatial arrangements, patterns, and layout of Hausa settlements?	• Reconnaissance surveys • On-site observations • Ground truthing • Key informant interviews	• Spatial analysis • Integration analysis • Architecture / housing design analysis • Participatory rapid analysis • Thematic analysis	Settlements' spatial patterns and layout Architectural styles and housing designs
3) What are the perceptions of the influence of traditional settlements and architecture in Zaria on integrating old and new settlements in contemporary urban design and planning?	• Key informant interviews • Deductive method	• Settlement discourse analysis • Integration analysis • Spatial analysis • Deductive analysis	Perception of the influence of traditional Zaria settlements and architecture on integrating old and new settlements

Sources: authors, based on Ibrahim (2015) and Narayanan (2015).

2.2 Administering the questionnaire

Questionnaires were administered to key informants in Zaria at ten intersections (near the mosque, market areas, and shops) to obtain information on architecture, urban design, and planning. This included types of building materials used, the influence of religion on architecture, religious symbols and design patterns, household composition, and how homestead land was divided. This approach was necessary because most residents of Zaria are Muslims, which makes it difficult to conduct surveys among Muslim women. Sixty-three questionnaires were administered to heads of household, who were first asked whether they lived in the old city or new town.

2.3 Field observations of homestead settlements

Surveys and observations of Hausa homestead settlement patterns were carried out and compared to old sketches from the colonial era. This information was used to create the illustrations and sketches in this article. The meanings of designs on facades and doors were discussed with key informants and researchers from the Department of Architecture at Ahmadu Bello University. This allowed deeper insight into the influence of traditional Hausa architecture and settlement patterns on planning new parts of towns. Sketches were used to illustrate Hausa settlement patterns.

3 Hausa settlements

Zaria is located at the southern tip of the Hausa ethnic area. Historically, Hausa settlements were feudal city-states encircled by a wall within enclosures with a market area and a monarchical government. Islam enriched the culture of the Hausa people when it was introduced from the Mali Empire in the fourteenth century. At the beginning of the nineteenth century, the British took over the administration of the former emirates. The establishment of a university campus has influenced traditional Hausa architecture and spatial organisation in greater Zaria, including in Bomo, which is another Hausa settlement north of Zaria.

3.1 Geographical and historical context of Hausa settlements

Hausa settlements on the savanna are usually located near streams. Sometimes wooded valleys alternate with ground sparsely covered with thorny shrubs. Before British colonial rule in Nigeria, the Hausa states had a pre-capitalist economy and a well-developed administrative centre. Technology included making pots and decorated calabashes (Kirk-Green, 1961). It is in this geographical area that Zaria, a major city in Kaduna State in Nigeria, previously known as Zazzau, evolved to become one of the seven Hausa city-states. According to the Nigeria's 2006 census, Zaria had a population of 406,099

Figure 1: Location of Zaria and other Hausa city-states (illustration: authors, based on Ayodele and Odeyale, 2019).

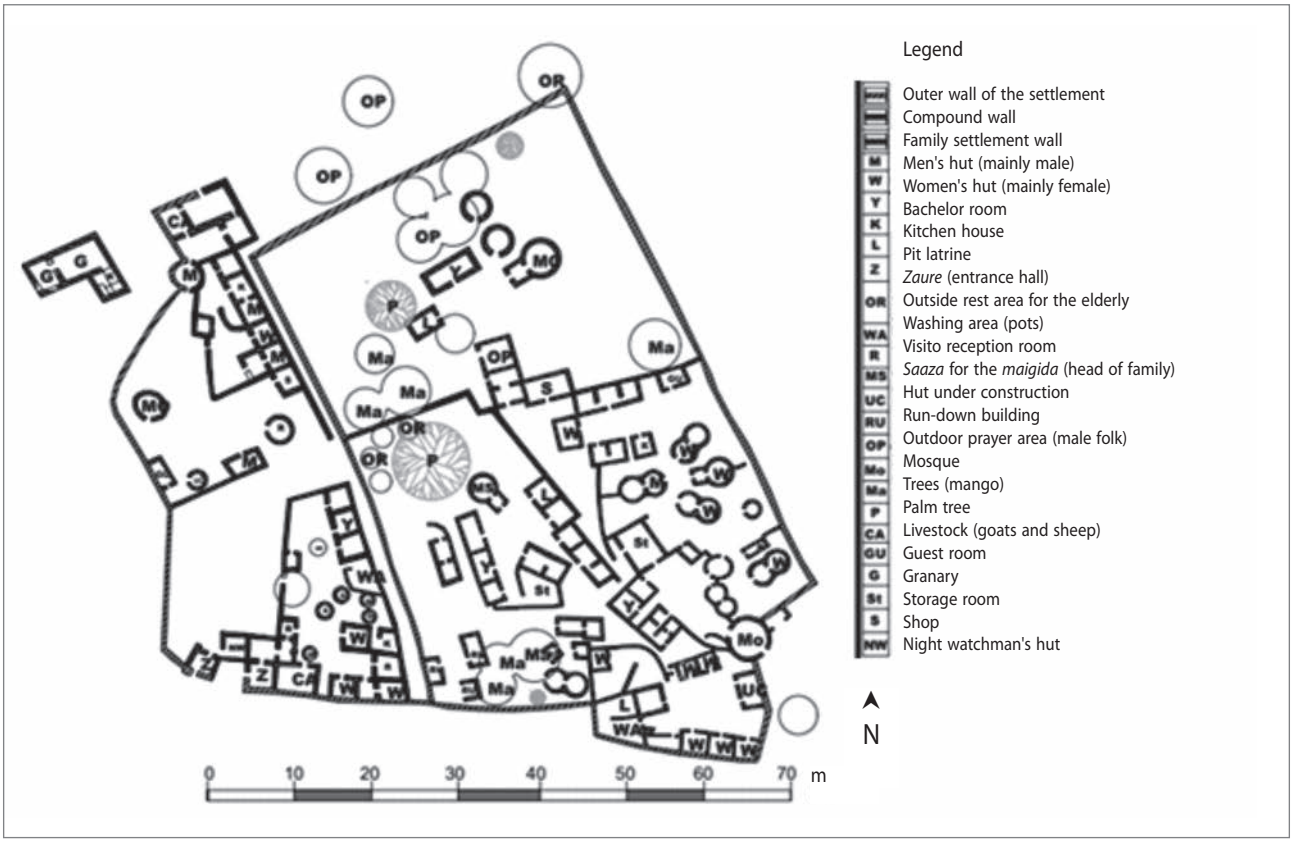

Figure 2: Spatial organization and layout of Hausa compounds (illustration: authors, based on Moughtin, 1964, and own field observations).

people (Federal Office of Statistics, 2006). The city is a predominantly Hausa settlement with institutions, markets, and farming activities (Ma'aruf, 2019).

3.2 Emergence of Hausa settlement patterns

Trans-Saharan trade coupled with the introduction of Islam from the Mali Empire in the fourteenth century had an enormous impact on Hausa settlement forms. A unique Hausa settlement pattern emerged from a hierarchy of rural settlement forms. This settlement system is based on an extended family system, and it is further sub-divided into several family compounds. Figure 2 shows a typical spatial plan of Hausa compounds with courtyards. It is a fenced settlement with several compact compounds. Security played a critical role in deciding how the Hausa settlement was nucleated. Zaria is a good example of a Hausa city encircled by defensive walls. The Zaria city wall was built in the eighteenth century (Adeyemi, 2008). The concentration of household members close to the market area is indicative of the defensive Hausa settlement style and a spatial layout structured for interaction.

3.3 Influence of traditional Hausa architecture on contemporary settlement forms

The connection between traditional Hausa architecture and contemporary settlement forms is based on three determining factors: Hausa culture, the environment, and the influence of climate. Hausa culture is based on history and tradition. It is centred on kinship and the social structure of the people (Madaua, 1968). Hausa building practices were dictated by Islam, in which the use of curvilinear and conical mud-dome roof structures was prevalent, as shown in Figure 3. Rapoport (1969) states that Hausa indigenous architecture is famous for its ribbed vaulting and dome-shaped sculpted external walls, which facilitate quicker runoff during heavy rain. In addition, individual dwellings were sometimes made of egg-shaped units called *tubali* to shed rainwater. Our observations on the ground showed that domed roofs were made of laboriously worked mud, cured under the sun and plastered for a monolithic finish (Beer & Higins, 2000). The homestead is made up of circular and sometimes rectilinear units, but not perfect squares, which are linked to one another (Friedrich, 1982).

3.4 Influence of climate and British colonial rule on traditional Hausa settlement patterns in Zaria

Zaria is in West Africa's savannah area, characterized by a tropical climate with year-round warm weather. The wet season lasts from March to September, and the dry season from October to February. In 2016 the average daily mean temperature was 25.6 °C, with average precipitation of 117.6 mm and an average relative humidity of 69%. The climate demands design solutions that reduce daytime heat and offer night-time cooling. For example, grass roofs are used for decorating and protecting the mud walls from heat and heavy rains. The openings under the houses and granaries provide shelter for chickens, dogs, and cats during severe heat and rain. These designs are still used in some traditional Hausa settlements (Beer & Anne, 1982). Other decorations include murals (Figure 4). Decorations such as bold designs are engraved on walls with entrances. Such decorations can still be seen in contemporary Hausa cities such as Kano, Kazaure, and Zaria. Such decorative artworks constitute architectural heritage that is used in many parts of Zaria. The decorations have simple triangles with vertical, horizontal, and sometimes circular designs.

Figure 3: Hausa building practices with curvilinear and conical designs (illustration: authors, based on Rapoport, 1969).

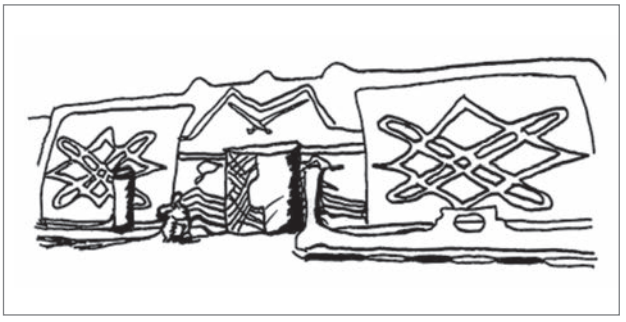

Figure 4: Typical Hausa decorations on walls with entrances (illustration: authors).

British rule in Nigeria started in the eighteenth century and peaked in the twentieth century. The colonial period introduced the concept of modern buildings and a change in perspectives on town planning (see Figure 5). Similarly, modern life in new towns outside the city was introduced by the colonial masters in what were called government reservation areas (GRAs), where modern durable building materials such as cement, concrete, and steel were commonly used. The com-

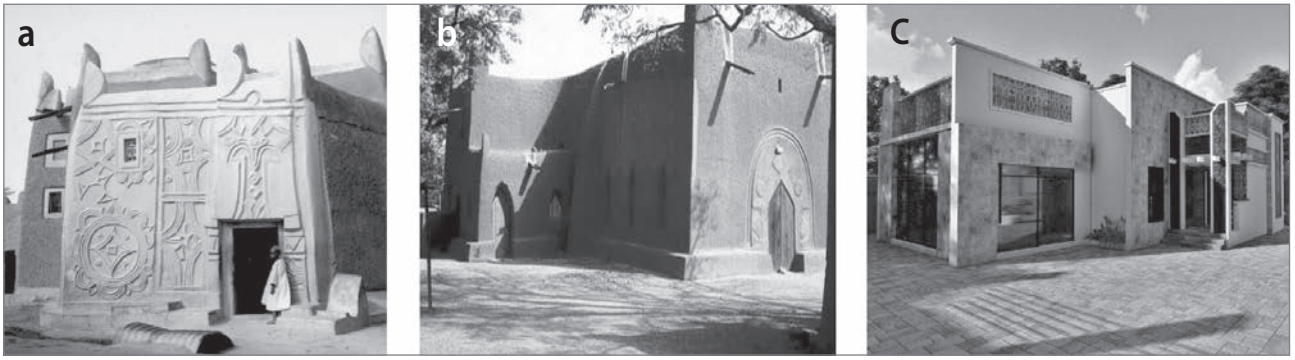

Figure 5: a) example of traditional Hausa architecture (photo: Isaac Samuel); b) example of colonial Hausa architecture (photo: Isaac Samuel); c) example of modern Hausa architecture (photo: Kalifa Rabiu).

bined effect was to make the residents of Zaria rethink the use of mud bricks as building materials and reinterpret architectural meaning in the spatial organization of homesteads. This led to concrete buildings in Zaria and paved roads. From an outside perspective, the traditional Hausa architecture and settlement form is challenged by the need to balance forces of change, modernity, culture, and heritage. It is no longer fashionable to build houses with mud bricks, but it is still fashionable to inscribe traditional Hausa design decorations on building entrances in Zaria (Adedokun, 2014).

The Hausa also started replacing the tracks and mud walls encircling dwelling units with street layouts during the colonial era. There is a separation of use for each space in a traditional Hausa settlement. For example, the houses of the Muslim women in purdah were arranged in such a way that each woman subordinated to her husband had a separate room. The pattern is typically African, but the rooms are arranged around a courtyard to provide for separation of the sexes. The entrance to the house is accessed via an entrance called the *zaure*, usually a hut where men sit and chat. Every family member has unrestricted access to the courtyard, and children can play there. In addition, at the edge of the courtyard there are huts for unmarried young men and male guests. The wife decorates her huts with her dowry gifts and other belongings. This is where she sleeps with her teenage children, and this is still practiced today. After an adult man has been allocated a piece of land, he first builds a wall, the *zaure* entrance hut, and a few sleeping huts as the need arises. These buildings are located inside the compound wall. The relatives' compounds are usually located next to each other. The network of compound walls produces the settlement pattern, which eventually becomes the city. The art of city making is a process in which cultural, social, economic, political, and physical components interact with each other. Lynch and Rodwin (1958) indicated that urban forms are a result of experiences, which are fundamental elements of human settlements, culture, and society. Hence, the organisation of urban spaces is crucial to producing social and spatial arrangements. In Zaria, the elements of urban form tend to influence its social, economic, and environmental settings, which is common in modern cities.

4 Results and discussion

4.1 Transition from traditional to modern Zaria

A sample of sixty-three respondents, including key informants from Zaria, were interviewed to assess their perceptions of the influence of traditional Hausa architecture and settlement forms in Zaria. Of these, 68% (see Figure 6) indicated that traditional Hausa architecture and settlement patterns had declined but still exerted influence on building design and settlement. On the other hand, 32% of the respondents indicated that other factors (e.g. modern urban design and town planning principles) influenced building design and settlement. With respect of religious influence on modern architecture, 52% believed that this shaped building styles in the past but to a lesser extent today. Meanwhile, 41% of the respondents viewed the building style of Hausa settlements as having incorporated western architectural styles; 7% were of the view that Hausa people have integrated international architectural cultures, thereby moderating the traditional religious influence on building styles and settlements. In terms of spatial organization and functional use of space, 65% of the respondents indicated that Hausa architecture is still influential. In contrast, 32% felt that this variable had moderate influence and 3% that its impact was low. This was premised on the observation that modern town planning uses architectural and urban design concepts such as new urbanism, new mobility, new regionalism, and smart cities. The results agree with Akintoye (2010), who asserted that the major "ethnic groups in Nigeria have rich traditions" in which culture influences housing patterns as expressed by the varied components of the traditional housing structure and ideas integrated into modern architectural design and town planning (Bailey et al., 1977). Husukić and Zejnilović (2017: 96) found that "architectural remnants, or ruins in the urban fabric, instead of being unstable entities, have the potential to become drivers of a continuum."

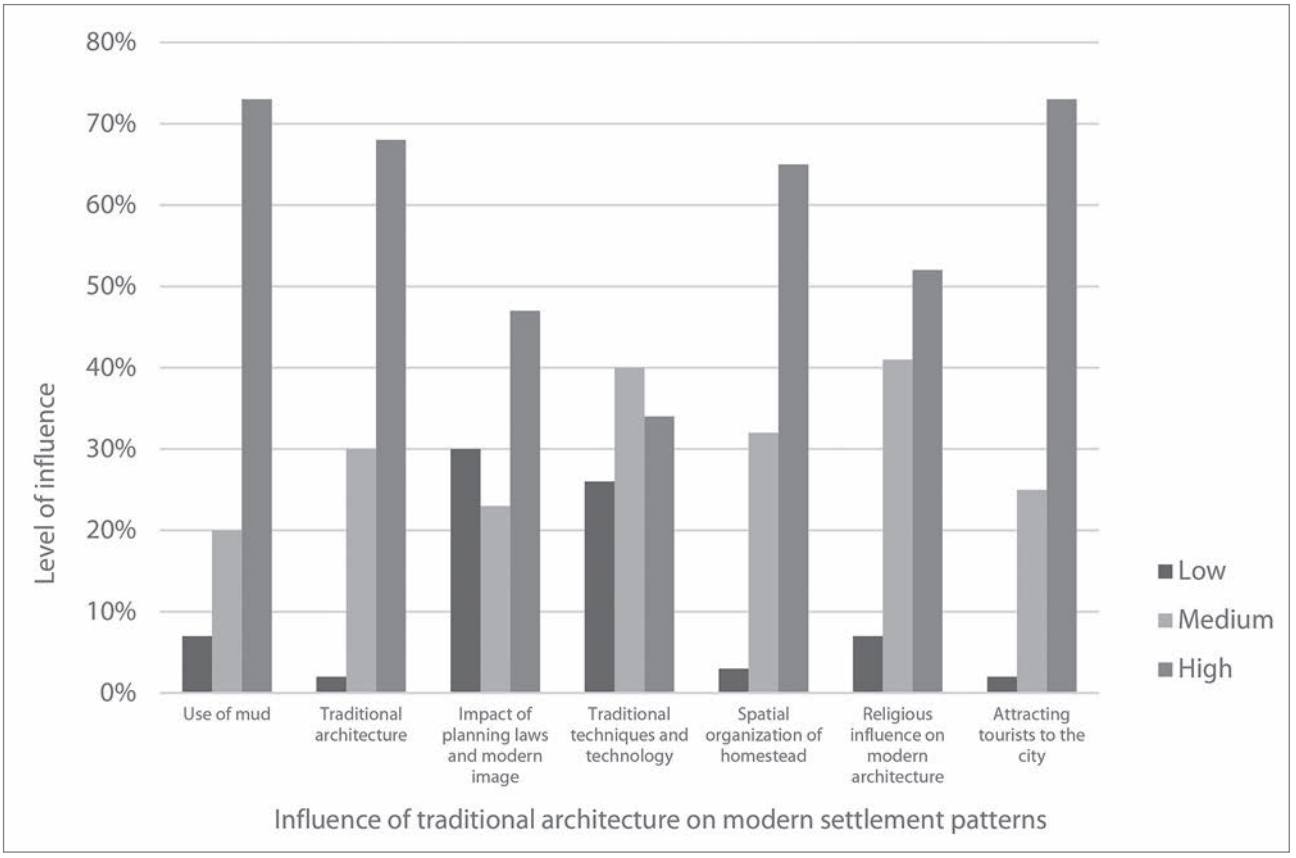

Figure 6: Respondents' perceptions of the influence of the traditional Hausa architecture on settlements (illustration: authors).

These themes resonate with the need to integrate old and new architecture in urban design and planning.

The study further revealed that current urban settlement patterns can be used to integrate components of Hausa spatial organization into new town layouts. This is because contemporary urban design and planning elements focus on the economical use of land, materials, and functional use of space. The study points to Islam as being one of the key rallying points for the continuation of Hausa traditional architecture and settlement patterns (Aluko, 2011). The emergence of the modern image of the city dweller and the fact that the government tried to integrate tradition into building regulations did not receive widespread acceptance from the respondents amid calls for more research. However, from the point of view of thermal comfort, form, and climate, mud still forms a substantial proportion of building materials across Nigeria (Evans, 1995; Danja et al., 2017). The respondents largely agreed (73%) that traditional Hausa architecture and settlement forms have influenced building design. Façades and doors decorated with swords and crescent moons is a common vernacular architectural design and decoration heritage infused in some of the buildings in Zaria.

According to 65% of the respondents, building designs in Zaria were influenced by ideas taken from colonial rule and the introduction of modern building legislation in the nineteenth and twentieth centuries, in addition to the following:

- There was a reduction in large traditional Hausa compounds because of the introduction of town planning legislation that catered to smaller nuclear families with a house, a landscaped front yard, and parking space.
- New town developments reduced the influence of Hausa architecture and settlement patterns because of modern housing developments and economy-of-scale advantages.
- The reduction in Hausa traditional settlement patterns is because of the introduction of modern building materials such as cement, concrete, and steel as well as the introduction of street layouts.
- The reduction in the use of traditional mud-moulded decoration and the preference for modern materials resulted from the simpler use of modern materials.
- There was a reduction in grass-thatch roofs and their replacement with corrugated metal because of the simplicity of modern roofing material as opposed to the labour-intensive task of thatching.

Table 2: Factors promoting integration and their significance.

Factor	Significance
Urban spatial compactness	Improvements in pedestrianization, reduced energy use, high quality of life for social interaction, access to community services, sense of community, reduced travel need
Mobility issues	Reduced travel need, access to services, convenient natural environment and pedestrian-friendly routes, more public transportation
Density considerations	Good links between urban functions and spatial activities, compact development, efficient use of space and urban land, reduced car ownership and travel need
Land-use mix	Safety on streets, increased accessibility, attractive local streets, more local creative interaction between neighbours
Diversity	Rich social and cultural activities, traditional and religious beliefs, potential for promoting walkability and close attractive urban landscapes
Green urban development	Favouring adaptation to micro-climatic conditions, green spaces for children to play, open spaces for social interaction and promoting participatory spatial planning

Source: Dhingra & Chattopadhyay **(**2016).

4.2 Transition from Hausa mud huts to concrete

The change from the use of mud to concrete or steel is based on durability, convenience, and flexibility (Taylor, 1998; Chokor, 2005). The uniqueness of the Hausa housing form is based on the availability of materials and the way homesteads are spatially organized. In this setup, mud is neither processed in a sophisticated manner nor fabricated like cement blocks. The Hausa, particularly in Zaria, preferred using tree branches, red laterite soil, and savannah grass, which are readily available in the vicinity. However, the loose nature of laterite soil, which is not as plastic as clay, obliged traditional Hausa builders to add grass, cow dung, and locust bean to laterite soil before moulding it to improve the plasticity of mud bricks. Because mud was readily available and cheap, this helped provide housing, but its drawback was that this construction method lacked flexibility, ground stabilization, and protection from erosion. Currently, such problems have been resolved with the use of building materials such as concrete, cement blocks, or cut stones (Rudofsky, 1964; Yiftachel, 1989). Thus, the transition from traditional building materials has an impact on the cultural heritage of the people of Zaria reflected in the integration of the old and new styles of buildings.

4.3 Influence of external factors

External moderating factors influenced the transformation of buildings and settlement patterns in Zaria. In terms of the traditional housing characteristics of the Hausa people, religion (jihads), daily living needs, the environment, and the need for security shaped housing and settlement patterns to a certain extent. Similarly, past and present socioeconomic factors made Zaria residents conceive dwelling characteristics and settlement forms from the perspective of change and modern town planning. A similar finding is made in respect of considering "the historical and essential relationship between people and place" in (re)constructing spatial identities in the Mađir (Banja Luka, Bosnia and Herzegovina) and Ilsvika (Trondheim, Norway) neighbourhoods (Kuvač & Schwai, 2017: 94).

4.4 Influence of the spatial organization of the Hausa settlement pattern

The study has shown that the traditional Hausa architecture and settlement patterns thrived in Zaria because of an enabling environment. The traditional architecture and settlement patterns were widespread in Hausa territory because of locally available building materials, sociocultural relevance, and affordability. A clear majority of the respondents (73%) highlighted these factors. The influence of traditional Hausa architecture in shaping dwelling spaces is synonymous with the organization of space and functions in Hausa settlement areas in Zaria. Traditional Hausa architecture and settlement patterns influenced the separation of space in Hausa compounds, which represents a unique socioeconomic settlement pattern. The juxtaposition of homesteads in compounds shows a classic Hausa settlement pattern with distinct space functions and uses that can be integrated into current development forms and town planning.

4.5 Factors promoting the integration of old and new settlement patterns in Zaria

The case study of Zaria is based on factors that promote integrating traditional and modern settlement planning. The study has shown that the spatial organization elements of traditional Zaria settlement patterns can be integrated to a certain level with current urban design and spatial planning. The factors studied have an overlapping influence on sustainability from the social, economic, and environmental perspectives (see Table 2).

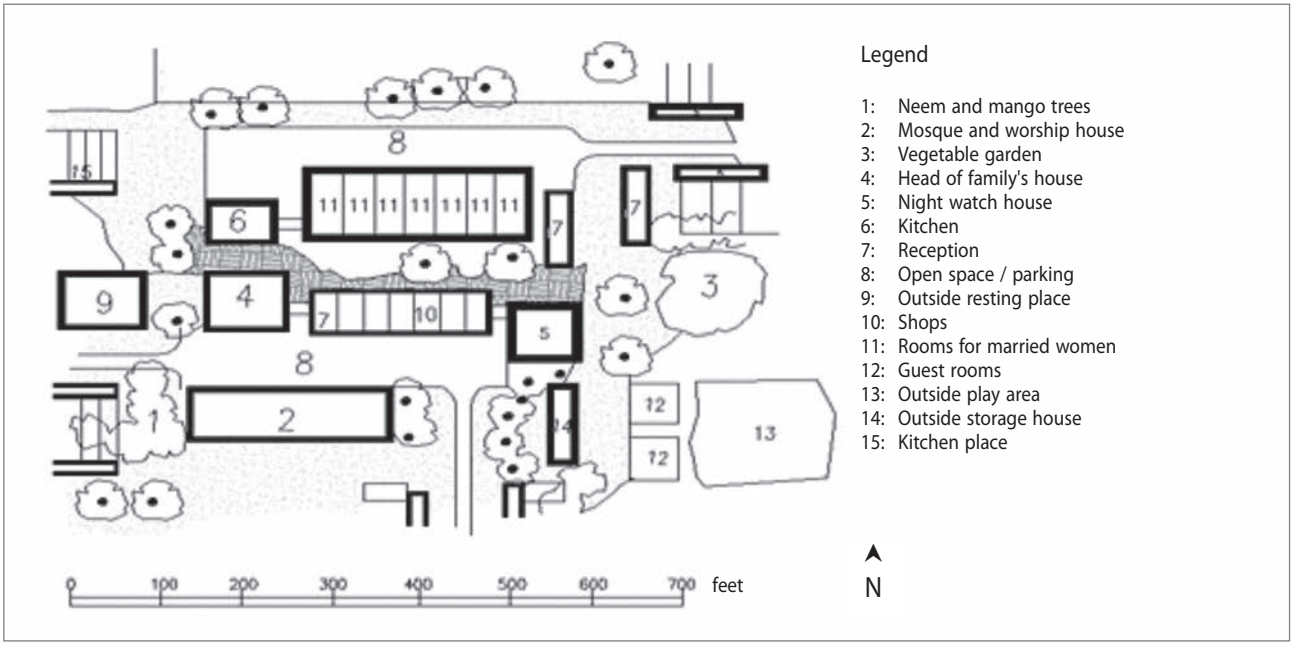

Figure 7: Integration of a traditional settlement pattern and township layout (illustration: authors).

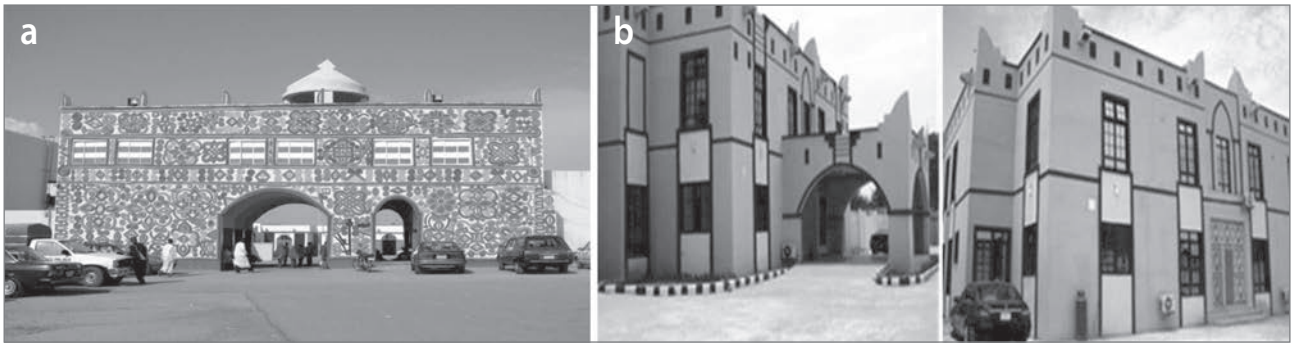

Figure 8: a) vernacular Hausa architecture in northern Nigeria; b) contemporary Hausa architecture with pinnacles (*zanko*) added at the top for a traditional look (photo: Shiraz Chakera).

From a modest wall city, Zaria evolved to become a conglomeration consisting of three main spatial areas: 1) the old walled city, 2) European-style non-Hausa residential areas, including government offices and markets, and 3) the new town, with non-native Hausa settlement areas. According to Ma'aruf (2019), each area was treated as a separate unit with respect to administration and town planning. The 1917 plan was crystallized in Zaria through a series of plans proposed by the colonial administration first in 1914 and revised in 1918 and 1939, all addressing the main European residential area (ERA) and associated land uses (Yigitcanlar et al., 2015).

4.6 Application of traditional Zaria settlement patterns

This section illustrates how the traditional Hausa settlement pattern in Zaria can be conceptualized to form part of the new town layout. The traditional Hausa open space, or *dadali*, in Zaria is comparable to green areas or parks in new towns. In addition, the Hausa homestead in Zaria can be compared to cul-de-sac layouts. The cul-de-sac concept can be likened to a gateway in the Hausa homestead, where control and security are exercised by a gatekeeper or night watchperson. Figure 7 shows an attempt to incorporate traditional Hausa settlement patterns and new town designs (Jackson, 2005). This resonates with spatial organization themes raised by Rezafar and Turk (2018: 85) with respect to urban design and planning being "a multidimensional and complex subject that can be evaluated both formally and symbolically, requiring assessments of individuals' experience, behaviour patterns, and subjective consideration and meaning at the same time as those of physical characteristics, natural setting, land-use, circulation systems, and built forms." Note that there are lessons that can be learned from the influence of the traditional Zaria pattern with respect to similarities and differences in settlements' spatial organization. There are many contemporary examples of incorporating traditional settlement designs.

Table 3: Factors influencing traditional and new town layouts in Zaria.

Factors	Differences		Similarities	
	Traditional patterns	New design concept	Traditional patterns	New design concept
Adaptation to environment	Location at a suitable local site	Site must meet necessary construction requirements	Sustainability of site for residency and not flood-prone	Residential buildings in low flood-risk areas
	Building materials local	Building materials imported or processed	Wood from nearby forest	Polished imported wood
	Considerations for seasonal temperature changes	Site suitability may depend on engineering requirements	Seasonal temperature, precipitation, and wind may determine building orientations	Building orientation based on direction of sun, prevailing winds, temperature
	Trees are kept, providing shade	Trees planted where necessary	Building around existing trees	Trees planted for specific functions
Settlement forms	Popular culture from same ethnic group	Integration irrespective of ethnic groups	Cultural consideration for social integration	Integration of people from all walks of life
	Size of building depends on function and use	Buildings can incorporate many floors	Size of building is determined by use	Size of building determined by funds
	Residential compound clustered together	Residential buildings based on zoning	Urbanization more gradual than spontaneous	Urbanization by establishing townships and new towns
Architectural style	Building techniques similar for all types of buildings	Building techniques adapted to building styles	Building techniques rudimentary	Building with aid of technology
	Local materials	Imported or industrial materials	Local building materials	Imported or local materials
	Decoration based on customs or cultural practices	Decoration based on research or innovations	Decorations are social and cultural expressions	Decoration is manifestation of popular culture and IT
Spatial organization	Allocation of open spaces and functions based on social and cultural needs	Allocation of open spaces based on scientific calculations	Allocation of open spaces based on social and activity needs	Allocation of open space based on land use and zoning
	Arrangement of dwelling spaces based on clan, marital status, need	Open space for shared use by children	Allocation of dwelling spaces based on current dwelling needs	Allocation of dwelling spaces based on residential density
	Allocation of building spaces based on extended family size	Allocation of dwelling spaces is demand driven	Allocation of dwelling units based on housing needs	Allocation of dwelling units based on development and business proposals

Source: authors.

Traditional Hausa settlement designs and planning principles can also be applied generally in town planning and sustainability management. The differences and similarities of factors influencing traditional and new town layout concepts in Zaria are similar to those in studies from elsewhere (Mandanipour, 1996; Boerefijn, 2016).

5 Conclusion

The study shows that traditional Hausa architecture and settlement patterns have influenced the spatial organisation of settlements in Zaria (Falahat, 2013). Traditional Hausa settlement patterns can be integrated into new town designs by taking into account factors that are similar in both old and new town planning concepts. The study has also shown that the use of cheaper building materials such as a mixture of laterite and clay, wood, stone, thatched roofs, and appropriate design principles to enhance privacy and comfort are rooted in traditional Hausa architecture and settlement forms. However, the Zaria settlement pattern cannot be applied completely because of informality of acquiring land in the past, which is not possible under current systems. Historically, land was primarily acquired through traditional systems that did not incorporate formal registration of property rights. Currently, land in Zaria is predominantly acquired through formal land registration systems. The study has shown that to apply the architecture and settlement patterns in Zaria elsewhere, the solution must be relevant to the sociocultural environment

of the people. The impact of modernization cannot be underestimated, and the importance of cross-blending traditional and modern concepts of architecture and settlement planning cannot be overemphasized. However, further research is needed to understand the influence and framework for integrating the two models. Traditional settlement forms such as those of the Hausa people in Zaria reflect people's aspirations with respect to their social, economic, educational, religious, and cultural values. Town planners, architects, and developers can study the modalities of integrating traditional architecture and other cultural heritage into new settlement plans to promote community cohesion, heritage, and best practices in urban design and planning.

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Ensuring sustainability of cultural heritage through effective public policies

Sustainability of cultural heritage is a complex issue and is rarely measured, especially at the project level, mainly due to a lack of universal heritage sustainability indicators. This is why many heritage projects are only partially sustainable. This article defines the concept of heritage sustainability and offers methods to measure and evaluate it. The research presented was conducted on good practice examples analysed in Greece, Italy, the Netherlands, Poland, Portugal, and Spain, which are assessed as strategic projects within specific EU, regional, or local policy instruments. The methodology, which explored possible indicators for evaluating the sustainability of cultural heritage investments, involved desk research and ex post analysis of selected heritage projects funded within a policy instrument, interviews with cultural heritage managers, focus groups, and comparative analysis of best practices analysed. The findings showed the crucial importance of cooperation and broad participation of various stakeholders, excellent cultural management, diversification of funding sources, community involvement and appropriation of cultural heritage by the community, respect for professional standards, innovative solutions, and careful spatial planning in ensuring heritage sustainability. Transferability of good practice examples is challenging because it depends on the local context. In order to be able to measure heritage sustainability at the project level, an all-encompassing set of cultural heritage sustainability indicators is proposed. To justify heritage investments, policy instruments may consider future priorities based on this set of indicators.

Keywords: cultural heritage, heritage sustainability indicators, heritage policies

1 Introduction

The importance of heritage, both in terms of its intrinsic and instrumental values, is unquestionable and widely recognized. However, ensuring heritage sustainability is not an easy task and depends on a number of factors (e.g., financing, management, and human capacities). Heritage-related policies are the most important frameworks to ensure sustainability. If they fail to set appropriate measures, heritage sustainability may be threatened, even resulting in the demise of cultural properties. Failed investments due to inappropriate policy frameworks are also a concern.

Sustainable growth is the priority of the Europe 2020 Strategy (European Commission, 2010), which is also reflected in the EU Cohesion Policy (European Commission, 2014). This should have durable effects on regional development. Sustainability also applies to cultural heritage projects, which have been well funded from various EU sources. Calls within different heritage funding schemes usually require explanations or proofs to ensure the sustainability of potential projects. Although most projects do well on this task in theory, they sometimes fail in practice, leading to the shameful but common practice of "when the project is over, everything is over" (Steckiewicz, 2017: 34). The authors of this article do not know of any studies examining how many cultural heritage projects are sustainable after their funding period, but they have witnessed several projects that obtained funding without considering their sustainable future. This practice, although common knowledge, has rarely been openly discussed. It also reveals possible gaps in project evaluation, pointing to a need to reconsider evaluation mechanisms.

1.1 Aims

This article provides general recommendations for effective and efficient heritage-related public policies to ensure the sustainability of funded projects and to justify the resources invested. It is first necessary to reflect on the concept of heritage sustainability and to provide indications on how to measure heritage sustainability. After this, a general set of heritage sustainability indicators is proposed.

The concept of sustainable development has been widely discussed since the 1970s, but only in recent years has culture been introduced as an important pillar supporting sustainable development (Vecco & Srakar, 2018). However, sustainability of cultural heritage per se, for its intrinsic values, is rarely considered. Although there are several reasons to ensure sustainability of cultural heritage (e.g., identity enhancement, community cohesion, and aesthetic, educational, and scientific values), the obvious and usually most important reason is to justify public investments in cultural heritage. Improving public policies and consequently ensuring the durability and sustainability of cultural heritage is not an easy task because heritage is not treated by cultural policy only, but is often part of various public instruments (e.g., spatial planning, tourism, regional development, etc.), which calls for integrated governance of cultural heritage.

The next section presents the challenges encountered in conceptualizing cultural heritage sustainability and its further measurement. Then, the results of studying good practice examples of cultural heritage sustainability are presented, followed by a discussion. Finally, recommendations for improved public policies are presented.

1.2 Conceptualizing heritage sustainability

Sustainable development is defined as 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). Culture in the context of sustainable development has come to the fore in the work of United Cities and Local Government (UCLG) and their Agenda 21 for Culture, adopted in 2009. This was an important step forward, which stressed the importance of culture, introduced as the fourth pillar of sustainable development (alongside the economic, social, and ecological pillars). The concept is usually referred to as cultural sustainability, but it differs greatly from sustainability of culture. The latter relates to the maintenance of culture per se – of practices, beliefs, and identity, including heritage, and the future existence of a given culture. Heritage sustainability follows the same line, and practice shows that public discourse usually focuses on its instrumental values and less on its intrinsic values. Discussed here is sustainability of cultural heritage in the sense of preservation "for future generations, while at the same time finding a balance and harmony between cultural heritage and the people who would like to experience it" (Jelinčić & Glivetić, 2020). Intrinsic values are substantially underrepresented in different policy agendas in comparison with heritage instrumental values. In this way, the 2030 Agenda for Sustainable Development only marginally mentions the need for cultural heritage protection, but it fails to refer to its valorization or regeneration (Vecco & Srakar, 2018). However, a number of EU-funded projects deal with the subject from a practical point of view with the aim of meeting the standards of heritage sustainability alongside effective EU investments.

The concept of heritage sustainability is extremely complex because there are many facets of sustainability against which the longevity of heritage projects can be evaluated. It is gen-

Table 1: Usual challenges and responses to cultural heritage sustainability.

General pressures	Specific challenges	Usual responses to challenges
Economic	Lack of funding	Direct funding (grants, inheritance, sponsorships and donations, membership, co-branding activities, crowdfunding, retail, accommodation and catering, events, private hire and rentals, interpretation, user fees)
	Lack of managerial capacities	Capacity-building activities, training programmes development, training of trainers, exchange of experience, transferability of knowledge, development of heritage management plans
Sociocultural	Modernization	Appropriate use of the asset, use of technology, compromising
	Standardization	Creative and innovative context-specific methods
	Public perception	Awareness raising and educational activities, visiteering (volunteering activities), living heritage activities
	Political pressures	Contested or dissonant heritage, awareness-raising campaign and educational activities, engaging an external and unbiased expert
	Social pressures (over-visitation, looting)	Visitor management frameworks and tools, technology, international legal frameworks against looting, drones to combat heritage looting, and scanning satellite photos of heritage
Environmental	Climate change	Digital preservation of heritage, long-term strategic plans for reducing negative environmental impacts, education
	Green economy	Environmentally friendly material and equipment in renovation and maintenance, circular economy principles (e.g. eco-friendly and renewable energy systems)
	Natural risks (e.g. earthquakes, invasive plants, floods)	Regular monitoring; control, management, and combat of invasive plants, and their eradication and replacement with non-invasive species; digital preservation of heritage

Source: Jelinčić and Glivetić (2020); Boromisa, Tišma, and Ležaić (2016).

erally regarded in the social, cultural, economic, and environmental sense, which requires a holistic approach. The theoretical starting point for understanding heritage sustainability is research on the impact of "activities of various actors on cultural heritage according to political, economic and social interest" (Čeginskas, 2018). There are three key challenges in the discourse of cultural policy: limited ability to assess the impact of heritage on development, the problem of sustainability of heritage effects in the long run, and difficulties proving the existence of these effects. Therefore, research is seeking new methodological steps in assessing and managing cultural heritage (Azevedo, 2016).

Cultural heritage sustainability implies the evaluation of cultural, technical, economic, and environmental outcomes (ICOMOS, 2019), whereas the economic sustainability of cultural heritage is usually evaluated through the creation and maintenance of sustainable tourism development relevant for local communities (Pepe, 2018). Sustainability of social impacts often refers to the impact of heritage on local communities (Labadi, 2007; Carra, 2016), and the recent academic approach to cultural heritage management is to opt for community-defined values (Kajda et al., 2018). Environmental sustainability is manifested through the impact of climate disturbances on heritage (Gruber, 2008) on the one hand, and practice of the principles of the circular (Foster, 2020) and green economy (Hoff, 2011) on the other.

Evaluating the sustainability of cultural heritage still has a number of gaps related to determining projects' impacts and effects. For example, the definition of values is not clear (Garcia & Cox, 2013), the emphasis is on economic measurements of sustainability, there are fewer indicators related to cultural, sociological, and environmental indicators, and negative effects are often reduced, whereas positive ones are emphasized. There are several quantitative evaluation methods using predominantly economic indicators, whereas sustainability is insufficiently measured by qualitative methods that answer the questions of how and why. Finally, in order to achieve sustainability of cultural heritage, it is important to create a consensus that can ensure successful implementation and maintenance of cultural heritage projects. Taking all this into account, it is extremely difficult to rate the importance of different aspects of sustainability and to decide which of them is more important. Providing appropriate and authentic conservation techniques to ensure that artistic, aesthetic, and historical heritage values

are sustained may at the same time be extremely cost ineffective or may collide with environmental sustainability. The intention is therefore to approach heritage sustainability in a holistic and integrative way, ensuring that both effective and efficient measures are in place. This may pose various problems in ensuring that heritage sustainability is approached from diverse perspectives. "It proves that sustainability and durability of cultural heritage are not stand-alone concepts but often involve a negotiation process among its various aspects" (Jelinčić & Glivetić, 2020).

When trying to ensure heritage sustainability in the economic sense, the greatest challenge for heritage durability and sustainability refers to the lack of funding. Modernization and standardization of heritage, political pressures (e.g., issue of contested or dissonant heritage), as well as the public perception of heritage values are considered sociocultural challenges. Concern with environmental pressures has rapidly increased in the latest decade and relates to climate change, the green economy, and natural risks (see Table 1).

In trying to achieve sustainability of cultural heritage values, the extensive literature (e.g., Torre, 2002; ICOMOS, 2013) usually refers to its uniqueness, its artistic, scientific, aesthetic, cultural, historical, educational, landscape, and community values. Challenges range from poor maintenance (possibly affecting aesthetic, educational, or scientific value), over-exploitation for tourism purposes (with impacts on potential damage, and even demise or gentrification), use of false or incorrect historical data or unauthentic heritage (affecting educational, scientific, cultural, or historical values), and disputes over the uniqueness of registered heritage assets to the loss of local community connection to cultural heritage (Jelinčić & Glivetić, 2020).

One of the greatest challenges in achieving heritage sustainability today lies in poor management of heritage assets. This entails all management phases: planning, implementation, monitoring, and evaluation. Specific challenges in relation to heritage conservation and physical maintenance may also affect sustainability. However, these belong to specific professional knowledge and are not dealt with in this article.

1.3 Measuring heritage sustainability

One of the approaches to achieving heritage sustainability is to introduce concrete measures: a group of relevant activities with common impacts as a part of policy instruments. This, however, does not necessarily entail an effective and efficient outcome, as measured by the number of sustainable heritage projects. Due to a number of factors influencing heritage sustainability, different indicators to measure success in achieving heritage sustainability are required. However, as much as there are a growing number of studies dealing with cultural indicators, knowledge about heritage sustainability indicators is scant (e.g., Noca, 2018). Research usually focuses on heritage tourism (UNWTO, 1996), and heritage sustainability is measured against indicators related to specific situations, such as in conflict and war regions (Vecco & Srakar, 2018).

Cultural sustainability measurement is "organized around seven storylines: heritage, vitality, economic viability, diversity, locality, eco-cultural resilience, and eco-cultural civilization. These storylines are partly interlinked and overlapping, but they differ in terms of some contextualized aspects" (Soini & Inger 2014: 213). As much as these storylines may equally be applied to heritage indicators, it is necessary to stress the importance of heritage in achieving cultural sustainability because it bears cultural capital to be passed to future generations. If measures to achieve heritage sustainability are carried out at the level of policy instruments, Colin Mercer's set of indicators for evaluation and assessment of cultural policies comes in handy. Four categories of indicators are proposed: 1) cultural vitality, diversity, and conviviality; 2) cultural access, participation, and consumption; 3) culture, lifestyle, and identity; and 4) culture, ethics, governance, and conduct (Mercer, 2002). The first category relates to the dynamics of cultural economy, the second measures active cultural engagement, the third evaluates how culture affects specific lifestyles and identities, and the fourth relates to the role of culture in personal and community development. The indicators are proposed with the aim of contributing to human development; that is, to improving the quality of life, which can be in indirect relation to sustainability and can also be considered a heritage sustainability indicator. All of the proposed indicator categories could be adapted to cultural heritage, and partial attempts to do so were made by Axelsson et al. in 2013 for 290 Swedish municipalities. Along with the findings in this research, Mercer's set of indicators served as a basis for recommendations to improve policy.

Measuring heritage sustainability is further complicated by the fact that there are different levels of impact measurement; it can be at the policy level, but individual projects and programmes can also be assessed, as well as institutions. The usual cases assess proposed actions (projects, programmes, plans, or policies; Pope et al., 2017) and serve to identify possible gaps or failures in meeting the previously set objectives. In reality, despite the existing available sustainability measurement indicator sets, it is difficult to find a universal model (Agol et al., 2014). Even the UN Sustainable Development Goals to be achieved by 2030 hardly recognize the importance of heritage and fail to provide respective indicators. This is also the case with the EU Sustainable Development Strategy. Some

researchers (Vecco & Srakar, 2018) have attempted to correct it by adding themes related to cultural heritage site sustainability to headline indicators for each of the sustainable development themes. They proposed the following headline indicators: 1) conservation of cultural heritage, 2) cultural cohesion and integration of the local community, 3) protection of the natural and cultural ecosystem, 4) quality of cultural heritage site management, 5) the economic dimension of cultural heritage tourism for the host community and destination, 6) the social carrying capacity of the destination, 7) sustaining tourist satisfaction, 8) development and planning control over the cultural heritage site, 9) tourist activity seasonality, 10) tourism employment, and 11) transport related to tourism.

As much as the proposed indicators are valid, they are not comprehensive. The existing indicator sets generally seem to be suitable for higher vertical level measurement (e.g., international or national), whereas site-specific heritage attractions have rarely been measured and comprehensive indicator sets are not available for this purpose (Ren & Han, 2018).

2 Research method

Research on good practice examples in heritage sustainability was carried out to assess heritage sustainability at the local level. Based on this, recommendations were proposed for improving the policy instruments that provide support to cultural heritage projects. The research was conducted within an EU-funded project (Internet 1) based on the premise that public policies can serve as catalysts for high-quality projects with a long-lasting impact on regional development. Six countries were studied: Greece, Italy, the Netherlands, Poland, Portugal, and Spain. They apply different approaches to cultural heritage funding with respect to related policy instruments (local, regional, or EU funds), and to ensuring heritage sustainability (e.g., economic, environmental, or social). Selected projects funded through different policy instruments were analysed. Additional good practice examples were analysed in order to identify factors influencing heritage sustainability. The research phases are presented in Figure 1.

The methodology consisted of various research methods: desk research and ex post analysis of the selected heritage projects funded within the respective policy instrument, interviews with cultural heritage managers responsible for selected cultural heritage projects, focus groups organized as a consultative body, and comparative analysis of the best practices studied.

Phase 1 analysed thirteen selected heritage projects implemented under respective policy instruments (Internet 1), which provided state-of-play information about the projects. This

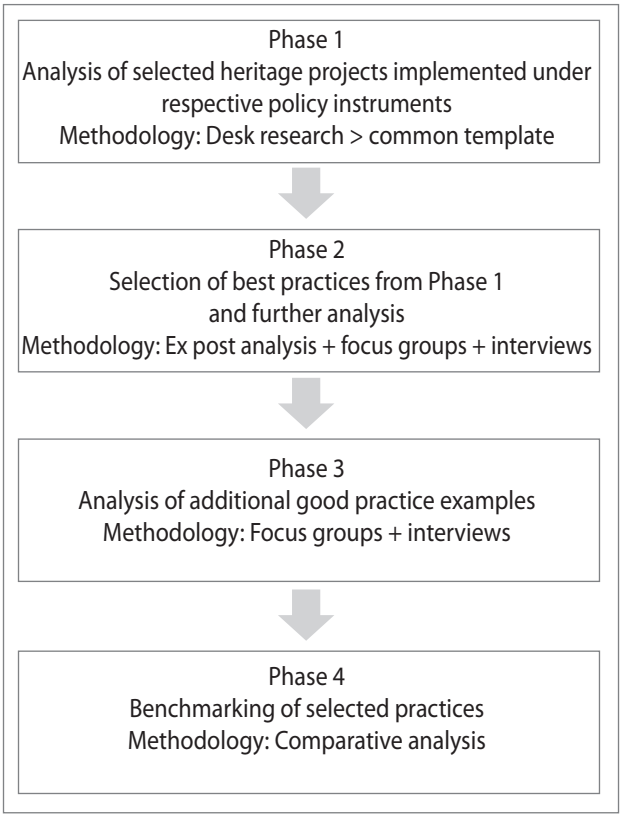

Figure 1: Research phases and methodology applied (illustration: authors).

phase had a descriptive character. A common template was designed, including a project description, its context, design, governance, financial sustainability, and conclusive remarks. Phase 2 selected seven best practices using ex post analysis and focus groups. The members of the focus groups discussed the projects and selected the best ones based on the total score the projects achieved in the evaluation exercise. Ex post analysis examined whether the goals of the project had been achieved and whether the results achieved justified the money spent. Good practice examples were analysed in terms of their effectiveness, relevance, impact, and sustainability (e.g., the actual situation with respect to planned activities, the contribution to society, sustainability, and auditing the financial statements). Focus groups were organized to select the best past cultural projects, assessing their sustainability, heritage values, and transferability. Phase 3 identified ten additional good practice examples based on interviews with cultural heritage managers. These examples were further analysed to identify factors influencing heritage sustainability. Thus, the total number of interviews was seventeen. For this purpose, a good practice template was designed with the same criteria used with the focus groups in Phase 2. The existing Interreg Europe good practice template served as a basis but was modified for this study. The criteria relied on standard models of heritage value estimates as defined by discipline-specific professional practice but were

complemented with new ones, in line with contemporary heritage conservation and management. They were collected from various sources such as heritage management plans, international organizations' heritage-related documents, or cultural heritage evaluation reports (e.g., Rampton & Carlberg, 2015) and divided into three groups: sustainability covering the usual four pillars (safeguarding cultural heritage, economic viability, environmental impact, and social impact), heritage values (scientific, aesthetic, cultural, historical, landscape, uniqueness, educational, local community, and economic value), and transferability (organizational model, policy-making, specific tools such as training, financing, management, and risk management). In addition, a set of questions was listed for the interviews with cultural heritage managers, which served as support in filling out the good practice template. This made it possible to identify key issues in achieving heritage sustainability. Phase 4 benchmarked selected best practices and identified key challenges. These were further analysed to create heritage sustainability indicators.

Focus groups meetings were organized at two levels: 1) in each country studied, and 2) at the research partnership level. The aim of focus groups in each country was to obtain expert opinions to support the selection of best practices to be analysed, along with expert comments on research instruments (e.g., templates for data collection) and final outputs (the results of individual research phases). The number of participants in the focus groups and their composition varied by country, based on the local context, but the groups mainly included cultural heritage managers, representatives of managing authorities, municipalities, tourism boards, local action groups, universities or research centres, cultural institutions, and consultants. The second type of focus group consisted of representatives of each country accompanied by researchers acting as knowledge managers and guiding the overall process. The aim was to discuss the research process in each country and adjust the course of the research accordingly.

The research was conducted between June 2018 and February 2020. The greatest challenge of the research was in the diversity of the good practice examples analysed, which require a specific management approach. This caused some difficulty in studying sustainability practices because they are measured by a variety of criteria. Thus, it was difficult to assess whether a certain example could be considered a sustainable practice because it was practically impossible to find one that satisfied all the criteria. The challenge was mitigated by employing a focus group approach with experts to decide what could be categorized as a good practice. However, the diversity of the good practice examples analysed was necessary to encompass a wide spectrum of indicators related to heritage sustainability, leading to the final heritage sustainability indicator set. Among all the assessment criteria, transferability was the biggest challenge because it greatly relies on the local context, which was outside the scope of this research. Minor limitations related to different levels of expert knowledge in policy planning, strategic development, and cultural heritage management were overcome by employing the focus group method at the partnership level.

3 Results

The results of the analysis of the thirteen selected heritage projects implemented under different policy instruments showed a positive correlation with different aspects of sustainability. All these projects can be considered sustainable, either economically, environmentally, or socially, and they affect the safeguarding of cultural heritage. Assessment of good practices implemented under respective policy instruments showed sustainability in some but not all aspects assessed (Table 2).

However, further analysis of some projects from Phase 1 alongside additional practices in seventeen interviews showed that not one of the practices complies with all of the criteria. Thus, some projects sustain heritage values but fail to comply with management-related criteria, or they show excellence in heritage interpretation but are not economically viable. Even so, the examples satisfy most of the criteria. However, not all of the criteria are equally important in ensuring the sustainability and durability of cultural heritage, which is greatly dependent on the context as well as the development objectives.

The interview analysis showed the crucial importance of cooperation and broad participation (in terms of vertical as well as horizontal policy, including various sectors and disciplines) in the cultural heritage project. In addition, excellent cultural management may greatly affect the sustainability of cultural heritage practice as may diversification of funding sources. The importance of highly emotional connections of the local community with their heritage ensures a strong premise for projects' success as well as local community participation in the project. Furthermore, respect for professional standards in the reconstruction of heritage buildings proves to ensure quality, and eventually also sustainability. Innovative solutions, if properly applied, play an important role in ensuring heritage sustainability. Careful spatial planning and community involvement (reintegration of heritage in both urban fabric and society) ensures valuation of heritage because it is part of citizens' daily lives. All the examples analysed may be considered transferable, but caveats are related to repurposing religious heritage because it is viewed differently in different countries. This may also prevent transferability of the practices.

Table 2: Assessment of sustainability of good practices implemented under respective policy instruments.

Country	Implemented practice	Areas in which sustainability is achieved
Greece	MELINA: Education and Culture project	Educational value, cultural value, specific tools: training, economic viability
Italy	Stupinigi hunting roads*	Social value, historical value, cultural value, environmental value, uniqueness, educational value, landscape value, community value
	Venaria Reale restoration	Cultural value, historical value, landscape value, uniqueness, educational value, community value, economic sustainability, governance model
Netherlands	City wall area: parking solution through heritage restoration	Economic viability, environmental value, urban planning, response to citizens' needs, educational value, historical value, scientific value
	Saint-John bulwark: hospitality and tourism through (visible) heritage	Environmental value, economic viability and sustainability, urban planning, community value
Poland	Expansion of the Kielce Village Museum: Ethnographic Park in Tokarnia	Community value, educational value, economic viability
	The Royal Castle in Chęciny	Cultural value, environment, community value, historic value, spatial planning, risk management, partial economic sustainability
Portugal	Excavated Rock Wine Mills in the municipality of Valpaços	Historical value, educational value, cultural value, scientific value, economic viability
	Flax and Linen Museum in the municipality of Ribeira de Pena	Historical value, scientific value, cultural value, community value, economic viability
	Tresminas Interpretative Centre in the municipality of Vila Pouca de Aguiar	Cultural value, historical value, educational value, governance model, economic viability
Spain	Natura Xurês-Gerês*	Spatial planning, economic viability, environmental value
	Cultural heritage of the Galicia–Northern Portugal Euroregion: Valuation and Innovation	Governance model, organizational model
	Dynamic Gerês–Xurês project*	Community value, cultural value, environmental value, social value, economic viability

Note: *Natural heritage projects involving cultural heritage.

4 Discussion

This research has confirmed the complexity of ensuring sustainability due to the vast array of sustainability aspects and their sociocultural, environmental, and economic sub-levels. Regarding the crucial issues that make up the concept of heritage sustainability, the research identified excellent cultural management, diversification of funding sources, emotional connections, community involvement, and broad participation of stakeholders. In addition, application of professional standards was identified as key in line with the preservation of artistic, aesthetic, and historic heritage values. New factors affecting heritage sustainability identified in the research relate to innovative solutions and careful spatial planning, and transferability proved to be important at the policy-making level to justify investments. The local cases analysed did not comply with all the previously identified factors that heritage sustainability entails, which confirms the complexity of the concept of sustainability as well as its site-specific nature. The reason for the scarce indicator sets at the local level, as identified by Ren and Han (2018), might be sought in this fact. However, this does not mean that there is no need to measure heritage sustainability at a site-specific level or that sustainability indicators are not needed.

Regarding the measurement and evaluation of heritage sustainability, the findings showed that a number of aspects must be considered. Even if one indicator shows a practice to be sustainable, another indicator may not. Measuring heritage sus-

tainability therefore requires a broad indicator set as a basis to ensure durable and sustainable heritage projects. Equally, it also helps improve the heritage-related policy instrument. Based on theory and this research, a set of general indicators for regular monitoring and evaluation of heritage projects is proposed. This could help cultural heritage managers and decision makers measure project sustainability and the efficiency of policy instruments. The design of the indicators, however, is rather complex and challenging because the literature offers only partial aspects of heritage sustainability, and the case studies investigated do not always cover all aspects of heritage sustainability. Another challenge is overlapping areas (e.g., local community engagement can be considered not only a sociocultural aspect related to heritage value for the community, but also an economic aspect). However, solutions have been found and the indicators are presented in three recommended sets: 1) sociocultural, 2) environmental, and 3) economic.

Sociocultural sustainability covers twelve areas, focusing on modernization challenges, standardization, public perception, heritage aesthetic or artistic values, historical values, cultural values, educational values, landscape values, scientific values, local community values, heritage uniqueness, and political and social pressures. Public policies may introduce measures in relation to each of the sustainability areas identified. In ensuring heritage cultural values, for example, possible measures may focus on stimulating heritage-related events or practices; heritage presence in artworks, stories, films, music, and so on; religious or spiritual importance; and the use of infrastructure for cultural creation. Indicator examples are the number of events or activities; the number of participants in events or activities; new heritage-related cultural productions; the number of consumers of newly produced cultural heritage–related products; religious or spiritual services or activities performed in a heritage asset; and the number of artists, community members, or visitors using heritage infrastructure for cultural creation. Sociocultural heritage sustainability is closely related to heritage-intrinsic values, ensuring the continuation of local identity as well as heritage authenticity.

Environmental sustainability covers three areas related to the challenges of climate change, environmental risks, and the circular economy or green economy. Regarding environmental risks (e.g., earthquakes, volcanic eruptions, invasive plants, and floods), accompanying policy measures may involve regular monitoring of the site for environmental pressures; control, management, and combat of invasive plants, and their eradication and replacement with non-invasive species; and long-term strategic plans for reducing negative environmental impacts. Proposed indicator examples are monitoring activities; interventions as a result of monitoring recommendations; activities to eradicate invasive plants; reduced negative environmental impacts; disincentives for changes in mobility behaviour, such as restricted traffic zones and urban tolls; and promotion of public transport, mobility plans, traffic calming zones, walking, and cycling. Environmental sustainability ensures safeguarding of built heritage and contributes to changing the behaviour of the local community.

Finally, economic sustainability is divided into seven major categories: planning; heritage product development; financial sustainability; marketing; employee management; visitor management; and monitoring, evaluation, and impact assessment. Accompanying public policy measures may refer to innovative heritage-related product development; targeted education and training measures for cultural production; availability of funding and investment for product development; capacities for action in transforming ideas, content, and values into products; access to infrastructure; and capacities for active appropriation of cultural forms. The proposed indicator examples are newly developed heritage products; spin-off products, related services, and experiences; training and trained persons; funding sources; creative and innovative heritage products; professionals with creative capacities; and products accepted and further promoted by employees, the community, and visitors. The importance of economic sustainability is primarily seen in ensuring appropriate financial means for heritage asset operation, and there is also an emphasis on heritage instrumental values, providing a strong foundation for regional development.

5 Conclusion

Sustainability of investments in cultural heritage is one of the key challenges for local and regional public policy. The main source of financing the protection and conservation of cultural heritage comes from national budgets and the EU budget. However, ex post analyses are rare and there is a lack of knowledge on the life and sustainability of projects. These issues are of particular interest for work on the development of European public policies and development plans in the coming period. In order to monitor the success of policy implementation at the national, regional, and local levels, it is crucial to set clear indicators to measure changes in local communities as a result of the investment of public funds.

Previous research on this topic provides extensive analytical material related to socioeconomic and environmental impact analyses, but there are no tailor-made integrated sets of indicators for assessing the sustainability of cultural heritage projects. This research has confirmed the complexity of heritage sustainability measurement, resulting in a number of aspects and related indicators to be taken into account. Based on the examples analysed, this research confirmed that cultural

heritage projects are partially sustainable and it is practically impossible to find an example that would satisfy all the sustainability criteria. However, the diversity of the cases analysed made it possible to identify a full array of indicators, which may be considered and applied in policy instrument development, cultural heritage project proposal through ex ante assessment, or project implementation. Naturally, they may primarily serve in regular cultural heritage project monitoring and evaluation.

The proposed set envisages three main areas of sustainability assessment (economic, sociocultural, and environmental), with a number of specific areas. An important step was taken toward linking specific areas with measures as a part of a policy instrument and then with a series of specific measurable indicators. It is important to emphasize that the priorities (specific areas) can be selected depending on the needs and requirements of the project being assessed. In doing so, it is possible that some areas can overlap and can be evaluated from different aspects (e.g., landscape can be viewed through the prism of environmental sustainability or heritage values). This raises the question of the selection of indicators and their correct interpretation, which will depend on those that carry out the evaluation and monitoring processes. Future research, therefore, may focus on this dual nature of individual specific areas and related indicators while finding ways to integrate them. Regardless of the challenges encountered during the research, its contribution is seen in a systematic and comprehensive set of concrete indicators that can facilitate the monitoring process. In addition, they can be measured against previously set policy instrument priorities and measures. In this way, justification of cultural heritage investment at the policy level could easily be measured using ex post analysis. At the same time, it can serve to improve the policy instrument itself as well as the evaluation mechanisms for solving future gaps in project evaluation. This not only adds to heritage sustainability but ensures appropriate territorial planning and development alongside a full array of community benefits.

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How green facades affect the perception of urban ambiences: Comparing Slovenia and the Netherlands

Green facades are gaining growing attention among the general public and researchers in various disciplines. Vertical greenery systems play an important role as expressive elements of buildings, while at the same time being treated as a special type of green infrastructure with various positive effects, especially in densely built-up urban areas. This study focuses on the perception of green facades in urban ambiences. The emphasis is on visual perception and the evaluation of the pleasantness or visual quality of various spaces based on the presence or absence of green facades. The public perceptions and evaluation of urban open space with the green elements studied was examined in the Netherlands and Slovenia. The online survey included images of various spatial situations about which respondents conveyed their opinions. Two target groups were addressed: the general public and architecture and urban planning students. The results show that in general greener urban environment is perceived as more pleasant, suggesting that most people think vertical greenery also contributes to the quality of urban ambiences. Nonetheless, differences were identified between the residents of the two countries studied and the two groups surveyed.

Keywords: vertical greenery, green facades, living walls, perception of urban space, green infrastructure

1 Introduction

Because of the environmental problems identified and changes that also affect the urban quality of life, awareness of the importance of natural elements in cities is increasing among both the professional community and the general public. These increasingly highlighted topics are also included in modern urban planning strategies, which not only focus on using sustainable construction materials, but also reflect on envisaged natural processes that can help improve the built environment. This may entail anything from providing a larger share of green areas and planting trees to using greenery on buildings, in which using plants in designing building envelopes is especially highlighted in densely built parts of cities (Medl et al., 2017). Vertical greenery and green roof systems are elements of green infrastructure, representing a part of a city's or town's green system (Šuklje Erjavec et al., 2020), whose functions they perform (i.e., ecological, environmental, climate, design, cultural, economic, and social functions). Even though greening buildings was already practiced in the past, green roofs and walls are now becoming a synonym for an innovative form of urban greening, especially in large cities with warm, humid climates (Wong et al., 2010a). In Asian cities in particular, ideas of biophilic urbanism and designing vertical and forest cities are emerging (Guan et al., 2018). The media present various examples of integrating vegetation into architecture, promoting their use across the globe (Černigoj, 2018). Because the application of biotechnological building envelope systems depends on climate, research results are not necessarily transferrable and comparable across countries. For example, a Greek opinion survey (Tsantopoulos et al., 2018) explored the occurrence or perceptions of green infrastructure in cities. Its results showed that the aesthetic aspect of greening buildings in Athens is significantly more important and present in the people's minds than its impact on improving the microclimate and environmental parameters. On the other hand, a Malaysian study (Mansor et al., 2017) reveals that the residents view vertical greenery as a form of street art that has a certain effect on the environment, which is why they also value it highly. Taking into account the findings of studies from warmer climates, the authors of this article were interested in the public perception of and general attitude toward green facades in Europe's temperate climate zone. In particular, this study examines the perceptions of spatial users in the Netherlands and Slovenia.

1.1 Green facades as an integral part of infrastructure

Vertical greenery is used on various types of buildings, in various spatial contexts, and in various forms. The method of integrating green elements into the building envelope is usually connected with the architectural and design concept of an individual building. The entire envelope and especially the facade plays an expressive role. In central Europe, green roofs are generally more common than green facades. Examples of modern architecture designs with a building envelope completely covered in greenery, such as the one in the Netherlands (Internet 4), are rare. The application of a suitable vegetation system is closely connected with specific climate and micro-location conditions that dictate the selection of materials. In the first stage of planning, the concept, type, and maintenance of vertical greenery must be defined to achieve the desired design goals. The results of a Singapore study of green facades showed that a lack of technical information, maintenance instructions, and information on vegetation may become a barrier to installing these systems (Wong et al., 2010b), which are generally considered a potential in future architecture and construction. They are also treated similarly by Italian researchers. Perini and Rosasco (2013) analysed the costs and benefits of green building envelopes. They explored their impact on the building and the surrounding area, especially in terms of environmental, economic, and social improvements, drawing attention to the difficulty defining the effects of these systems on the outdoor space.

The definition of green facades used in this study was developed based on an overview of terminology used in several studies (Jim, 2015; Pfoser, 2016; Bustami et al., 2018). Accordingly, green facades or walls are defined as vertical vegetation systems integrated into the buildings' outer walls (or envelope), either directly or through a support. There are diverse typologies of vertical greenery determined by the construction elements, the method of installing vegetation, and the vegetation selected. Despite various approaches to classifying these elements, two basic types are defined based on physical characteristics: green facades and living walls. Green facades are ground-bound systems with climbing plants growing up or along the wall and green walls are systems with plants growing from an element attached to the wall without coming in contact with the ground (Bustami et al., 2018). Because these vertical systems are always bound to the building's wall, they help shape the dialogue between the built and natural environments.

1.2 Urban space perceptions

Urban environments and the way people experience urban spaces are explored by a variety of studies. In studying green facades, the socio-psychological aspect is interconnected with other aspects that affect perception and public opinion (Köhler, 2008). Perception is a process that involves all human senses and is composed of several stages. Bell (2001)

defines the following three: sensing (in which a connection with stimuli is established), processing and organizing information (where the recipients' past experiences are important), and cognition (which includes interpretation and evaluation connected with the culture and social status of the recipient or subject). The perception of architecture, the built environment, and open space is intermodal, which means it involves a combination of various senses. The majority of information (c. 70%) is obtained through sight (Fieandt, 1966). According to various authors, space and architecture need to be personally experienced (Rasmussen, 2001), because people's perception of space is multi-layered – that is, connected with physical and functional spatial characteristics on the one hand and meanings on the other. Drawing from Relph (1976), a complex explanation was developed by Punter (1991) and Montgomery (1998) (cited in Carmona et al., 2003). They identified three aspects of "place" for use in urban design. They believe that a place is the result of the relationship between the physical characteristics of space, the activities that take place in it, and the symbolic meanings attributed to it by its users. The combination of these aspects has an important impact on the perception of the hierarchical position of a particular open space within the urban structure.

The culturological dependence of spatial perception has been proven in various studies. Passini (1992) highlights the connection between patterns of environmental perception and people's need or capability to adapt to the environment; if a cultural milieu is (forced to be) in touch with nature or natural processes, its perception of space is more complex. European researchers report that in European culture the perception of space is primarily tied to the physical structure of space (Jackson, 1994; Nikšič, 2008), which they explain with the multi-layered physical structure of European cities, which have developed over the centuries through various and distinct morphological forms. In turn, US studies show that residents do not associate a specific place so much with its architectural character or spatial design, but more with the developments and events taking place in it. Along similar lines, Rapoport (1977) distinguishes between "Western" culture and indigenous cultures, arguing that Western culture primarily perceives space based on its physical and functional characteristics, whereas indigenous cultures, such as Australian Aborigines, perceive space through its mythological meanings and symbols. In Slovenian urban design, pure perception studies are rare. Nikšič (2008) establishes that the perception of urban public open space is largely affected by its physical characteristics, followed by its functional characteristics, whereas symbolic meanings play only a small role.

1.3 Green elements in urban ambiences

The perception of green elements within urban design is difficult to examine outside the spatial context. This study explores people's attitudes toward urban ambiences in terms of the presence of green facades. It is assumed that green facades affect perception of the space in which they are located. As green element with their physical characteristics, green facades affect the relationship between solids and voids, scales, proportions, surfaces, texture, rhythm, uniformity of material (or a lack thereof), and so on. In addition, the semantic relationships between natural and built environments, various interpretations of the sustainability paradigm, and the general attitude toward natural elements in the urban environment are also important.

Studies explore the perception of the urban environment and its natural elements in various ways. Studies dealing with the integration of the natural environment and design focus on people and their need to perceive natural processes in time and space (Hayles & Aranda-Mena, 2018), and the connection between the effects of the presence of natural elements, especially vegetation, on the everyday experience of the environment and the extent of using that environment. Green streets have been proven to have a major impact on urban walkability and hence also the residents' physical activity (Lu et al., 2018). A major positive effect of vegetation on perception has also been established in a study of urban noise (Van Renterghem, 2019). The visual presence of vegetation mitigates the perception of annoying environmental noise, which is why green spaces are perceived as more pleasant than those without vegetation. In relation to green building envelopes, White and Gatersleben (2011) explored whether green buildings (with green roofs and walls) are more valued than those without integrated vegetation, establishing a preference for green buildings. Public perception and opinion studies often apply questionnaires with examples of the presence or absence of a specific stimulus. A similar use of stimuli (both negative and positive) is also common in other disciplines, such as in examining the physiological sensory processes themselves or measuring responses or activity in the brain hemispheres (O'Hare et al., 2017).

The hypothetical premise of this study is that people perceive urban spaces that include vegetation as more pleasant (likeable). The aim is to verify this hypothesis by analysing green walls as elements of urban green infrastructure. The key questions arising in this regard are as follows:

- Does the presence of green facades affect the perception of ambience pleasantness?
- Does the amount of vegetation affect the evaluation of ambience pleasantness?
- Do people show preferences for certain types of green facades?

The central part of this study examines people's responses and differences in their answers. In addition to the public opinion, the views of selected groups are also examined. The study raises not only the issue about the perception of vertical greenery, but also people's preferences for specific types of open space and the physical characteristics that affect its degree of attractiveness.

2 Research methods

2.1 Designing a questionnaire

The surveying method was selected to collect the public views. In designing the questionnaire and preparing the material for the survey, the following principles were applied: maximum measurability of responses (acquiring independent assessments), adequate representativeness of the material presented, clear questions, and user friendliness (the length of the survey). A publicly accessible online questionnaire in Slovenian and English was designed. The accompanying text at the beginning of the questionnaire informed respondents that the survey was anonymous, what the aim of collecting data was, what the survey dealt with, and how long it was; in addition, recommendations were given to view the images on a computer or use the zoom function with smaller devices (e.g., a smart phone). The questionnaire included questions referring to the images of urban scenes (visual stimuli) and questions investigating the respondents' sociodemographic characteristics. In addition to general questions (about sex, age, education, country of residence, and occupation), additional questions were provided to establish any possible effects on the respondents' preferences (e.g., questions about their living environment).

The respondents were asked to rate every digital image in terms of the attractiveness of a specific urban ambience on a scale of −10 ("not at all") to +10 ("extremely"), using a slider. The images showed twenty spatial situations (diverse urban spaces) in three different versions. All sixty images (stimuli) were shown in a mixed order determined in advance. The random order, in which different urban spaces and greening versions followed one another, was used to minimize any mutual influence between the individual stimuli. Although possible start and end effects in applying picture surveys were considered (Strumse, 1994), no additional images were added (which would later be excluded from analysis) because of the large total number of images used (additional images would have made the survey longer).

2.2 Visual stimuli

Images of spatial situations were prepared in a way that also makes it possible to process them with other methods and compare results in the future. The images were edited in a uniform way and included in the questionnaire such that the respondents could focus on an individual stimulus. The images did not include changes to the built environment and architecture; the simulations only showed changes to the elements studied – that is, green facades. From the perspective of studying urban space, different urban ambiences and options for incorporating vertical greenery in them were selected. Each open space was presented in three versions: A) without greenery on the walls, B) with a medium amount of greenery on the walls, and C) with dense or a high amount of greenery on the walls. In terms of the type of vertical greenery, images featured either green facades (twenty-two images) or living walls (eighteen images).

The images used to present various urban spaces included photos of real situations and edited photos of these situations in two variations. 3D renders or visualizations were used to a smaller extent. Because the study focused on the users of urban space, images taken from the pedestrian's point of view or the user's scale were used. Images with visible spatial context were selected on purpose because this context is key to understanding the ambience itself, the element studied, and the spatial relationships (e.g., close-ups and long shots), allowing respondents to rate a specific ambience (i.e., offer their views on the presence of a green wall in this environment). Images were selected from which the viewer can infer the type of the outdoor space (e.g., a street, parking area, playground, etc.) and the type of the building (e.g., residential, industrial, commercial, or public building). The selected examples included in the survey comprised: public open spaces (six), areas next to public buildings (seven), residential areas (five), and shopping areas (two examples). In terms of the physical characteristics and use of the spaces presented, these examples were further divided into the following types:

- Open spaces that function as streets (primarily ambiences that people can walk through) and other multi-purpose areas where people perform various activities and spend time (e.g., squares and playgrounds);
- Spaces next to various types of public buildings (an image of a public building, taking into account a potential different interpretation; spaces next to schools, and visualizations of planned construction included as a separate group of images);
- Residential areas (real situations and visualizations of apartment buildings);
- Shopping centres (typical large-scale buildings).

The images used included the author's field photos, 3D visualizations (images) produced by others, and two images available online (Vogelnik, 2013; Internet 1; Internet 2; Internet 3; Haesevoets, 2015). To prepare photographic simulations, the

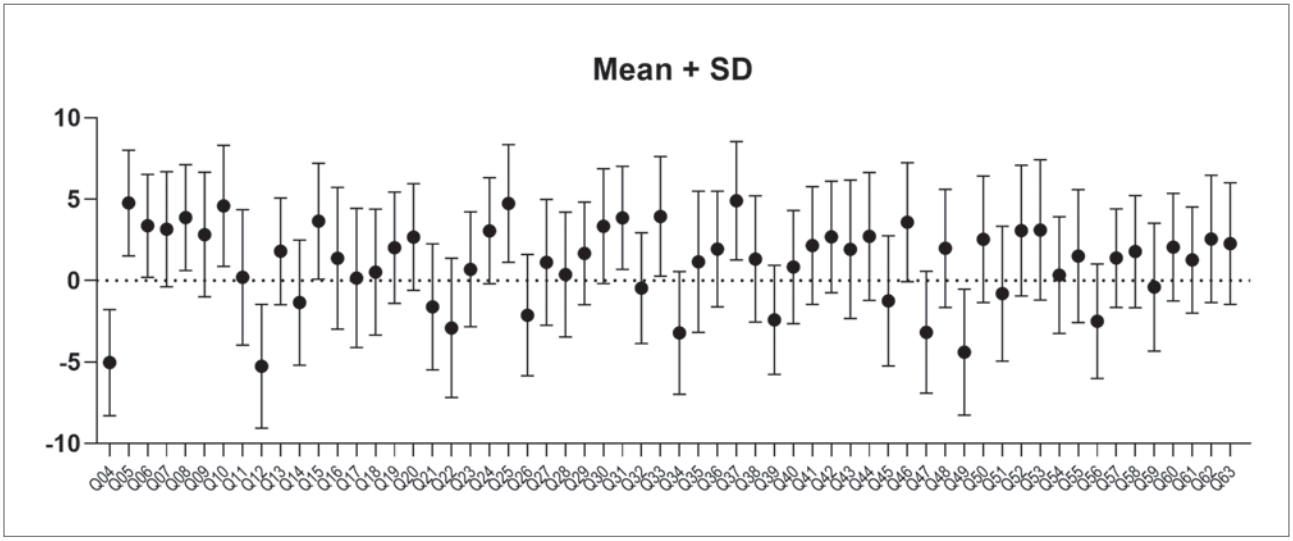

Figure 1: Means and *SD* for all sixty images (*n* = 223) (author: Jana Kozamernik).

digital images were manipulated using the digital image editing program Adobe Photoshop CS3. Image editing focused on changing the facades in the original image. To exclude the impact of other factors on rating individual images, no changes were made to other (outdoor) spatial elements or architectural design, and the number of people shown was approximately the same in all images.

2.3 Collecting data

This study used the online survey tool 1KA developed by the University of Ljubljana Social Informatics Centre. The survey was conducted in the Netherlands and Slovenia during the summer of 2019 (from June to September). To obtain as large a representative sample as possible an e-mail invitation was sent to various recipients in both countries. In addition, personal invitations were sent by post to a smaller portion of addressees, primarily the elderly. The survey focused on obtaining data for two groups: the general public and younger representatives of the professional community. The random sample of the general public included individuals that are not professionally involved with architecture or urban planning. The sampling for the second group was carried out among architecture and urban planning students (and, to a smaller extent, landscape architecture students). To ensure the professionals group was sufficiently representative, it included students of various years and study tracks. The aim was to obtain data for all age groups, the most diverse population structure as possible, and diverse occupational profiles.

2.4 Data analysis

Statistical calculations were made with SPSS for Windows, in combination with Microsoft Excel and GraphPad Prism 8.3.0. The valid data obtained from both surveys (originally sampled in Slovenia and the Netherlands) were combined into a single database, from which all invalid questionnaires (i.e., incomplete questionnaires, questionnaires with missing answers, and questionnaires in which respondents did not rate all the images) and errors were subsequently eliminated. A total of 233 valid questionnaires were obtained: 131 from Slovenia and ninety-two from the Netherlands. The basic calculations for the first, visual section of the survey (with images and slider ratings) included the means and standard deviations (dispersion of values), and a detailed analysis of the visual images was conducted by comparing the frequencies of ratings provided for an individual image. The analysis was conducted by examining the following design indicators:

- Ratio between the built and green environments; the three versions of the same ambience were labelled A (without greenery on the walls), B (with a medium amount of greenery on the walls), and C (with a high amount of greenery on the walls);
- Type of vertical greenery system: green facades (GF) or living walls (LW);
- Type of urban space: public open space with a multipurpose function, such as squares and playgrounds (Oo), streets or open space next to streets (Os), spaces next to public buildings (Pi), areas next to schools (Ps), 3D renders of areas next to public buildings (Pr), residential areas (R), residential areas with a potentially different interpretation (Ri), 3D renders of residential areas (Rr), and shopping areas (S).

Table 1: Ten (out of sixty) lowest rated images based on their mean values (*n* = 223).

Image*	Q12	Q4	Q49	Q34	Q47	Q22	Q56	Q39	Q26	Q21
Mean	−5.26	−5.03	−4.40	−3.22	−3.17	−2.90	−2.49	−2.41	−2.12	−1.61
P(1–20)**	1	11	17	15	8	2	10	9	7	17
A/B/C	A	A	A	A	A	A	A	A	A	B
Space	S	R	S	Ps	R	Os	Ps	Ps	Os	S
Wall	/	/	/	/	/	/	/	/	/	LW

Note: *sequential number of the image in the questionnaire; **selected example (photo or 3D render)

Figure 2: Images with the lowest mean ratings (*n* = 223) (author: Jana Kozamernik).

Table 2: Ten (out of sixty) best rated images based on their mean values (*n* = 223).

Image	Q37	Q5	Q25	Q10	Q33	Q8	Q31	Q15	Q46	Q6
Mean	4.91	4.77	4.74	4.59	3.95	3.87	3.86	3.65	3.59	3.37
P(1-20)	5	18	5	14	6	18	10	2	4	10
A/B/C	C	C	B	C	B	B	C	C	B	B
Space	Rr	Oo	Rr	Pi	Rr	Oo	Ps	Os	Ri	Ps
Wall	GF	GF	GF	GF	GF	LW	GF	GF	LW	GF

Figure 3: Images with the highest mean ratings (*n* = 223) (author: Jana Kozamernik).

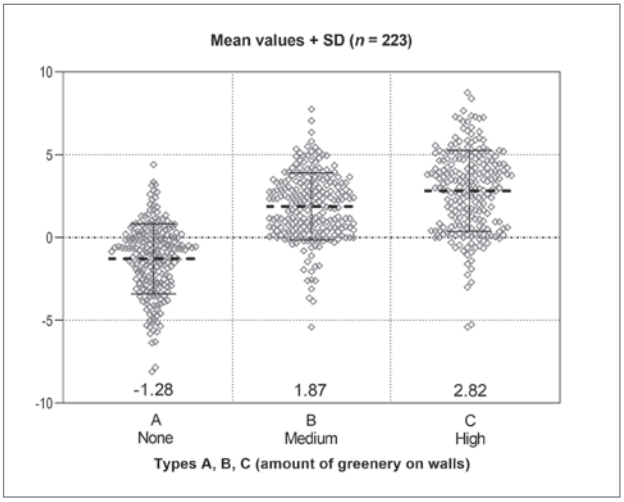

Figure 4: Mean values and *SD* of images grouped in categories A (without greenery), B (a medium amount of greenery), and C (a high amount of greenery) in the total sample (*n* = 223) (author: Jana Kozamernik).

3 Results

3.1 Demographic characteristics

The respondents comprised 58.7% women and 41.3% men. In both countries the survey included people of various ages, mainly the active working population and young individuals. Most respondents belonged to the under twenty-five age group (50.6%), followed by those between twenty-six and thirty-five (19.3%,) thirty-six and fifty (15.7%), fifty-one and sixty-five (10.8%), and over sixty-five (3.6%). In terms of education, 24.2% of respondents had a bachelor's degree (EQF level 6), 28.3% had a master's degree (EQF level 7), and 32.2% had an EQF level 5 qualification. The shares of respondents with an EQF level 4 qualification and an EQF level 3 qualification or lower were smaller (i.e., 5.4%, respectively), as was the share of those with the highest, EQF level 8 qualification or doctoral degree (4.5%). In terms of the living environment, most respondents came from urban environments (28.3%), followed by those from small rural settlements (23.3%), downtown areas (21.5%), the suburbs (20.6%), and the countryside (6.3%).

3.2 Preferences regarding the images presented

The frequency distributions of respondent ratings of individual images in the survey showed a trend of concentration and skewing in a negative or positive direction. Based on the means calculated, a rating for every image was obtained (Figure 1) along with the standard deviations of the mean values, which show a fairly high dispersion of responses (*SD* = 3.1–4.3).

By ranking the visual stimuli from the ones rated the most positive (most attractive) to those rated the most negative (unattractive), it can be established that the ten least attractive images (Table 1) include all group A images (the version without green facades), except one. They feature outdoor areas of shopping centres (the two images rated the lowest), residential areas (two images), public buildings (three images), and street ambiences. The image of an outdoor area of a shopping centre with a partial green facade (living wall type) was also rated the lowest (−10). Images that were rated the lowest are shown in Figure 2.

An overview of images with the highest average ratings shows that respondents evaluated green opens spaces as more attractive: the ten best rated images include five group C images (high amount of greenery on the walls) and five group B images (a medium amount of greenery on the walls). In terms of the type of open space presented, these were images of residential areas, spaces next to public buildings, and other public open spaces (playgrounds and squares; Table 2). The highest rated images are shown in Figure 3. The images that were considered more attractive also included three 3D renders of apartment buildings with green facades.

3.3 Amount of greenery on the walls

The images were grouped into three categories in order to examine the evaluations of individual urban spaces in terms of the presence or absence of greenery on the walls, or the amount thereof. Figure 4 shows the mean values of all images grouped in category A, B, or C for the entire sample. The results demonstrate that on average the images of urban spaces without vertical greenery (group A) were rated 3.15 points lower than those featuring vertical greenery (groups B and C). On average, groups B (a medium amount of greenery on the walls) and C (a high amount of greenery on the walls) were rated as more attractive. In addition, the mean values of these two groups differed by 0.95 points in favour of group C.

By analysing all three versions of an individual urban space image it can be established that in all twenty spaces presented, the group A images were rated the lowest and group C images the highest, with a minimal difference between the ratings of group B and C images in some cases. Figure 5 shows one of the twenty open spaces included in the survey. The frequency distributions of individual images' ratings show differences between the Slovenian and Dutch samples, but nonetheless a similar trend of ratings can be observed in both countries.

3.4 Comparison by demographic characteristics and samples

A comparison between the Slovenian and Dutch samples shows that in general Slovenian respondents rated the images

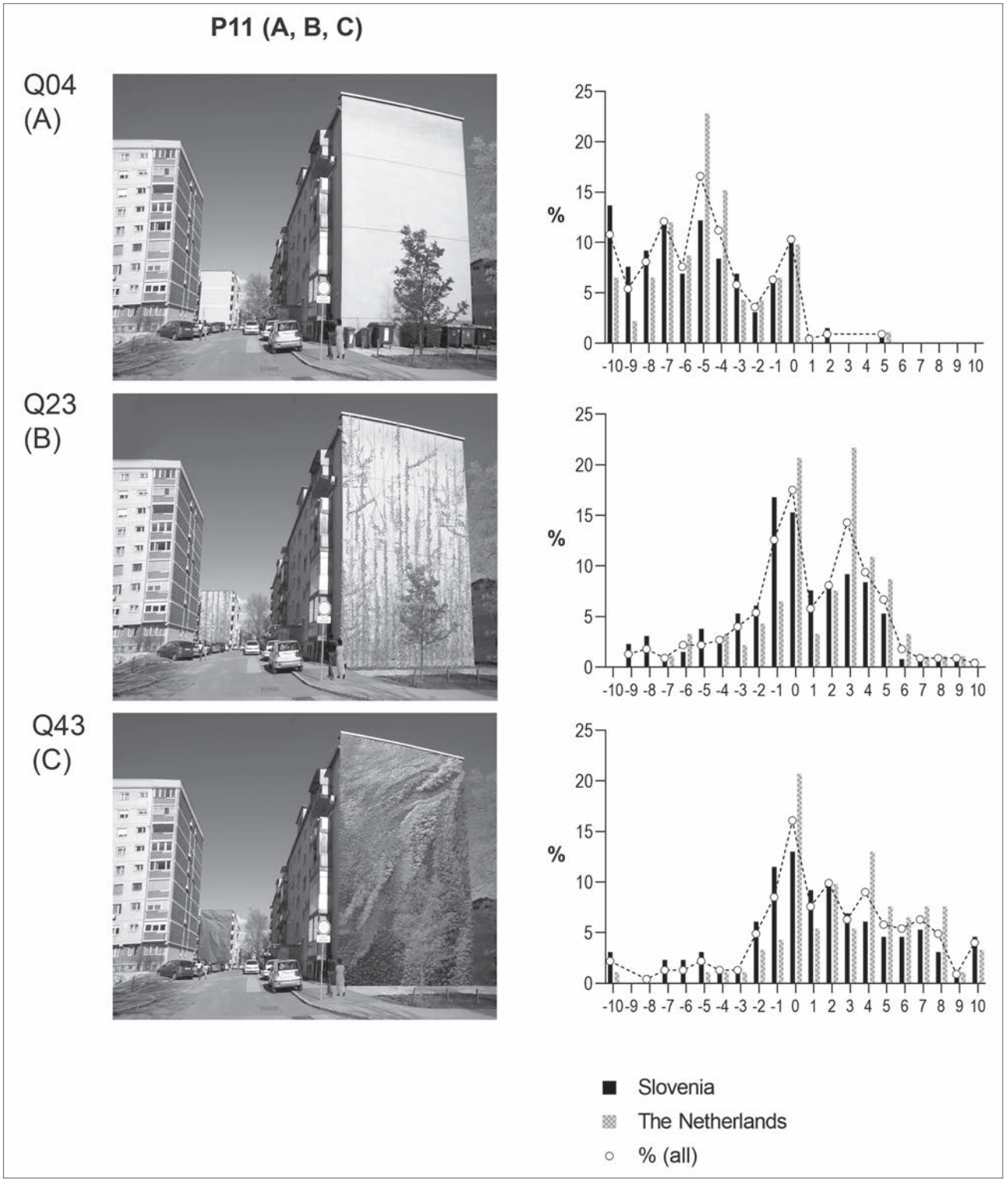

Figure 5: Three versions (A, B, and C) of one of the twenty cases presented and the frequency distributions for both countries (author: Jana Kozamernik).

lower than their Dutch counterparts. For seventeen images (out of sixty), the difference in the mean value of the ratings was greater than 1 point, and for two images the difference was even greater than 2 points. Similarly, Slovenian ratings of images in all three categories (A, B, and C) were also lower than those of the Dutch; specifically, they were lower by 0.64 points for category A, 0.63 points for category B, and 0.69 points for category C. Comparing the differences between individual images, the greatest deviations occurred when well-known themes were displayed (e.g., a well-known building in the Netherlands, which the Dutch respondents rated higher in all three versions of the image). Group A images (without

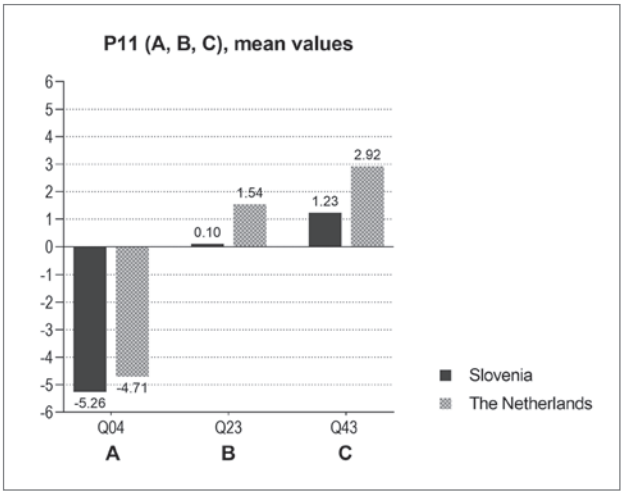

Figure 6: Mean values of an image (A, B, or C) for both countries (author: Jana Kozamernik).

vertical greenery) were rated the lowest by Slovenian men and Dutch women. Slovenian and Dutch women rated group B and C images (with vertical greenery on the walls) higher than men, and the differences between the two sexes were greater in the Dutch sample. A comparison of the results between the Slovenian and Dutch samples in terms of the respondents' age group shows greater differences. The mean value of ratings provided by the Dutch respondents twenty-six to thirty-five years old is around 0. From it can be concluded that this age group finds built ambiences without vertical greenery (green facades) neither attractive nor unattractive or, in other words, they find them acceptable. In contrast, the ratings of the Slovenian respondents of the same age are the lowest among all the age groups studied; from this it can be concluded that to them these ambiences are the least attractive. Images featuring green facades were rated the highest by Slovenian respondents in the middle and at the end of their active working life (fifty-one to sixty-five years old) and Dutch respondents thirty-six to fifty years old, representing the active working population. These groups may be better aware of the importance of the contact with nature in one's living environment.

Differences in the evaluation of open spaces were also observed in terms of the respondents' place of residence. On average, the Slovenian respondents living in downtown areas rated group A images lower than the Dutch and the difference was even more pronounced in the ratings of group B and C images. Compared to the respondents living in other environments, the residents of Slovenian downtown areas rated all three categories of images the lowest (their ratings were the lowest compared to other groups of respondents). Respondents living outside downtown areas evaluated the images without green facades (A) less negatively and at the same time they rated the images featuring green facades (B and C) higher (similar to the Dutch respondents). The reasons for this are most likely connected with the fact that green facades are more common in the Netherlands than in Slovenia, where the residents of downtown areas are not used to them.

The evaluations of urban spaces provided by the general public and professional community show that in both countries the professional community rated images with green facades (B and C) half a point higher on average than the general public. A more detailed comparison between architecture and urban planning students (i.e., the professional community) and other students showed similar results: the former rated images with green facades higher. The general public evaluated type A images (without green facades) less negatively than the professional community, whereas it rated type B and C images lower than the professional community. The comparison of architecture students and urban planning (and similar) students alone shows that urban planning students rated spaces with green walls significantly higher than architecture students. The greatest difference (by approximately 1 point) can be seen with regard to type A images (without green facades) featuring real urban spaces: urban planning (and similar) students rated these spaces higher than architecture students, which many indicate that differences in the perception of urban spaces are already appearing within the professional community surveyed.

3.5 Perception of various types of green walls

In examining the evaluations of images by type of green walls (i.e., green facade or living wall), certain limitations need to be taken into account in relation to the methodological approach applied and the visual images presented. Most images showed urban ambiences, with green facades visible from afar and not up close. The differences between the two types (green facades and living walls) are visible, but all the technical details are not. The evaluations of the attractiveness of an individual type are thus based on a wider spatial impression. The results show that on average images showing green facades (GF) or ground-bound climbing plants were better rated than images of living walls (LW). The mean value for GF was 2.65 and for LW 1.98. The maximum mean values are comparable for both types of green facades (max. GF = 8.23, max. LW = 8.28), but nonetheless the mean for GF is higher than for LW because the GF ratings are less dispersed, whereas the LW ratings also range to the lowest negative values.

Similar results were obtained when comparing the respondents' preferences by country and sex. In the Dutch sample, the difference between the ratings of both green wall types is smaller than in the Slovenian one. This is expected because GF is the only type that has been historically present in Slovenia, whereas living walls have only appeared there recently. The comparison between both sexes in the two countries also

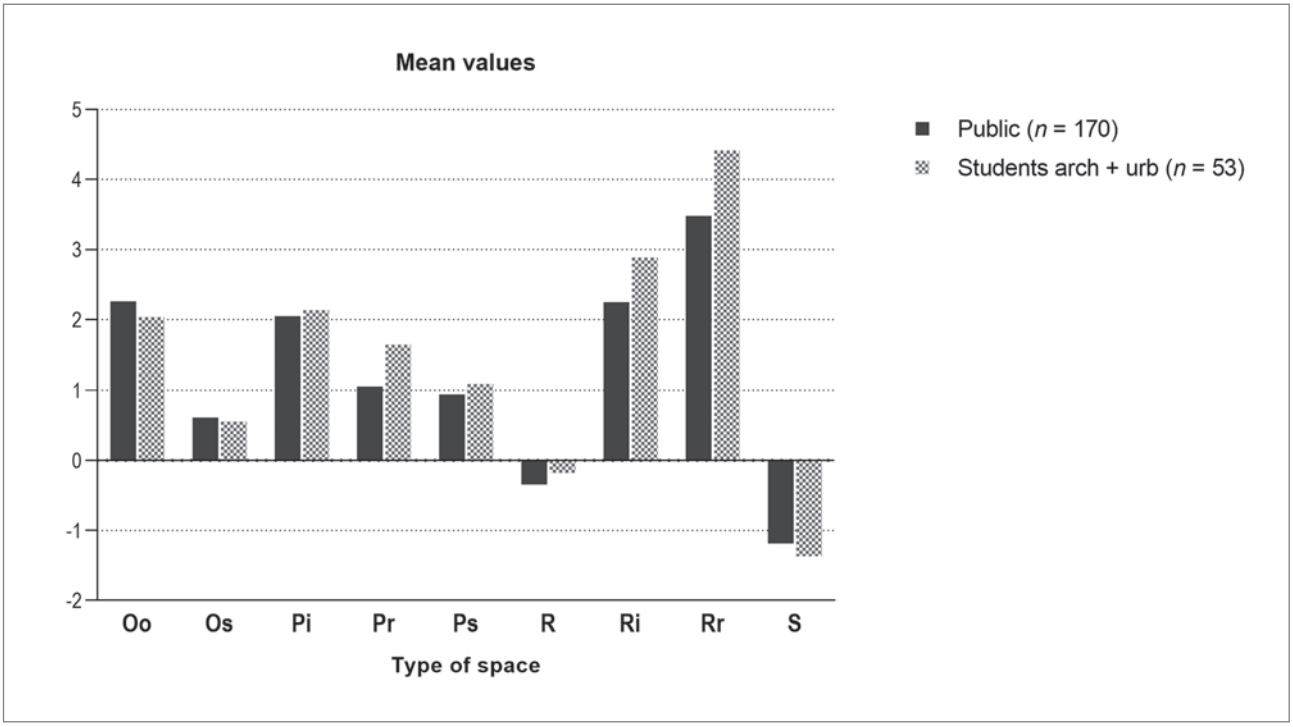

Figure 7: Mean values for individual types of urban space based on responses by the general public and the professional community (*n* = 223) (author: Jana Kozamernik).

shows the same results: images showing the GF type are better rated. The average rating of this type among men was 0.82 points higher than that of living walls, whereas the difference among women was slightly smaller: 0.56 points. The results of comparing age groups show that the perception of green wall types among the younger population does not differ significantly from that of the older population: respondents in all age groups rated green facades better than living walls, irrespective of the country, and the place or environment they live in. Even though the residents of Slovenian downtown areas provided the lowest ratings, they too find spaces with green facades more attractive. A similar result was obtained by comparing the two groups (i.e., the general public and the professional community).

3.6 Types of urban spaces

The study uses only a small sample of urban space types (i.e., twenty ambiences) and therefore the results can be interpreted as respondents' opinions about concrete images, but they are more difficult to generalize. The examples of spaces that people use daily were divided into categories according to the functions of spaces and buildings (open spaces and spaces connected with residential, shopping, and public buildings). 3D renders were analysed separately from images of real spaces (photos), even though 3D renders have a similar, realistic effect. Among the images of real situations, respondents found open public spaces where people often spend time (e.g., squares and playgrounds) and areas next to public buildings the most attractive. In turn, they considered shopping and business areas the least attractive. A 3D visualization of a modern apartment building, which received high ratings, can be highlighted among the more attractive examples.

A comparison between the two countries shows that even though the Slovenian respondents provided lower ratings overall, the average Slovenian and Dutch ratings of public open spaces (e.g., squares and playgrounds) were almost identical. Compared to the professional community, the general public rated all open spaces included in the survey (especially those with a multipurpose function or where people spend time, such as squares and playgrounds) higher. In turn, they rated residential areas and all spaces presented as 3D renders significantly lower than the professional community (Figure 7). The results also show that urban open spaces were best rated by the residents of urban areas and lower by residents of rural areas. Shopping and business centres were evaluated the worst.

4 Discussion

The perception of urban environments is greatly affected by natural elements. With their presence on the buildings, green facades as elements of vegetation and green infrastructure contribute to a greater attractiveness of the urban environment.

The fact that spaces with green facades are evaluated as more attractive than those without them is also an expected result based on previous research exploring the importance of the presence of natural elements in the living environment and the positive effect of vegetation on the perception of space.

The perception of space (through the examined evaluation of green facades as elements of urban space) also depends on the respondents' sociodemographic characteristics. Differences were established in the ratings of various age groups in the two countries studied, especially young people and the elderly, which may indicate certain culturological differences between the countries. The major deviations of results for respondents living in downtown areas prompts the question of why Slovenian respondents evaluate urban ambiences significantly more critically than their Dutch counterparts. This group provided low ratings for all the categories of images presented (the lowest compared to other groups), which suggests that these people may also be more critical toward the living environment in general. In this regard, it would make sense to expand this study to obtain information on green facades and urban green elements in general from other countries, to focus on a comparison between urban and other residents, and to continue to incorporate the views of the professional community in research.

One of the key findings is the importance of not only the presence, but also the amount of vegetation in the urban context. Based on the results it can be concluded that the public opinion favours a larger share of vegetation in the urban environment. This said, it needs to be highlighted that the results are closely connected with the visual images used. They presented realistic scenarios of installing green facades, albeit with a different degree of vegetation cover, but always within the scope appropriate for the building to which they are attached, in an appropriate maintenance condition, and during their growth period. A larger respondent sample and additional images (even ones showing less attractive and poorly maintained spaces) could improve the understanding of the responses provided, which are not necessarily connected with the amount of greenery used, but also with the evaluation of these elements based on their condition. Nonetheless, it can be concluded from the results that in general people highly value urban ambiences with a higher amount of greenery, which is key from the perspective of urban design and guidelines for planning these urban spaces.

The respondents' preferences for various types of green walls were logically analysed in reference to the results of a 2011 study (White & Gatersleben, 2011), according to which the vegetation system used and the type of vegetation selected have a great impact on the respondents' views. The findings of the survey presented in this article show that people find the traditional type of green facades more attractive or that they are more reserved toward modern vegetation systems (living walls). However, it needs to be highlighted that the survey did not examine individual types in detail; given the scale of the images used, differences between the systems or individual types were nonetheless visible. The findings of this survey suggest that people in urban environments would accept the GF type better or with fewer reservations.

To study the urban environments themselves, a greater diversity and a larger sample of images of individual ambiances would be required, which was not possible in this study due to the methodology used and is considered one of the its limitations. The study gave priority to various versions of images showing the same ambience and used a limited number of images because it also needed to ensure that the questionnaires were not too long. Despite the limited sample of urban space images, it can be established that open public spaces and areas next to public buildings play a significant role in the users' perceptions. These are places of social interaction, where people hang out, usually constituting a designed or planned open space. Respondents were more critical toward spaces directly connected to residential buildings or areas, and outdoor spaces at shopping centres, which were rated the worst, are probably perceived by users as environments of the poorest quality. Based on the study's results, attention should also be drawn to the fact that similar future studies should take into account that identifying well-known real-life motifs can affect the respondents' ratings and that 3D visualisations may be too idealized, which can again affect the ratings. In the future, it would make sense for studies to limit the images used to concrete spaces that respondents are not familiar with and to include a broader sample of the professional community (both students and active professionals).

In the future, it would make sense to expand the studies that focus on visual perception alone with comparative methodology or to conduct them in a way that would also involve other senses. It should be noted that this study's limitation is connected with the images prepared, but partly also with the amount of the data captured or their use in a detailed analysis. Limitations relating to the images have to do with the number of photos, the physical characteristics of the ambiances presented, and the decision on what should be shown in the images (i.e., the amount of greenery had to be appropriate and the green facades had to be well-maintained). The main cause of the limitations was the length of the questionnaire applied. Due to the large number of images used and the method of examining the green element studied, the survey included a small selection of individual space types. This limitation resulted in the low reliability of findings concerning the evaluations

of individual urban space types. Despite adjustments made to shorten the questionnaire, many were only half completed and thus had to be eliminated from the analysis. The reliability of the study's results is hence also limited in terms of individual respondents' subgroups; for example, a smaller number of questionnaires completed by a specific group (e.g., the oldest population and respondents living in a rural environment). A minor limitation from the perspective of studying culturological differences is the international comparability of the study because it is limited to differences between Slovenia and the Netherlands alone, excluding other countries.

5 Conclusion

Understanding people's attitudes toward the urban environment and the presence of natural elements in it is key for defining the quality criteria and guidelines in planning these spaces. The study elucidates the effect of green facades on the perception of urban open spaces. The methodology used made it possible to include a wide circle of respondents from two European countries and the research material prepared can be combined with other methodologies in the future. The findings about the impact of green walls on the perception of urban ambiences suggest that green infrastructure plays a vital role in spatial users' perception in general. The findings show that it would also make sense to devote more attention to other studies of urban green infrastructure, and to compare the role of green facades to other elements of the green system. In making concrete decisions about installing green facades, attention should be paid to selecting the right sites, architectural acceptability, and environmental responsibility. It is key that urban planners are aware of the importance of the presence of green elements and treat them as factors enhancing spatial quality in both emerging as well as existing and less attractive urban environments.

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Quality of life in neighbourhoods undergoing renewal: Evidence from Mashhad, Iran

Urban decay is one of the most critical challenges in urban development, whereby old urban districts fall into decrepitude and face serious social, economic, and physical problems. Governments thus implement renewal projects to revitalize physical and functional structures, restore socioeconomic capacity, and improve residents' quality of life. However, ignoring the complex nature of intervention in old urban areas may have undesirable consequences, including an additional decline in residents' quality of life. This article assesses residents' quality of life in neighbourhoods undergoing renewal, supported by experience from Mashhad, Iran. Using a mixed-methods design, it combines quantitative and qualitative methods of impact assessment, including questionnaires, semi-structured interviews, georeferenced data, and direct observation. The results show that a lack of sustainable financing for the Samen Renewal Project has had undesirable physical, sociocultural, and economic effects in the historical district of Mashhad and significantly reduced residents' quality of life due to focusing on the interests of tourists, pilgrims, and especially private developers.

Keywords: quality of life, urban transformation, urban renewal, urban decay, Iran

1 Introduction

Conventional urban development has faced complex challenges in recent years, ranging from the phenomenon of shrinking cities to physical decay, environmental risk management, heritage preservation, security, transport, health, and social inequality (El Din et al., 2013; Marra et al., 2016). Urban decay is one of the most critical challenges in urban development, whereby by a previously functioning city, or part of a city, falls into decrepitude and faces serious problems such as depopulation, abandoned buildings and infrastructure, high unemployment, increased poverty, a desolate cityscape, crime, and low living standards and quality of life (Dale, 1999; Deng & Ma, 2015; Andersen, 2019). This is particularly crucial in unplanned traditional core areas of towns and cities, specifically in developing countries, in which traditional core areas are most often the oldest parts of cities (Ibem, 2013). These traditional core areas are typically marginalized during urban development and face challenges related to decay, dwindling economic function, dilapidation, and migration to better and more modern areas (Munoth et al., 2013). As these old urban areas fall into decline, they not only lose their ability to satisfy residents' needs, but also pose social, cultural, and economic challenges for the city (Dale, 1999).

However, international experience has shown that investment in historical cores can contribute to urban revitalization, tourism, job creation, reversing fiscal drain, increased liveability, social cohesion, and reduced crime (Bigio & Licciardi, 2010). Thus, governments are enthusiastic to intervene in these traditional core areas through urban renewal projects (Bianchini & Parkinson, 1994; Leary & McCarthy, 2013). These large-scale interventions generally seek to reverse decline by improving physical structure, social inclusion, welfare services, and – more importantly but sometimes elusively – the economy of those areas (Leary & McCarthy, 2013; Roberts et al., 2016). Thus, urban renewal can be an effective tool for promoting sustainable urban transformation and enhancing the macro- and micro-level quality of life if the principles of encouraging participation, building community character, advancing equity, improving the environment, and invigorating the economy are observed (Ng, 2005; von Hoffman, 2008; McCormick et al., 2013). This can be achieved through various governance mechanisms derived from two rather different orientations: the tradition of universalism and the neo-liberal worldview of urban problems (McCarthy, 2007; Leary & McCarthy, 2013). However, lack of an integrated approach in the perception and implementation of such renewal projects may negatively impact residents' quality of life by exacerbating unsustainable urban changes such as increases in property values and the cost of living, social exclusion, gentrification, and displacement of poorer residents (Atkinson, 2000; Bacqué et al., 2011).

Although the relationship between quality of life and various urban characteristics such as socioeconomic status (Mielck et al., 2014; Rokicka & Petelewicz, 2014; Bielderman et al., 2015), environmental factors (Lo & Faber, 1997; Li & Weng, 2007), population density (Cramer et al., 2004), household density (Carnahan et al., 1974), amenities, and economic performance (Deller et al., 2001) has been widely addressed in recent decades, assessing the quality of life in residential neighbourhoods during implementation of renewal projects has rarely been examined, specifically at a local scale. Because several variables of quality of life, such as population factors, infrastructure conditions, and environmental factors, can be deeply affected by renewal projects (Johansson, 2002; Li & Weng, 2007; Lee, 2008), investigating the quality of life in neighbourhoods being transformed by such projects could offer the research community a fresh perspective.

The traditional core district of Mashhad, Iran, has been experiencing the largest and longest-running government-run renewal project in Iran for twenty-five years. The Samen Renewal Project primarily aims to improve residents' quality of life and raise the performance and competitiveness of the tourism industry in the central district of the city through large-scale physical intervention. Such intervention in the historical district of the city could have a wide range of impacts and consequences, one of the most important of which is changing the quality of life. This article examines the central district of Mashhad as a laboratory for assessing the quality of life in neighbourhoods being transformed by large-scale renewal projects.

2 Methods

Renewal projects can have various quantitative and qualitative impacts, and so a combination of quantitative and qualitative methods is necessary to assess these impacts. This study uses a mixed-methods sequential explanatory design, which involves collecting and analysing quantitative and qualitative data in two consecutive phases within one study. This method is used to explain and interpret quantitative results through a qualitative analysis (Creswell, 1999). A combination of qualitative and quantitative methods of impact assessment was considered following the principles of participatory assessment (Roche, 1999; Morris et al., 2011; Catley et al., 2014; Forouhar, 2016).

To assess the quality of life in the traditional core district of Mashhad and the impacts and consequences of the Samen Renewal Project, this article uses a conceptual model of quality of life (Figure 1) derived from various literature (Day, 1987; Cummins, 1996; Musschenga, 1997; Seik, 2001; Johans-

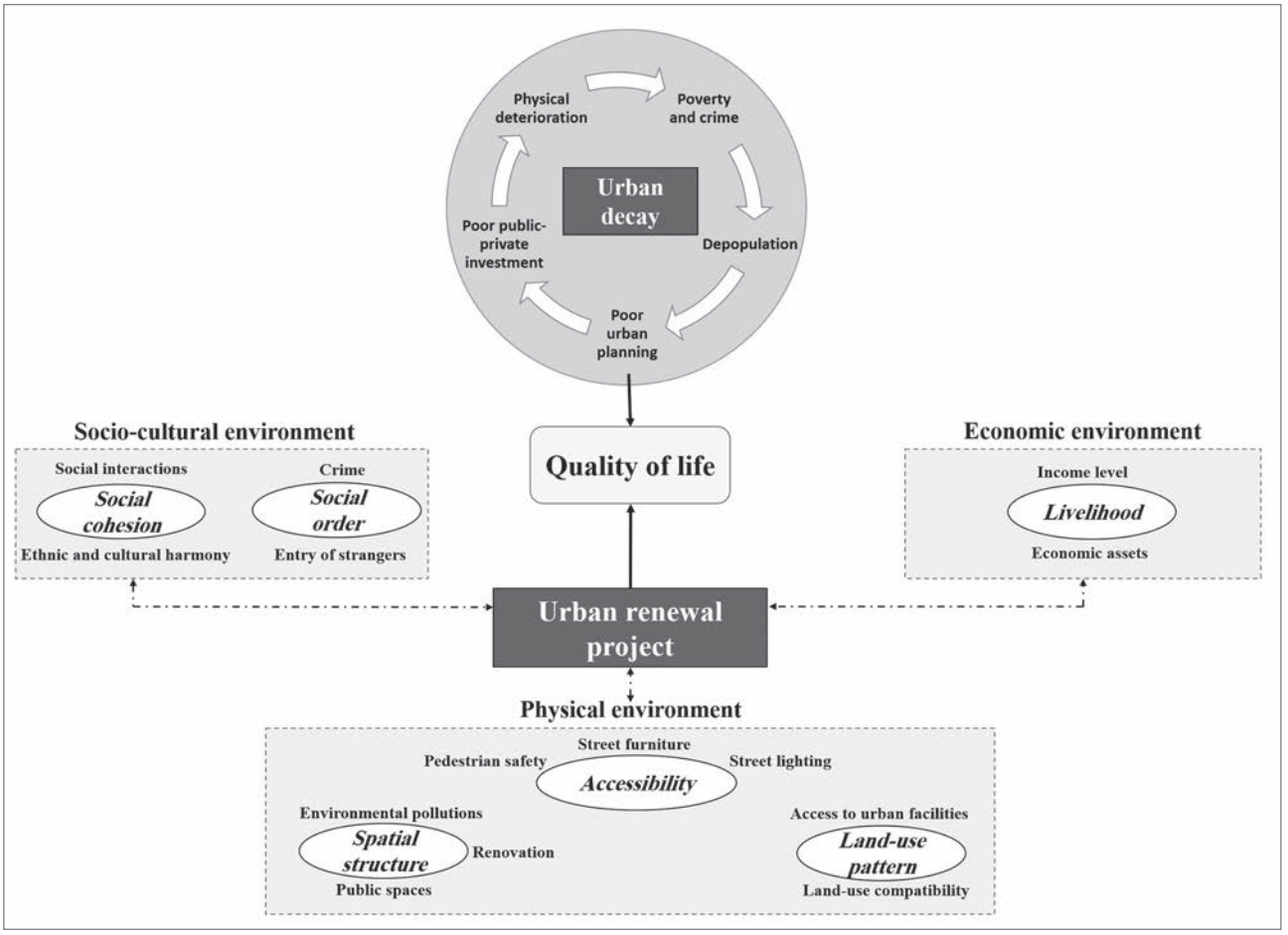


Figure 1: Conceptual model of quality of life (illustration: Amir Forouhar).

son, 2002; Costanza et al., 2007; Marans & Stimson, 2011). According to this model, urban decay is a sociological process in which a previously functioning city, or part of a city, falls into disrepair and decrepitude. It may feature poor urban planning and development policies, economic stagnation, abandoned buildings and infrastructure, high local unemployment, increased poverty, crime, depopulation, and low overall living standards and quality of life (Dale, 1999; Deng & Ma, 2015; Andersen, 2019). Renewal projects generally attempt to reverse that decline by improving the physical structure, sociocultural environment, and especially the economy of those areas. However, the precise emphasis may vary according to context (Ibem, 2013; Leary & McCarthy, 2013; Tallon, 2013; Roberts et al., 2016; Andersen, 2019).

This study used questionnaires, semi-structured interviews, georeferenced data, and direct observation. To determine the sample size for questionnaires, IBM SPSS Sample Power (version 3.0.1) was used to consider a maximum probability of 5% for error type I and 20% for error type II (minimum test power of 80%), and a minimum effect size of 0.2, which calculated the sample size as 265. Based on theoretical saturation, the semi-structured interviews included thirty-five local residents, twenty local shopkeepers, ten tourists, and five real estate agencies. The sampling method was random sampling with a random walk technique (RWT). The RWT is a random sampling method in which the number of paces between sample points is determined by random numbers, usually drawn from random-number tables, and from each sample point a right-angle turn determines the direction of the next point (Roche, 1999; Forouhar & Hasankhani, 2018).

The questionnaires and interviews asked about residents' satisfaction with the physical, sociocultural, and economic circumstances of their living environment, their perception of change, and its causes in the neighbourhood. Applying participatory assessment methods such as trend analysis and historical timelines (Roche, 1999; Morris et al., 2011; Catley et al., 2014; Forouhar, 2016), the respondents were asked to discuss some major trends of events in their neighbourhoods over time, and to then recall how those changes had occurred, thereby reconstructing history by adding other events and the implementation processes in the Samen Renewal Project. To analyse the qualitative data, all recorded interviews used an open coding system to label concepts, and define and develop categories based on their properties and dimensions.

Figure 2: a) location of Mashhad in Iran (illustration: authors); b) Mashhad; c) Samen district of Mashhad and the study area (source: Map data, 2020); d) the shrine (photo: Mohammad Khoshneshin, ILNA News Agency).

3 Case study

Mashhad is the second-largest city in Iran and the second-largest Shia holy city in the world. It attracts more than thirty million tourists and pilgrims every year, many of whom come to pay homage to the Imam Reza shrine dedicated to the eighth Shi'ite imam (Mashhad Municipality, 2017). This city has been a magnet for pilgrims and tourists since medieval times (Kafashpor et al., 2018). Mashhad experienced population growth after the Anglo-Soviet invasion of Iran in 1941 because of relative insecurity in rural areas, and the rapid increase in population continued in the following years thanks to an increase in Iranian oil revenues, the decline of the feudal social model, agrarian reform, religious attractions, and the development of the healthcare system (Kheyroddin et al., 2014; Abrahamian, 2018; Rabbani et al., 2018).

Table 1: Satisfaction of local residents with their living environment.

Component	Domain	Indicator	Satisfaction (%)				
			1	2	3	4	5
Physical environment	Accessibility	Street lighting	35.1	31.3	28.1	3.7	1.8
		Street furniture	31.3	38.2	21.8	5.8	2.9
		Pedestrian safety	26.4	37.5	26.3	6.1	3.7
	Spatial structure	Renovation	30.5	39.3	21.9	7.2	1.1
		Public spaces	38.2	34.2	20.1	5.2	2.3
		Environmental pollution	28.7	43.3	24	4.0	0.0
	Land-use pattern	Access to urban facilities	29.3	40.0	26	4.0	0.7
		Land-use compatibility	22.9	51.1	19	4.0	3.0
Sociocultural environment	Social order	Crime	38.0	41.3	16.7	4.0	0.0
		Entry of strangers	32.4	41.5	21.3	4.7	0.1
	Social cohesion	Social interactions	15.4	36.2	36.7	8.7	3.0
		Ethnic and cultural harmony	24.9	33.2	29.3	9.2	3.4
Economic environment	Personal livelihood	Income level	47.3	34.7	14.7	3.3	0.0
		Economic assets	41.3	37.2	17.2	2.5	1.8

Note: 1 = completely dissatisfied, 2 = somewhat dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = somewhat satisfied, 5 = completely satisfied.

Table 2: Descriptive statistics for quality of life in the study area.

	Descriptive statistic									
	M	Lower	Upper	*Mdn*	*Mo*	*Var*	*SD*	Min.	Max.	*Ra*
Total	3.2100	2.8866	3.5182	3.0000	2.00	3.567	1.83014	1.00	9.00	8.00
Men	4.1432	3.6581	4.3648	4.0000	3.00	3.003	1.67712	2.00	9.00	7.00
Women	2.2768	2.0148	2.7400	2.0000	2.00	2.651	1.57602	1.00	8.00	7.00

Table 3: One-sample *t*-test for quality of life in the study area.

t-test statistic					
t	*df*	Sig. (two-tailed)	Mean difference	Lower	Upper
−12.670	146	.000	−2.19000	−2.5132	−1.8868

Over the past decades, the central district of Mashhad, which includes the historical core of the city around the shrine (the Samen district), was marginalized during urban development and faced serious challenges related to physical and functional decay. In 1965 an important urban renewal project for the surroundings of the shrine was proposed by the government to replace the dilapidated buildings and infrastructure that surrounded the shrine. Although the project was officially approved in 1968 and some neighbourhoods were demolished, the project was abandoned after the Iranian revolution in 1978 (Sarkheyli et al., 2016; Kafashpor et al., 2018; Forouhar & Forouhar; 2020). However, the shrine and its related economic potential for tourism as well as growing sociocultural, economic, and political challenges in the traditional core of Mashhad encouraged the government to intervene in 1992 through a renewal mega-project: the Samen Renewal Project. The project primarily aimed to improve residents' quality of life, meet the needs of tourists and pilgrims, improve urban services, and upgrade the performance and competitiveness of the central district of Mashhad to achieve a global and regional position (Hosseyni, 2008; Sarkheyli et al., 2016). Today, the Samen Renewal Project is the largest and longest-running government-run renewal project in Iran; it covers approximately 366 hectares and is run by the Samen Renovation Organization Figure 2). Because this renewal mega-project has only achieved 50% of its goals in about twenty-five years, it has turned into one of the most controversial mega-projects in Iran and resulted in serious challenges to Mashhad's urban management.

4 Results

In the statistical sample, 140 men (52.8%) and 125 women (47.2%) responded to the questionnaire (sex ratio: 1.12). The respondents' average age was thirty-four (range: fifteen to seventy-eight). Forty-nine per cent of the sample population was

Table 4: Correlation between components/domains with quality of life in the study area.

	Quality of life	
	Pearson coefficient	Sig. (two-tailed)
Physical environment	0.755*	.000
Accessibility	0.696*	.000
Spatial structure	0.719*	.000
Land-use pattern	0.657*	.000
Sociocultural environment	0.751*	.000
Social order	0.746*	.000
Social cohesion	0.625*	.000
Economic environment	0.624*	.000
Livelihood	0.624*	.000

Note: *p = .01.

non-native, reflecting the high degree of immigration into the study area. In addition, 37.3% of the respondents had been living in the area for less than five years and 69.1% less than ten, which reflects evacuation of the neighbourhood by older local residents. Table 1 shows local residents' satisfaction with the physical, sociocultural, and economic circumstances of their living environment.

Tables 2 and 3 also indicate that, on average, the sample population ranked their quality of life at 3.21 on a scale from 1 to 10. The respondents assessed their quality of life as lower than the possible median value (5.50). The comparison of subjective quality of life by respondents' sex shows that women's average score for quality of life was lower than men's average score. In addition, a one-sample *t*-test indicates that the quality of life is also lower than the possible median value with a confidence level of 99%. The Pearson correlation coefficient shows that the physical environment has the strongest correlation with the subjective quality of life among the components in the study area. With increasing satisfaction with the physical environment, residents' quality of life increases, and vice versa. In addition, among the domains, social order correlates most strongly with residents' quality of life (Table 4).

4.1 Physical impacts

One of the main goals of the Samen Renewal Project was to provide residents and pilgrims with access to commercial, recreational, and accommodation centres, and to the shrine throughout the historical core of Mashhad. The construction of two boulevards and a few service routes around the new commercial-residential buildings are the main activities of the project (Samen Renewal Organization, 2002). The construction of these new roads has led to the large-scale destruction of old routes in this district. As a result, residents and pilgrims have been forced to use alternative and temporary routes for two decades. More than 65% of the respondents were somewhat or completely dissatisfied with the lighting of pedestrian routes. Only 2.9% were completely satisfied with urban furniture, and more than two-thirds were somewhat or completely dissatisfied with pedestrian safety.

A field survey indicates that only the service routes to the new commercial-residential buildings (shopping malls, luxury hotels, and other accommodation) are well designed and well equipped with proper lighting and furniture. In contrast, temporary routes (which include most of the pedestrian routes in the district) suffer from a lack of street lighting, facilities especially for vulnerable groups, and well-designed and harmonious urban furniture (Figure 3). In addition, temporary routes lack necessary pedestrian safety precautions for traffic. The Samen Renovation Organization has prioritized access to income-generating commercial-residential complexes and has ignored improving temporary local routes, which is considered costly. "The renewal project has meant nothing but destruction for the residents of this neighbourhood. Many local streets have been destroyed to create access to commercial centres, hotels, and hostels, and the authorities have opened temporary pedestrian routes that are difficult to walk on at night even with a flashlight" (38-year-old male resident).

The Samen Renewal Project was intended to improve the quality of the environment through constant renovation, increasing well-equipped public spaces, and reducing environmental pollution. More than 60% of the respondents were somewhat or completely dissatisfied with this expectation. The number of construction permits issued in the Samen district from 2013 to 2015 was very small proportionate to the entire city: sixty permits were issued in 2013 (0.8% of the entire city), nineteen in 2014 (0.03% of the entire city), and nineteen in 2015 (0.5% of the entire city; Samen Renewal Organization, 2002). Although the number of permits issued is negligible, they cover a large area; the average area of each of

Figure 3: Comparison between temporary local routes and service routes to new commercial-residential buildings (photo: Navid Forouhar).

the permits in 2013 was 8,640 m^2, in 2014 it was 4,156 m^2, and in 2015 it was 6,039 m^2. The statistics show that construction permits in the Samen district have been issued for large-scale residential and commercial projects, and not for local residents' properties. This reflects the commercialization of residential areas surrounding the shrine in terms of generating revenue rather than improving residents' quality of life. Interviews with real estate agencies also show that the execution of the project was an important factor in the decline of small-scale renovation by residents. As soon as the project was launched, the Samen Renovation Organization suspended construction permits and prohibited locals from selling their properties. As a result, private construction and small-scale renovation stopped immediately. Residents could only sell their properties at a low price to the organization or wait for an uncertain future (City Council of Mashhad, 2016).

The field survey shows that new spaces resulting from the destruction of old buildings are currently used as parking lots or have become unsafe spaces. A major justification for the project was the lack of sanitation in the district (Samen Renewal Organization, 2002), but the interviews and field surveys indicate that environmental pollution has been significantly exacerbated because the demolished buildings have turned into dumps for household and construction waste. In 2016, the Mashhad Health Organization ranked the Samen district first in an outbreak of cutaneous leishmaniasis. The long-term

Figure 4: Access to urban facilities and public services in Mashhad (illustration: Navid Forouhar; source: Mashhad Municipality, 2017).

construction of commercial-residential buildings and roads has also led to noise pollution. This pollution can affect residents' physical and mental health, and eventually increases the incidence of disease.

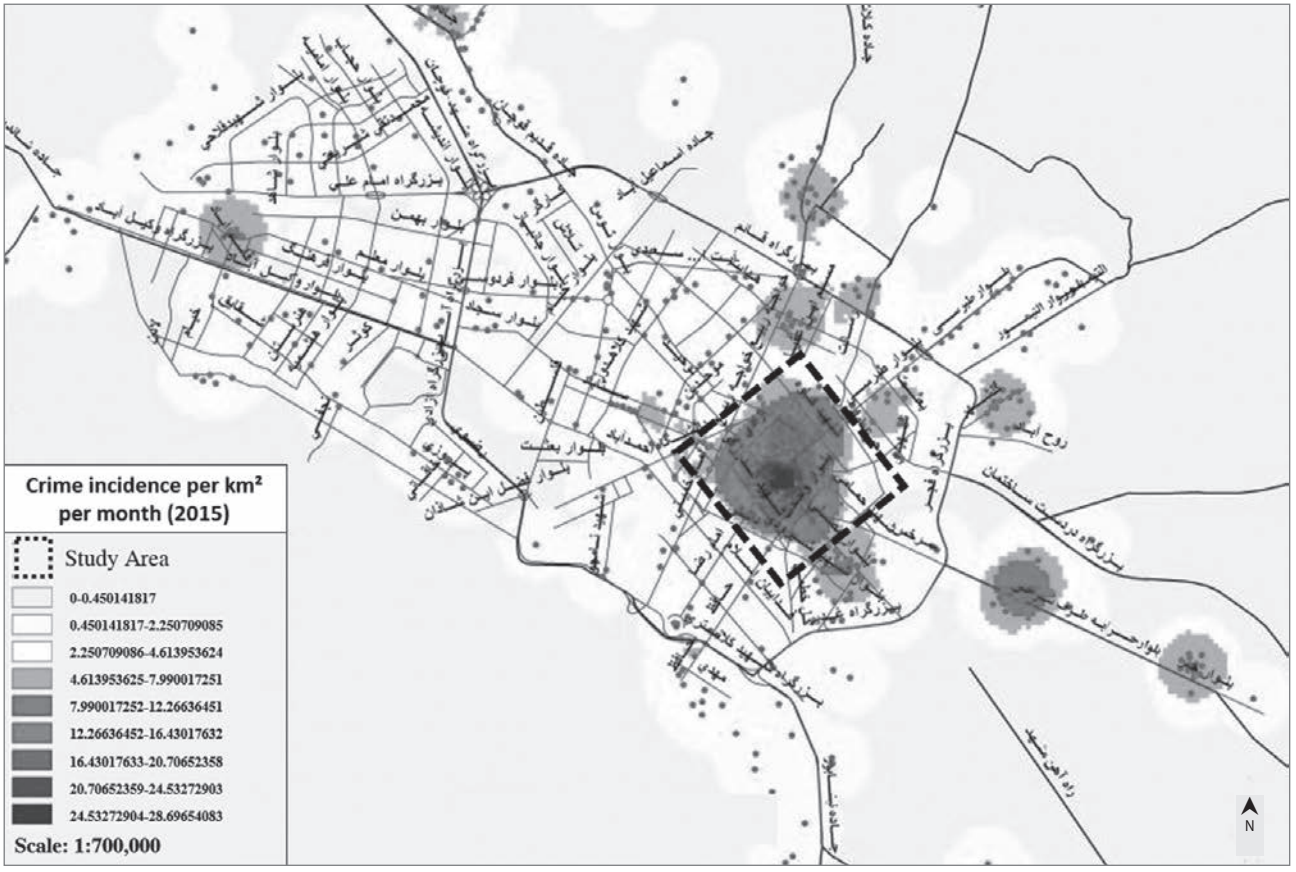
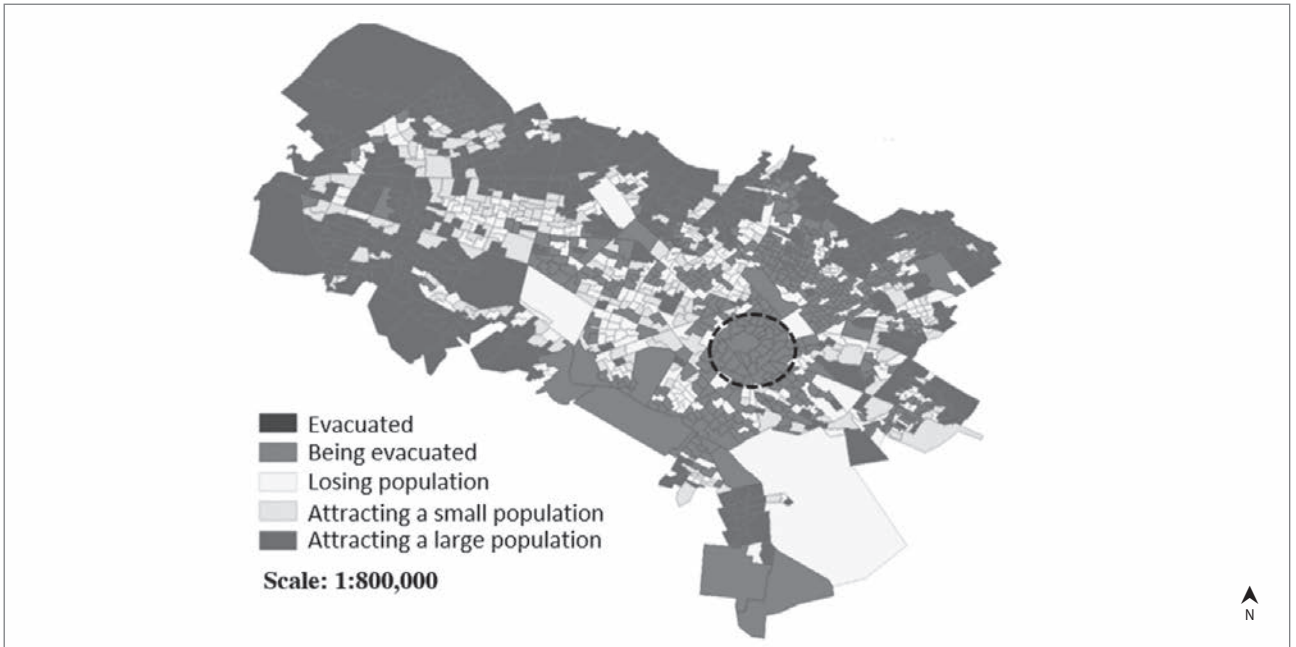


Figure 5: Crime incidence in Mashhad (source: Mashhad Police Department, 2016).

The results of the questionnaires demonstrate that the Samen Renewal Project failed to maintain a balance between the needs of residents and pilgrims. Nearly two-thirds of the respondents were somewhat or completely dissatisfied with their access to urban facilities and the compatibility of activities. In 2008, due to the slow progress of the project, the authorities decided to attract investors for financing and accelerating it. The organization made important changes in the proposed land-use plan. Based on these changes, the proposed residential parcels were converted into large-scale commercial-residential properties. Consequently, many houses were purchased at a low price using legal leverage. These properties were then aggregated and converted into large lots to build commercial towers, malls, shopping centres, and luxury hotels. The organization concentrated on large-scale commercial-residential projects to finance the project instead of providing affordable housing, educational and medical services, or public spaces. Figure 4 shows the shortage of facilities and public services at the local level in the Samen district. Interviews with pilgrims revealed that these large-scale commercial-residential centres are only suitable for wealthy pilgrims and have impeded access to affordable services and facilities for ordinary pilgrims. "In the past, we used to stay in local residents' houses. They were not good quality, but they were very affordable for low-income pilgrims. Now these houses have been destroyed and luxury hotels have been built that most pilgrims cannot afford to stay in" (39-year-old male pilgrim).

4.2 Sociocultural impacts

Quality of life is deeply affected by feelings of anomie, and anomic people tend to have lower life satisfaction (Genov, 1998; Western & Lanyon, 1999; Huschka & Mau, 2005). Crimes such as drug and alcohol trafficking, extortion, harassment, and prostitution can significantly reduce the quality of life in urban neighbourhoods. On the other hand, the entry of strangers into residential neighbourhoods without adequate supervision can not only increase criminal activities but also significantly reduce life satisfaction (Huppert et al., 2009; Hanson et al., 2010; Kitchen & Williams, 2010). Altogether, 77.3% of the respondents were somewhat or completely dissatisfied with the incidence of crime in their neighbourhoods, and 73.9% were somewhat or completely dissatisfied with the entrance of strangers into their personal living area. The 2016 Report on crime prevention and community safety in Mashhad indicates a concentration of crime hotspots in the Samen district (Figure 5). In addition, an examination of the number of defendants held in the Mashhad Central Prison shows that



Year	1996	2006	2011	2012	2013	2014	2015	2016	2017
Mashhad	1,877,414	2,575,429	2,807,464	2,856,691	2,906,782	2,957,751	3,027,692	3,088,118	3,150,855
Samen district	46,107	32,330	21,456	19,795	18,255	16,825	15,456	14,239	13,118
% of total	2.45	1.25	0.76	0.69	0.62	0.56	0.51	0.46	0.41

Figure 6: Population change in Mashhad (source: Mashhad Municipality, 2017).

the Samen district ranks first in crimes against public decency and morality, fraud, and crimes against people and property. Moreover, the district ranks second in other crimes, such as drug abuse, theft, and drug trafficking in the city (Mashhad Police Department, 2016). In addition to undesirable socio-economic circumstances in the district, lack of planning for unsafe spaces (corners and L- and U-shaped spaces) and desolate properties resulting from the widespread demolition by the project have significantly contributed to crime. Interviews also show that the presence of strangers has considerably increased due to the uncontrolled increase in the number of hotels and hostels built based on the project recommendations. Due to the degradation of neighbourhood quality, old residents have started leaving their houses and illegally renting them out to tourists and pilgrims. Official statistics show that in the Samen district there are currently 3,300 private houses illegally used for pilgrims' accommodation (City Council of Mashhad, 2016).

The Samen district has undergone a significant population loss over the past two decades; it is currently considered a shrinking district that is being evacuated by its residents (Figure 6). The interviewees believed that social interactions were significant before the project, and that relatives lived in the same neighbourhoods. Following the displacement of old residents, traditional social relations in these neighbourhoods have greatly declined. Due to the low quality of the district, new inhabitants are often from the poor migrant class. The Samen district is currently the second most popular destination for non-Iranian immigrants in Mashhad (City Council of Mashhad, 2016). As a result, the ethnic and cultural harmony of the district has declined significantly, and more than half of the respondents were somewhat or completely dissatisfied with the quality of social interactions and the ethnic and cultural harmony of their neighbourhood.

4.3 Economic impacts

Livelihood not only has a direct impact on subjective quality of life, but it is also an important factor in residents' ability to participate in renovation (Ashley & Carney, 1999; Karl, 2000). The income level of residents in the Samen district is directly related to their employment and economic assets such as land and property (Saghatoleslami, 2017; Kafashpor et al., 2018). Although the shrine has made the Samen district one of the most profitable tourist attractions in Iran, less than 5% of the

respondents were somewhat or completely satisfied with their income level and economic assets. The residents believed that before the project the main occupation of residents was tourist-related, such as selling products to tourists, souvenir shops, and renting houses to pilgrims and tourists. However, local retail has been heavily affected by the large shopping centres and malls in the project. The decree prohibited private construction and renovation, leading to a significant decline in residents' income from renting their houses. Locals believed the neighbourhood used to be a source of income for residents, but the project damaged their jobs and income. "After the project, many properties were destroyed and replaced by upscale malls and shopping centres. Most of our customers were attracted to these centres. We could not compete, so we lost our customers and had no choice but to close the shop" (31-year-old male shopkeeper).

The interviews with real estate agencies also show that the project has reduced local residents' property values. Local people were prohibited from selling their properties unless it was to the Samen Renewal Organization. However, the prices set by the organization differed greatly from the real value of the properties on the regular housing market. The long duration of the project has had a diminishing impact on the value of local properties. "We had to sell off our properties cheaply, otherwise the organization would cut off our electricity, gas, and drinking water. The increase in value was only for large-scale commercial properties owned by investors, not for the local properties" (43-year-old female resident).

5 Discussion

Urban decay in Iran has no single cause; it has resulted from various interrelated socioeconomic conditions and urban planning policies over the past decades, such as lack of attention to infill development and public-private partnerships (Sarkheyli et al., 2016; Abrahamian, 2018). Although the Samen Renewal Project sought to improve residents' quality of life and the performance and competitiveness of the tourism industry, this large-scale project had undesirable physical, sociocultural, and economic impacts.

Since the inception of the project, a lack of sustainable and stable financial resources turned into serious challenges for the municipality and the Samen Renewal Organization to implement this large-scale transformation project. Due to the financial sanctions imposed on Iran after the Iran–Iraq War in 1979, the national government introduced a new financial system for municipalities in Iran (Sarkheyli et al., 2016; Gholizadeh & Aminirad, 2018). This new legislation cut off much state support for municipalities without identifying any alternative economic sources. Based on this policy, the national government refused to allocate funds to the Samen Renewal Project, and the organization was forced to fund the project through self-sufficient and zero-based budgeting. Similar to urban renewal projects in contexts such as Taiwan (Hsu & Chang, 2013), China (Chen, 2013), and Canada (Zuberi & Taylor, 2013), the financing pattern of the Samen Renewal Project changed the initial goals of the project to the goals of investors and private developers. However, as Cullingworth et al. (2013) mentioned, private developers are not usually interested in low-income housing (whether subsidized or not), but in developing shopping and commercial centres. Thus, the municipality and the Samen Renewal Organization considered developing the tourism industry to be the main goal of the project to attract investors and private developers in Mashhad's central district. The organization subsequently applied fundamental changes in the initial land-use plan to address the interests of investors and private developers and ultimately generate revenue for the project by increasing the density of commercial land use.

The authorities sought to acquire land and property through compulsory purchase orders. Like several other high-profile renewal projects – for example, London's Docklands scheme and Sheffield's Lower Don Valley (Imrie & Thomas, 1997) – the use of compulsory purchase orders in the Samen district was also characterized by opposition, dissent, and general hostility from those affected. Similar to several examples in the United States (Teaford, 2000), lower-income groups in the Samen district were displaced through exercise of eminent domain, and then transport infrastructure, shopping malls, luxury apartment buildings, and hotels took their place. In addition, opposition by local residents and shopkeepers has significantly prolonged the process, so that the project has only been about 50% realized after twenty-five years.

The findings of this article are in line with assessment of gentrification and urban renewal Canada (Zuberi & Taylor, 2013) and Turkey (Güzey, 2013), where neo-liberal renewal policies and growing reliance on the private sector has led to a declining commitment to the public good and the needs of local residents, favouring instead the interests of private developers. The capitalist approach has not only marginalized the social goals and needs of local residents in residential neighbourhoods around the shrine, but has also diminished residents' quality of life due to undesirable physical, sociocultural, and economic consequences. The social tensions from ongoing dislocation and economic strain will continue to challenge the urban planners and policymakers of the Samen Renewal Project to maintain a balance between the needs of residents, tourists, and private developers.

6 Conclusion

The Samen Renewal Project has physically intervened in the central district of Mashhad by adopting a non-cooperative planning and capitalist approach to the residential neighbourhoods around the Imam Reza shrine. The results show that this intervention had undesirable physical, sociocultural, and economic impacts on these residential neighbourhoods. On average, 68% of the respondents in the Samen district were somewhat or completely dissatisfied with accessibility, 71.4% with spatial structure, 71.6% with the land-use pattern, 75.6% with social order, 54.8% with social cohesion, and 80.2% with their livelihood. These undesirable effects significantly reduce the quality of life in the study area. The residents scored their quality of life at 3.21 on a scale ranging from 1 to 10. Furthermore, the physical arrangement of the neighbourhoods has the strongest correlation with the subjective quality of life in the study area ($r = 0.755$).

In conclusion, the Samen Renewal Project has seriously deviated from its initial goals of renovation toward the goals of investors and private developers. This has happened due to a lack of sustainable project financing. As a result, the capitalist vision ignored the needs of locals, and instead favoured the interests of tourists, pilgrims, and especially private developers. It should be emphasized that what can be seen in the Samen district is not only a mistake in the formulation and implementation of the project, but could be related to the oil-based political economy of Iran, in which the influx of oil money leads to property price inflation and oil-led gentrification, and thus all parts of the government and urban management seek to leverage the rent gap and extract greater financial benefits from urban renewal projects. Thus, future studies need to better understand the dynamics of transformation and gentrification in urban renewal projects in the developing world, particularly in countries with an oil-based economy, and provide strategies and policies to maintain balance between residents' quality of life, the needs of tourists, and the interests of the investors. The results also suggest that urban planners and policymakers should envision a more diverse, inclusive, and socially sustainable future for urban renewal projects, and they highlight the need for new mechanisms to counter trends of growing social exclusion, displacement, and disenfranchisement during project implementation.

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The role of user preferences in urban acupuncture: Reimagining leftover spaces in Tehran, Iran

The article deals with the fragile connection that public spaces often have with their context. In this regard, the use of urban acupuncture in leftover space can be an opportunity to revitalize the urban fabric through small-scale interventions developed in accordance with community preferences. This study evaluates interventions in vacant plots based on both residents' preferences and experts' opinions. Using the example of leftover space in Tehran, this article explores public preferences and priorities regarding urban acupuncture from a social, design, and aesthetic perspective, applying a descriptive-analytical method. The opinions of six experts were examined and categorized in the first phase. In the second phase, the topics and subtopics extracted from the first phase were incorporated into visual questionnaires to evaluate preferences, from which 165 valid responses were obtained. Following the analysis of the questionnaires, twenty-two personal interviews were carried out. The results show which interventions are preferred over others.

Keywords: leftover spaces, urban acupuncture, urban intervention, user preferences, Iran

1 Introduction

Leftover spaces are part of infrastructure that can improve social situations and ecological conditions (Kremer et al., 2013), and they present an alternative to contemporary public spaces (Kamvasinou, 2011). In addition, a better appreciation of the public value of urban vacant land is vital for better understanding its value in terms of ecological and social benefits (Kim, 2016). In order to convert unsafe areas and aesthetically displeasing landscapes into opportunities for enhancing social and ecological systems (Folke, 2006; Wals & Wals, 2015), there is still a need for research on how to intervene in social and environmental conditions, management practices, land uses, and vacant land (Kremer et al., 2013).

The primary advantage of community involvement in regenerating leftover spaces is that the final design of areas reflects residents' concerns and ideas (Kim et al., 2020). Despite the importance of developing effective engagement strategies to increase public support for redeveloping leftover spaces, much remains to be investigated regarding public attitudes toward vacant land (Kim & Miller, 2017). From this perspective, applying the urban acupuncture approach to vacant land can present a convenient opportunity to reduce social challenges. Modern cities often have to be designed with macro-structural interventions (Kermani, 2016), leading to high vacancy rates in cities with social challenges (Zhang et al., 2019). Urbanism focuses on the micro experiences of urban spaces. Urban acupuncture provides a macro lens and produces small-scale but ecologically and socially catalytic development in the built environment (Casagrande, 2015). Moreover, future cities will face limited urban spaces and resources. In this regard, vacant land is an opportunity (Németh & Langhorst, 2014; Dubeaux & Cunningham Sabot, 2018) that can be transformed into useful space (Newman et al., 2018) to balance and stabilize neighbourhoods. In the twentieth century, leftover spaces were mostly seen as voids in the urban structure (Newman & Kim, 2017). Today, voids are constitutive elements of urban structure, and the magnitude of the impact of small-intervention designs as urban acupuncture is evaluated for a precise function (Kim, 2016). Because studies of abandoned spaces refer to users' key roles and preferences (Lynch, 1977; Trancik, 1986; Thompson, 2002), considering these preferences is useful in choosing the type of intervention. The gap between theory and practice has been noted for some time. Thus, this study addresses an area developed in Tehran. To improve the relationship between urban intervention characteristics and residents' priorities in Tehran, leftover spaces have been identified as an opportunity for urban revival.

The following paragraphs provide the theoretical background to examine what the significant intervention factors are in people's priorities and preferences regarding residual spaces. This study therefore investigates user preferences and priorities to enhance the relationship between urban intervention characteristics and community preference in public spaces. First, a literature review is provided, followed by a presentation of the materials and methods used and the main findings. The conclusion discusses the key findings concerning the central research question and recommendations for future research.

2 Literature review

Understanding the role of vacant land as a potentially valuable natural and community asset can improve environmental quality in the surrounding neighbourhood (Kim, 2016). Leftover spaces have been defined very differently: as cracks in the urban structure (Loukaitou-Sideris, 1996), undesirable urban areas (Trancik, 1986), no man's land (Mariani & Barron, 2014), vacant land and unoccupied places available for spontaneous utilization (Lokman, 2017), and urban voids (Newman & Kim, 2017), which are perceived as public spaces (Kamvasinou, 2011; Kim, 2016).

According to de Solà-Morales (2014), vacancy constitutes strange places with spatial disorder potential, leading to new spatial qualities (Mariani & Barron, 2014). Nevertheless, an entirely unregulated environment would encourage improper social behaviour (Unt et al., 2014). However, a growing body of literature suggests that the regeneration of leftover spaces may lead to logical and inevitable courses of activity (Drake & Lawson, 2014; Pearsall & Lucas, 2014) for various applications, such as recreational areas (Johnson et al., 2014). Having become detached from their previous functions, these spaces have become open and empty, waiting to be filled with new utilization (Franck & Stevens, 2007). De Solà-Morales (2014) suggested empty places as the evocative potential of the city. They are latent places with special qualities that should be understood and respected to create predictable designs (Armstrong, 2006).

There is an assumption in the twenty-first century that claims cities' minimal interventions are the most relevant design strategies of urban development (Enia & Martella, 2019). In this regard, the concept of urban acupuncture presents small-scale interventions (Colorni et al., 2017). Urban acupuncture is a new way of understanding the catalysis of urban regeneration (Casanova & Hernandez, 2015). It is a strategy for approaching urban renewal or development projects to address social, ecological, and environmental issues (Daugelaite et al., 2018) and create shared common spaces for the local population.

Table 1: Features of intervention.

Feature	References
Small scale micro-intervention	Marzi & Ancona, 2004; Acebillo, 2006; Cheng & Niu, 2010; Radstaak, 2012; Casagrande, 2015; Aouad, 2016; Campelo & Fontenele, 2017; Colorni et al., 2017; Grifoni et al., 2017; Bugaric, 2018; Cerro, 2018; Daugelaite et al., 2018; Rau & Hutchison, 2019
Accuracy	Shieh, 2006; Campelo & Fontenele, 2017
Catalytic for the entire surroundings	Shieh, 2006; Cheng & Niu, 2010; de Solà-Morales 2014; Campelo & Fontenele, 2017; Colorni et al., 2017; Grifoni et al., 2017
Quick implementation	Marzi & Ancona, 2004; Colorni et al., 2017; Enia & Martella, 2019
Low cost	Cheng & Niu, 2010; Rau & Hutchison, 2019
Bottom-up	Unt & Bell, 2014; Gadanho, 2015; Aouad, 2016; Campelo & Fontenele, 2017; Bugaric, 2018
Local	Tortosa et al., 2010; De Wit, 2014; Unt & Bell, 2014; Casagrande, 2015; Houghton et al., 2015; Aouad, 2016; Grifoni et al., 2017; Lastra & Pojani, 2018
Tactical	Unt & Bell, 2014; Casagrande, 2015; Gadanho, 2015; Houghton et al., 2015; Aouad, 2016; Lastra & Pojani, 2018

Community engagement is a crucial part of urban planning and design because previous studies emphasize that different urban design guidelines are required by local needs and aspirations (Polat & Tümer Yıldız, 2019). Because urban acupuncture interventions consider residents' involvement, this strategy can address social aspects. Moreover, the application of urban acupuncture follows the strategy of well-targeted and minimal interventions (Daugelaite et al., 2018) considering residents' needs and their perspectives to change public space and improve residents' quality of life (Bugaric, 2018). A wide range of urban acupuncture examples can be found, from introducing a new tradition to changing habits (Lerner, 2014), which landscape architects and urban planners can use as a model to improve residents' quality of life. The design perspective of urban spaces seeks to create an observable organizing structure and a sense of human scale (Behzadfar et al., 2014). In this regard, numerous authors argue that producing smart and small interventions in a given site can positively affect the surroundings (Lydon et al., 2015). Having claimed that they are "interventions" in the built environment, Frampton believed that new projects have a moral obligation to catalyse the renovation of their surroundings (Shieh, 2006). This approach has been recognized as important in urban managed environments, with an emphasis on natural dynamics and low implementation costs (Daugelaite et al., 2018). It is beneficial in the developing world, where governments and institutions have limited resources, and it increases the direct participation of those living in such areas.

Acupunctural interventions in urban spaces create more comprehensive changes than initially intended (Lydon et al., 2015; Lastra & Pojani, 2018). Employing the "right measure" architectural approach to interventions, appropriate and necessary adjustments can be made to a place (Enia & Martella, 2019). Based on the literature review, small-scale interventions in urban spaces, such as spaces between blocks, building frontages, pocket parks, and small pieces of vacant land, should have specific features, which are presented in Table 1.

The main benefit of community involvement in regenerating leftover spaces is that the final design areas reflect residents' preferences, and so it is useful to increase such involvement (Kim et al., 2020). Despite the significance of developing effective engagement strategies to increase public support for redeveloping leftover spaces, there is still a lack of research on public attitudes toward vacant land (Kim & Miller, 2017). Past perception research on landscapes and sites has generally focused on environmental characteristics that influence landscape perception (Lafortezza et al., 2008; Hofmann et al., 2012; Svobodova et al., 2012; Ruelle et al., 2013). Several recent studies have suggested the integration of visual preferences with ecological site rehabilitation (Hands & Brown, 2002; Tveit et al., 2006) and landscape planning and design (Ahern, 1999; Greenberg & Lewis, 2000; Ruelle et al., 2013), but the investigation remains mostly untested in leftover spaces. Visual preference evaluation is a significant factor in evaluating residents' acceptance and desire to participate in the urban modernization intervention process (Zhao et al., 2020). Although a photo display has certain limitations (Daniel, 2001; Palmer & Hoffman, 2001; Steinitz, 2001), it is a significant public visual preference evaluation method.

3 Materials and methods

3.1 Study area

Although public spaces in Tehran are not very user-friendly, they possess porous characteristics that make possible embodiments of place bearing spontaneous events and experiences (Khorshidifard, 2014). Despite the scenarios of responsible organizations to enhance environmental quality and develop green spaces, the city has not been able to restore its ecolog-

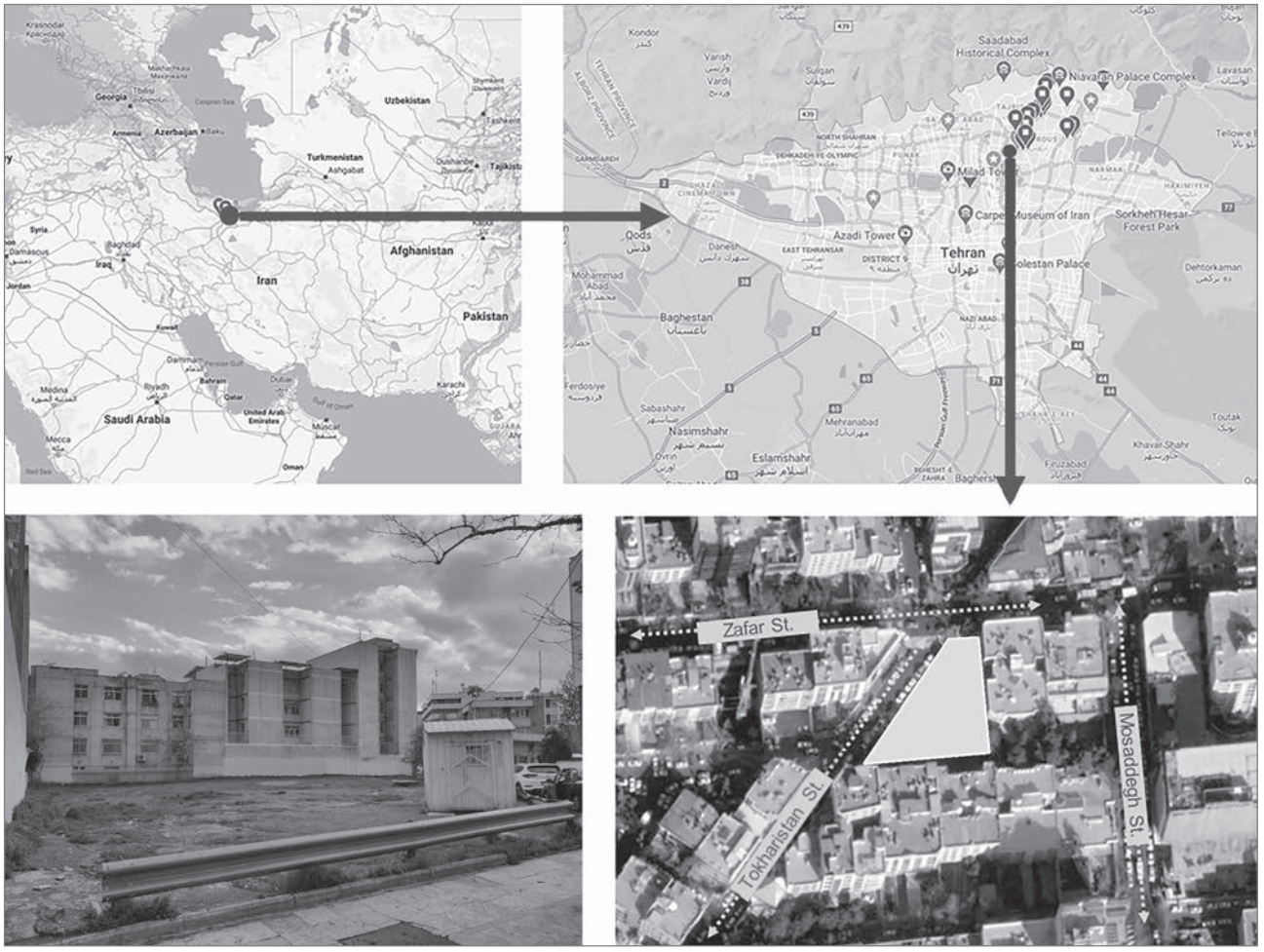

Figure 1: Site location (illustration: authors; source: Mapdata 2020).

ical network due to fragmentation resulting from unplanned growth (Bahrami et al., 2012). Because of the demolition of valuable natural structures in Tehran, numerous problems have *arisen*. Moreover, because Tehran is a metropolitan city that suffers from limited space, considering urban acupuncture in leftover areas can be useful. The diversity of leftover spaces in Tehran encouraged the researchers to choose this city as a study area. Due to the available facilities and to improve possible projects through public involvement, the main idea behind this study was to investigate urban acupuncture interventions on micro-leftover areas in Tehran. The criteria for selecting this case study included small open, empty, and underused spaces in residential neighbourhoods. Preliminary interviews were conducted with residents to select a site as a leftover space. The study area is located in Zafar, a neighbourhood in northern Tehran with a population of 70,677. As shown in Figure 1, this site is bounded to the north by Zafar Street and to the west by Tokharistan Street.

3.2 Research methodology

Research was carried out in several stages. First, photos of urban interventions were chosen from various urban spaces, which could be redesigned for the selected leftover space. Second, the selected scenes were classified into three categories: social, design, and aesthetic. Then each expert was asked individually to select three photographs that best represented each scene's categories and subcategories. In the end, an AHP-based visual questionnaire was conducted to determine residents' preferences.

The AHP decision-making method is used when there are several evaluation factors to complicate the decision-making process. This gives decision-makers a thorough understanding of issues in specific situations for a non-independent "hierarchical structure" (Nekhay & Arriaza, 2016; Saaty & De Paola, 2017). It is crucial to achieve a hierarchy among different interventions in micro-leftover areas and to distinguish the key factors that influence residents' preferences in public spaces. This strategy will help measure the effects of improvements at both the neighbourhood and urban scales (Mondini et al.,

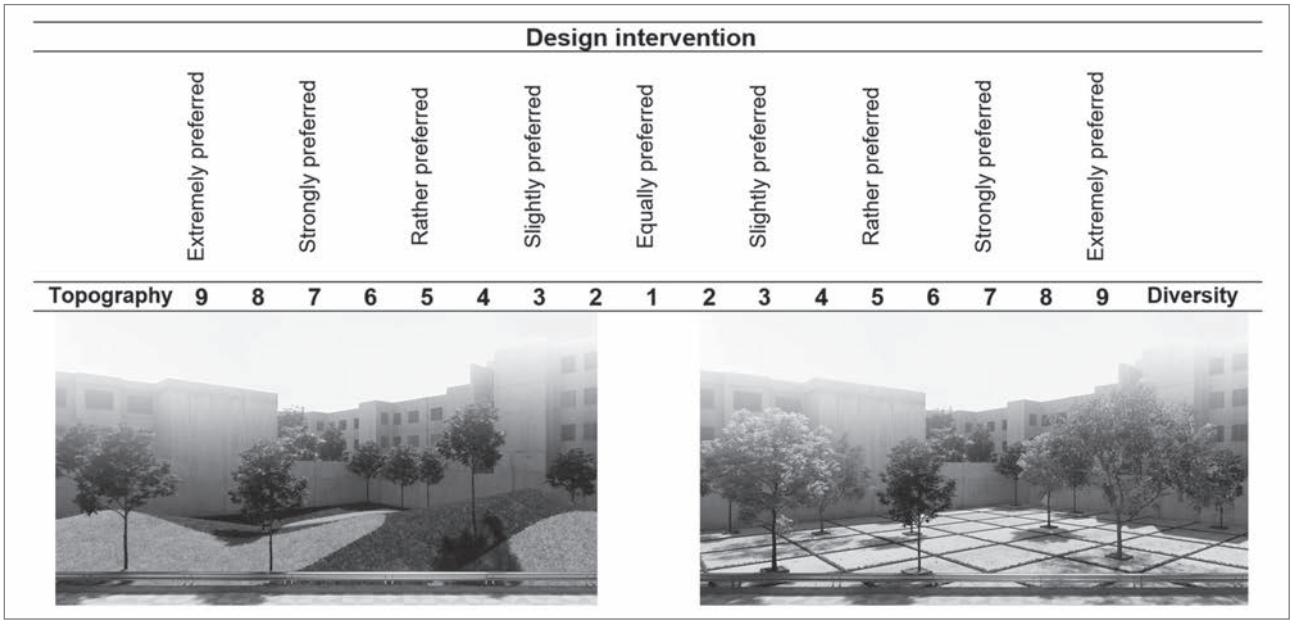

Figure 2: Example of pair comparison in AHP (adapted from Peng, 2019).

Table 2: Hierarchical structure of assessment factors.

Goal	Assessment category	Sub-category
Urban intervention	Social	Relaxing, restorative
		Playground
		Leisure in a café
		Gallery
		Table-top games
		Sitting
		Exercising
	Design	Topography
		Regular
		Diversity
		Density
		Irregular
	Aesthetic	Colour
		Pattern
		Sculpture
		Installation
		Mural

2018). After the online questionnaires were distributed among residents, an online interview was conducted with twenty-two residents.

3.3 Survey design

In the first phase, the researchers chose 114 photos of urban interventions in various urban spaces that could be redesigned for the selected leftover space. In order to aid the researchers in the decision-making process for the photo selection, six experts

Table 3: Demographic characteristics of interviewees.

		Sex		
		Female	Male	Total
Age	20–40	9	8	17
	41–60	2	1	3
	> 60	1	1	2
Total		12	10	22

with at least nine years of related experience (including three architects, one urban designer, and two landscape architects) were asked to select the scenes that best represented the acupuncture features based on the definitions in Table 1. In the first round, seventy-two scenes were selected. The frequency of the scenes most often selected by the experts was recorded. Features with a frequency of about four times were selected.

As shown in Table 2, these seventy-two selected scenes were classified into the three categories mentioned above. Then, the form of simulation employed to depict changes in the neighbourhood (Norouzian-Maleki et al., 2018) and each of the experts' selected interventions was modelled with the SketchUp software. The AHP method was used to select the appropriate interventions for the leftover space. The first section of the questionnaire comprised residents' demographics characteristics (Table 3) and current place of residence to ensure the respondents were local people. The second section included visual preference with an AHP-based assessment of thirty-seven questions, which the respondents were asked to rate on a seventeen-point rating scale.

Table 4: Respondents' demographic characteristics.

		Sex		Occupation				
		Female	Male	Employed	Housewife	Student	Retired	Unemployed
Age	20–40	78	51	12	10	29	1	77
	41–60	10	11	2	1	1	5	12
	> 60	6	9	1	2	0	7	5
Total		94	71	15	13	30	13	94

Table 5: Relation between education and participation in urban intervention.

		Education	Participation
Education	Correlation	1	–.164*
	Sig. (two-tailed)		.035
	n	165	165

Note: *Correlation is significant at the 0.05 level (two-tailed)

3.4 Data collection

To assess the relationship between urban intervention characteristics and community preferences, this study used an AHP-based visual survey. Before adopting the final full-scale study, additional pilot testing was performed to refine the attributes. The respondents were selected using a snowball technique. The online questionnaires were distributed among residents during April and May 2020. A message was randomly sent to two hundred residents, asking them to complete the online questionnaire. The analysis was performed based on the data collected from the survey using Excel, SPSS, and expert-chosen software. The results were rated and presented in the form of descriptive and inferential statistics. Afterward, qualitative data from an open-ended survey were used to complement the study.

A personal online interview was also conducted with twenty-two resident participants to determine residents' preferences for the three categories of urban interventions. The age and sex distribution of the respondents was representative. Therefore, the interviewees were selected following random routes (similar to stratified sampling). Using this process, twelve women and ten men were interviewed with the age distribution in Table 3. Each interview took approximately fifteen to twenty minutes, and the results are described separately in each section.

4 Results and discussion

One hundred sixty-five valid responses were selected out of 189 received. Then, ninety-four women and seventy-one men responded to the questionnaire with the following distribution of demographic characteristics as presented in Table 4.

4.1 Results of the first section of the survey

This research investigated the correlation between education, usage, and participation in urban interventions. Using a correlation rank ($p < 0.05$), it was demonstrated that the more educated a person, the more he or she intends to participate in urban interventions. Thus, Table 5 presents the correlation between participation in urban intervention and education.

Urban acupuncture is a bottom-up approach, and so this study also asked about respondents' willingness to participate in developing their neighbourhood. As shown in Table 6, a large number of respondents spend their free time in public spaces, one to two days per week, and they are also more likely to participate in the design intervention of the space: 86.6% of residents would like to be involved in creating their surrounding environment, and only 6.6% would not like to be involved in creating their living environment.

Based on Figure 3, the most common activity is walking (63.63%), followed by connecting with nature (52.12%), leisure in a café or restaurant (48.48%), and sitting and relaxing (44.84%). Walking and connecting with nature seem suitable because most participants were unemployed. Attending events (6.66%) and leisure with children (9.69%) are mostly restricted due to crowded environments.

4.2 Results of the second section of the survey

The weight per intervention type was derived and presented through AHP and pictures from *pairwise comparison per scene, respectively* (Tables 7–9). In this regard, assuming the criteria and *w*, which represents the scores on a nine-point scale, the next pairwise comparison matrix is defined as below:

$$\begin{pmatrix} w_1/w_1 & w_1/w_2 & \dots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & \dots & w_2/w_n \\ \dots & \dots & \dots & \dots \\ w_n/w_1 & w_n/w_2 & \dots & w_n/w_n \end{pmatrix} \times \begin{pmatrix} w_1 \\ w_2 \\ \dots \\ w_n \end{pmatrix} = \begin{pmatrix} w_1 \\ w_2 \\ \dots \\ nw_n \end{pmatrix}$$

The solution for a numerically analysed eigenvalue was applied to obtain the relative weight for each subcategory, thus acquiring the maximum eigenvalue (λ_{max}) of the comparison matrix and the corresponding eigenvector. Saaty (1990) introduced the use of a consistency test on pairwise evaluation as follows:

Table 6: Correlation between residents' willingness to participate in design interventions.

	Usage (days per week)				
Participation	> 4	3–4	1–2	0	Total
Difficult to say	1	3	5	2	11
Don't want to at all	1	3	4	3	11
Somewhat inclined	8	7	45	13	73
Very much want to	12	7	43	8	70
Total	22	20	97	26	165

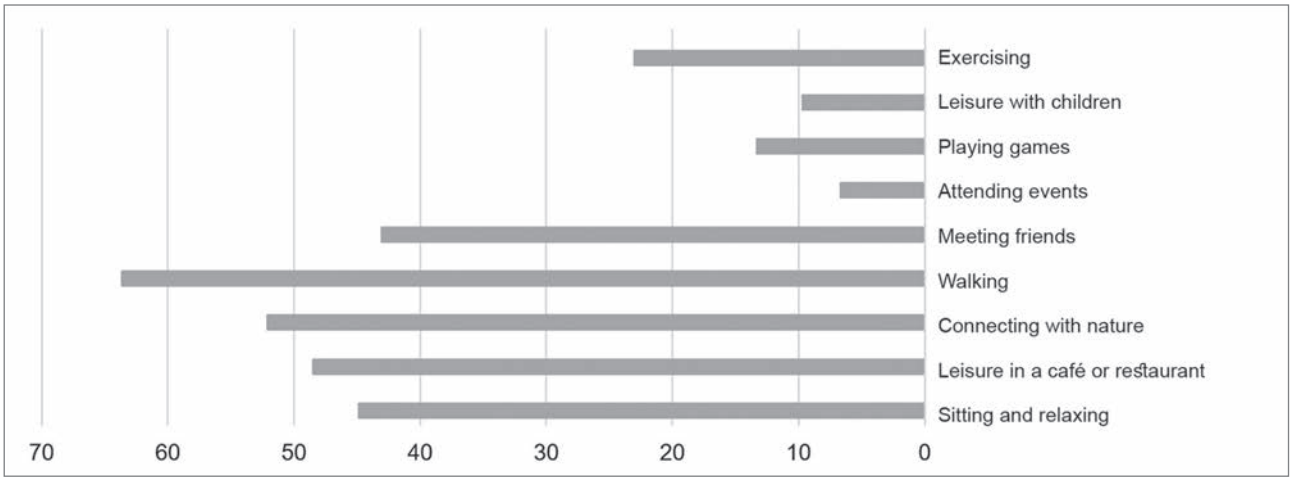

Figure 3: Activities chosen (multiple choice).

The consistency index (CI) is calculated as:

$$CI = \frac{\lambda_{max} - n}{n-1}$$

and the consistency ratio (CR) is calculated as:

$$CR = \frac{CI}{RI}$$

where λ_{max} is the maximum eigenvalue of the matrix, n is the matrix rank, and the random index (RI) is a randomly generated consistency index of a matrix, which relates to the matrix rank.

Saaty (2014) noticed the comparison as randomly generated when CR reached 1 and the consistency as higher when CR reached 0. Basically, CR < 0.1 was considered acceptable, whereas CR > 0.1 demonstrated a level of inconsistency and needed to be re-compared.

Based on the residents' opinions in the questionnaire, the factors' weights were calculated. The results obtained from the factors' weights are provided in Tables 7–9. The hierarchical analysis of the questionnaire was used to determine the critical items for assessing user preferences for the leftover space, using the weights.

4.3 Results of questionnaires and personal interviews

The weights of assessment factors given in Tables 7–9 indicate that relaxing had the highest weight for social intervention, topography had the highest weight for design intervention, and colour had the highest weight for aesthetic intervention. In weighing the social category (Figure 4), the two groups had similar priorities (table play and gallery). The choices were relaxing as the first priority, followed by leisure in café, playground, and exercising.

Interviews with the respondents indicated that the playground had the lowest priority for residents in the neighbourhood near the site, and that relaxing and restorative spaces were more vital to them. Comparison of the two options for sitting and relaxing intervention indicated that the urban furniture types were also important for the respondents. They paid attention to the form of the furniture and its flexibility. Although sitting and relaxing was not a priority of respondents in using open spaces (Figure 3), relaxing was a priority in the AHP comparison analysis. This could be due to the current inadequacy of urban furniture in Tehran. Respondents indicated that because having a restaurant in the neighbourhood is also interrelated to other factors, such as benches, these facilities can be the best way to become familiar with people in the neighbourhood and

Table 7: Relative weights of evaluation items in the social category.

	Social						
	Relaxing	Playground	Leisure in a café	Gallery	Table-top games	Sitting	Exercising
Relaxing	1	3.436	3.527	4.506	3.235	1.744	3.091
Playground	0.291	1	1.453	3.392	2.868	1.928	2.098
Leisure in a café	0.283	0.688	1	4.398	4.073	3.069	4.214
Gallery	0.221	0.294	0.227	1	1.126	1.601	2.254
Table-top games	0.309	0.348	0.246	0.888	1	1.826	2.091
Sitting	0.573	0.450	0.325	0.624	0.547	1	3.664
Exercising	0.323	0.476	0.237	0.443	0.478	0.272	1

Note: Maximum eigenvalue (λ_{max}) = 7.638; CI = 0.106; CR = 0.080.

Table 8: Relative importance of evaluation items in the design category.

	Design				
	Topography	Regular	Diversity	Density	Irregular
Topography	1	3.346	1.677	2.651	1.388
Regular	0.298	1	1.519	1.265	1.712
Diversity	0.596	0.658	1	2.893	2.128
Density	0.377	0.790	0.345	1	2.134
Irregular	0.720	0.584	0.469	0.468	1

Note: Maximum eigenvalue (λ_{max}) = 5.415; consistency index (CI) = 0.104; consistency ratio (CR) = 0.093.

Table 9: Relative importance of evaluation items in the aesthetic category.

	Aesthetic				
	Colour	Pattern	Sculpture	Installation	Mural
Colour	1	3.315	3.227	2.862	3.113
Pattern	0.301	1	2.604	2.097	3.228
Sculpture	0.309	0.383	1	1.322	3.245
Installation	0.349	0.476	0.756	1	4.420
Mural	0.321	0.309	0.308	0.226	1

Note: Maximum eigenvalue (λ_{max}) = 5.401; consistency index (CI) = 0.100; consistency ratio (CR) = 0.090.

attract new restaurants. Working out consistently received the highest rating in the questionnaires (63% of the residents use public open spaces to walk and 23% for sports activities), and active space for exercising was the least preferred intervention. As mentioned, respondents are more likely to walk, and they refuse to exercise in small spaces. Concerning the design category (Figure 5), topography was given the most weight, followed by diversity. In contrast, an irregular form for sites was chosen as the least important priority. Although variety in the level of space and type of vegetation was given priority in the design intervention subcategories, high vegetation density was the least preferred intervention. However, respondents did not favour designs below street level because they believed these would be turned into dumping grounds.

Unstructured interviews consistently indicated that high vegetation density creates a lack of visibility and social control, reducing safety and turning places into a crime location. A resident noted the existence of unsafe abandoned spaces with similar sizes in the neighbourhood. For this reason, she insisted on the importance of visibility and low vegetation density to ensure the safety of the space. According to four women, environmental factors, such as high vegetation density, also led to the disruption of norms. Therefore, the visibility of space was one of the most important variables for residents. Another woman said the following: "A few days ago, when I was passing through this area with my husband, we imagined this space as a small park with irregular geometry and a few benches". One of the respondents disagreed with all the options in the questionnaire. In his opinion, only design interventions with facilities,

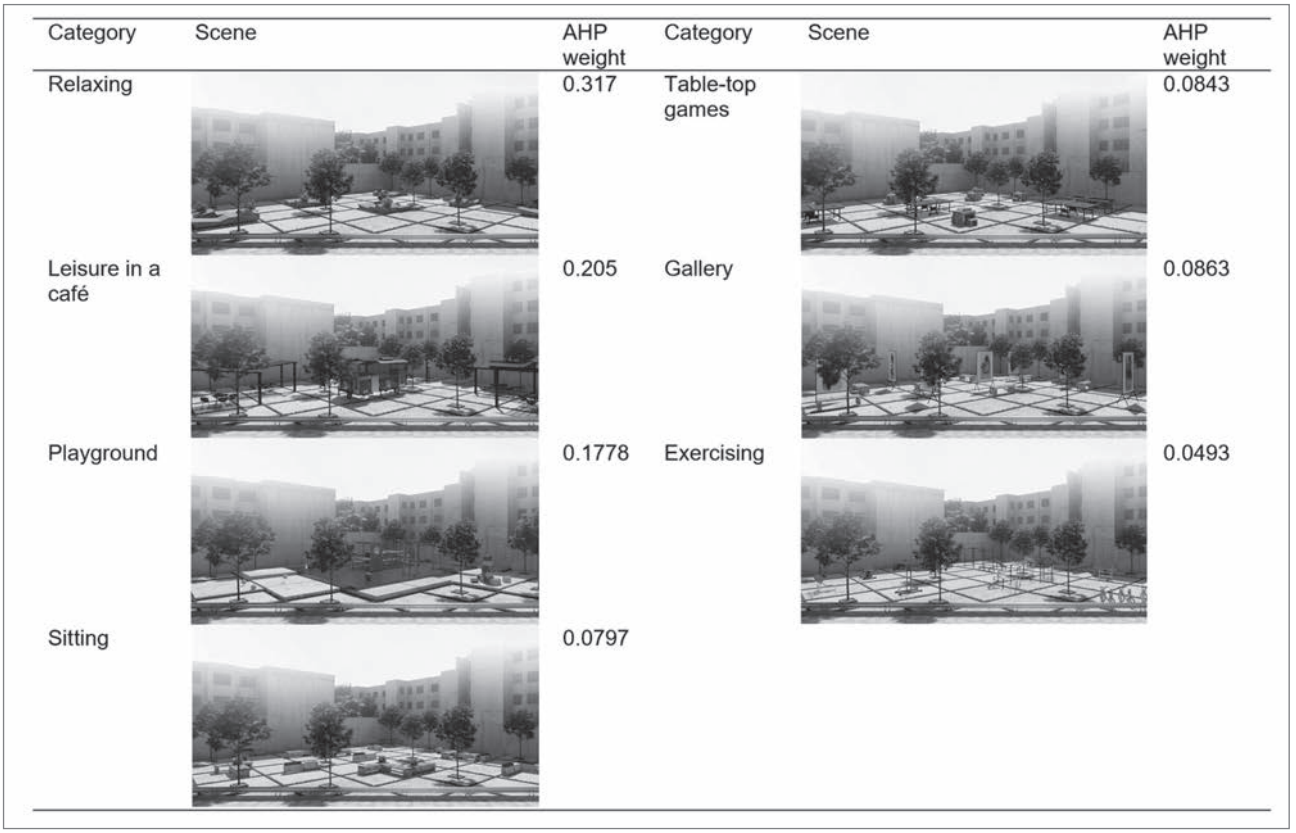

Figure 4: Relative importance of factors in the social category (illustration: authors).

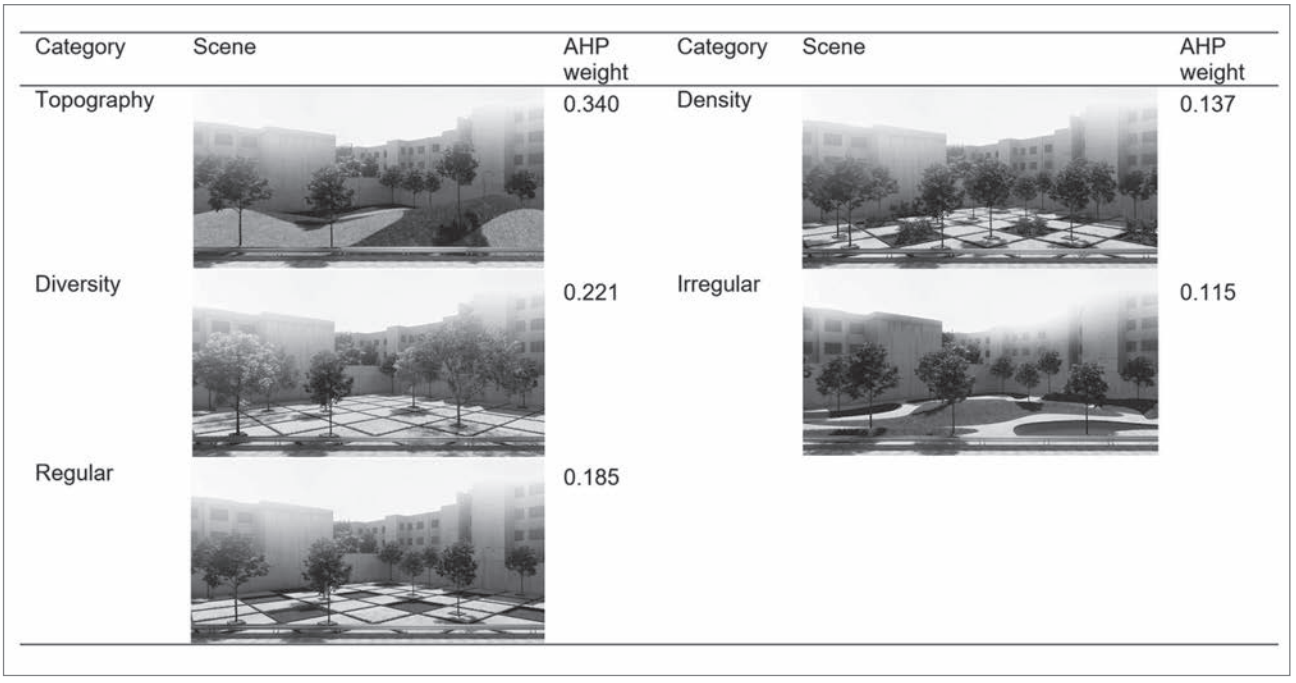

Figure 5: Relative importance of factors in the design category (illustration: authors).

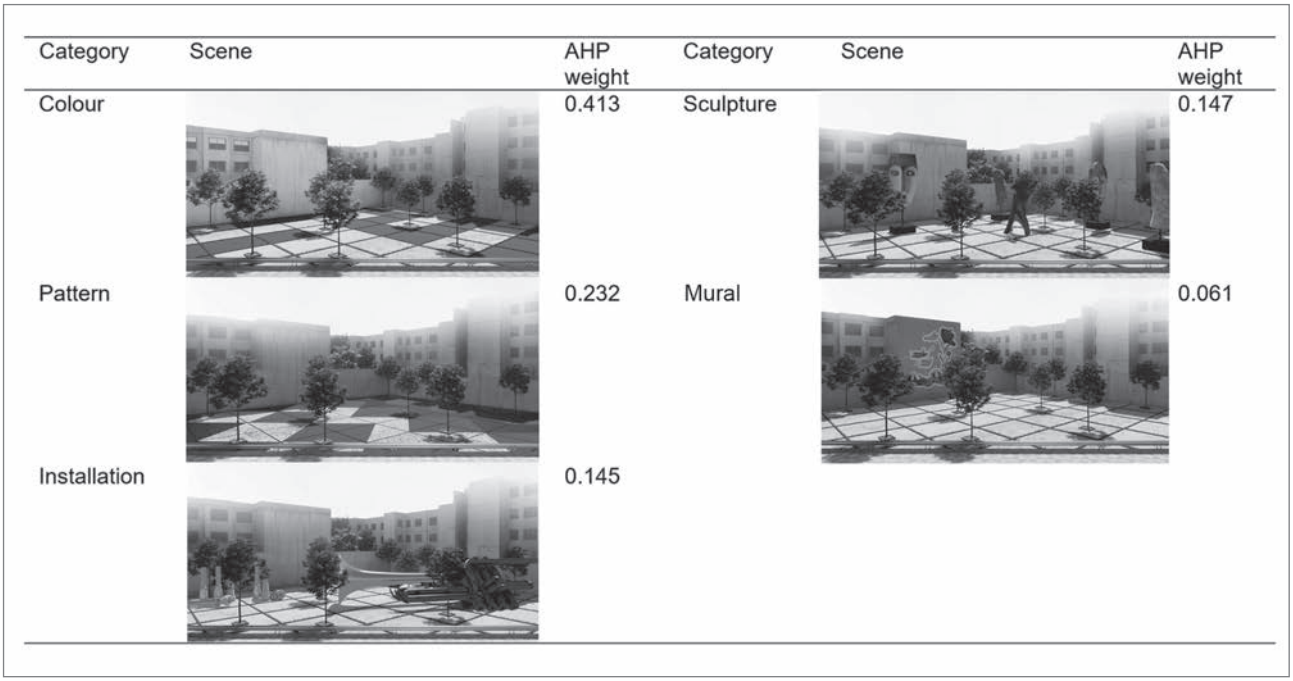

Figure 6: Relative importance of factors in the aesthetic category (illustration: authors).

such as a taxi station or a parking space, were suitable for this neighbourhood. Concerning the aesthetic category (Figure 6), colour had the most weight. In contrast, murals was chosen as the factor with the least priority. Although interviews showed that respondents liked the mural presented, they were not convinced that they would like one in their neighbourhood.

The difference in AHP weight in the two subcategories of colour and murals was raised in the respondents' interviews. According to a woman, the impact of colour on how we feel has been explored by researchers, but murals invoke an image associated with concepts and themes that may not suit her taste. A man mentioned: "Murals would be my first choice if I did not live in Tehran. Based on the low quality of the current murals in Tehran, this option will be my last priority. This reason also applies to not choosing a sculpture." Another man indicated that graffiti on a painted wall or floor can make it more attractive, but advertisements or writings on the wall cause a visual disturbance that is not easily removed.

Based on the questionnaire, because 81.21% of the respondents use miniparks in the evening and at night, darkness and lack of visibility may be another plausible reason for not selecting these types of interventions.

This study provides an excellent example of using AHP for evaluating user preferences. It employs AHP to discover residents' priorities in the design process and decision-making. Urban design, as an interdisciplinary process, needs to be incorporated with different dimensions. Therefore, decision-makers and designers are required to have comprehensive knowledge of the related aspects. Both residents' preferences and experts' opinions show that deciding what to do and how much to do can only be effective if it is based on both descriptive and prescriptive analysis. When dealing with urban spaces, using minimal operations, considering safety and vandalism, may help them remain active. This would be an intervention approach following urban acupuncture. Although respondents expressed interest in aesthetic interventions, based on the current interventions going on in the city, they refused to select those categories as their priority. They seemed to be more interested in installations rather than sculptures because installations are temporary and changeable. In this regard, it is key to consider whether the intervention is permanent or temporary. Although the selected space is small, it is possible to effectively choose the type of intervention considering land uses around each pocket park. Despite their small size, these spaces can have different uses and play a vital role in changing the urban environment.

5 Conclusion

The results suggest that design interventions are the most preferred. However, the type of vegetation and its density should be considered in a way that does not compromise safety. In addition to respondents' interests in using various types of vegetation, emphasis was placed on planting deciduous and non-deciduous trees together. This type of planting can be valuable in creating diversity in different seasons. Considering these details can lead to minimal spatial interventions with

high user preferences. In addition, respondents expressed interest in aesthetic interventions that are temporary and changeable. In this regard, it is key to consider whether an intervention is permanent or temporary. Moreover, the right type of urban furniture can improve the quality of space, which has a significant effect on residents' interaction with space. For new interventions to be effective as a catalyst of urban renovation, they must match the actual public preferences and priorities. This can be achieved by taking into account previous projects' experiences and selecting the best design interventions through categorizing and assessing their features.

In past decades, lost spaces were viewed negatively. However, findings have shown their potential to provide small-scale public space that can benefit residents and the entire city. Intervention on vacant land needs to be adapted to the characteristics of urban reality. In the future, it would make sense to carry out similar studies in other regions with different cultures and social contexts to see whether there is a significant difference between them. Furthermore, the views of experts and residents can be compared through further inquiries and surveys. Moreover, to evaluate residents' preferences regarding various interventions at the design phase, incorporating virtual reality into a questionnaire could prove useful.

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