

SOCIO-EKONOMSKA ANALIZA ZAŠTIĆENOG PRIRODNOG PODRUČJA: STUDIJA SLUČAJA BEGEČKA JAMA

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Rezime

Rad analizira socio-ekonomske aspekte Parka prirode Begečka jama sa ciljem identifikacije razvojnih potencijala i ključnih izazova. Istraživanje je zasnovano na studiji slučaja i kvalitativnim metodama (analiza dokumenata, fokus grupe, SWOT/PESTLE/TOWS).

Rezultati pokazuju da lokalitet ima značajan potencijal za razvoj održivog turizma i drugih aktivnosti zasnovanih na prirodnim resursima, ali se suočava sa problemima zagađenja, slabom institucionalnom koordinacijom i nedovoljno razvijenom infrastrukturom.

Zaključuje se da je za održivi razvoj neophodan integrisan pristup koji uključuje saradnju institucija i aktivno učešće lokalne zajednice.

Ključne reči: park prirode, socio-ekonomska analiza, ruralni razvoj

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Uvod

Da bi se razumele specifičnosti društva i (razvoja) ruralnih područja potrebno je da se analiziraju relevantni faktori koji mogu da utiču na brzinu, tok i posledice društvenih promena u ruralnim područjima. Kontekst i značaj ruralnog razvoja nalaže da imamo u vidu kompleksnost različitih nivoa analize i politika (nacionalnih, regionalnih, lokalnih), ali i specifičnosti heterogenih ruralnih područja, koje zaslužuju da budu reflektovane u teritorijalnim politikama ruralnog, odnosno, regionalnog ruralnog razvoja. Istorijski gledano, različite politike koje su bile usmerene prema ruralnim područjima imale su različite ciljeve i zasnivale su se na različitim osnovama: prirodnim resursima, razvoju i transferu tehnologija, ljudskim resursima, ekonomskom kapitalu, socijalnom kapitalu i društvenim mrežama i sl. Sa stanovišta evolucije ovih politika i u teorijskom smislu, ali i u smislu njihove primene u konceptualizaciji konkretnih mera ruralnog razvoja, evidentna je tranzicija od sektorskih politika, ka multisektorskim, odnosno, teritorijalnim i lokalnim politikama ruralnog razvoja (Hodge and Midmore 2008), odnosno, tranzicija sa mera (dominantno) agrarne ka merama ruralne politike. U smislu tematike ovog istraživanja, autori primenjuju pristup teritorijalnog i lokalnog kapitala koji predstavlja zahtev da se teritorijalne razvojne dimenzije (kapitali) adekvatnim teritorijalnim politikama transformišu (stave u službu) razvoja određenih područja. Prepoznavanje prisustva ili odsustva određenih tipova kapitala i njihovog značaja za razvoj, predstavlja osnovu za izgradnju održivih planova i programa razvoja određenih ruralnih područja od interesa (Bogdanov and Janković 2013).

Sa stanovišta ovakvih teorijskih pristupa, autori u ovom radu analiziraju jedno od zaštićenih prirodnih područja u Srbiji, naime, područje Begečke Jame, koje predstavlja jedno od značajnih zaštićenih prirodnih područja u neposrednoj blizini grada Novog Sada i deo je šireg ekološkog sistema dunavskog regiona. Zbog svojih prirodnih karakteristika, bogatog biodiverziteta i blizine urbanog centra, ovo područje ima značajan potencijal za razvoj održivih socio-ekonomskih aktivnosti koje su kompatibilne sa principima zaštite prirode. Autori ukazuju na to da se lokalitet suočava sa različitim izazovima koji uključuju pritiske na prirodne resurse, promene u vodnom režimu, zagađenje, kao i potrebu za boljom koordinacijom između institucija i lokalnih aktera. Sprovedena analiza usmerena je na široko shvaćene socio-ekonomske aspekte, moguće prilike i izazove u zaštiti ovog područja, kao i preporuke koje ukazuju na nužnost koordinacije i participacije većeg broja aktera (institucionalnih i vaninstitucionalnih) i rešavanje nekoliko ključnih razvojnih pitanja i potencijala poput problema zagađenja, potrebe za unapređenjem institucionalne koordinacije i ograničene turističke infrastrukture.

2 Metode istraživanja i izvori podataka

Sprovedena socio-ekonomska analiza lokaliteta Begečka Jama imala je za cilj identifikaciju ključnih aktera, njihovih interesa i percepcije razvojnih potencijala ovog područja. Analiza je zasnovana na teorijskim postulatima teritorijalnog pristupa u (ruralnom) razvoju, koji podrazumeva sagledavanje prirodnih, ekonomskih i društvenih resursa kroz njihovu međusobnu povezanost i mogućnost zajedničke valorizacije. Posebna pažnja posvećena je proceni potencijala za razvoj održivog turizma i drugih ekonomskih aktivnosti koje mogu doprineti lokalnom razvoju uz očuvanje prirodnih vrednosti ovog zaštićenog područja. Rezultati ove analize mogu da predstavljaju osnovu za izradu akcionog plana razvoja turističke destinacije Begečka jama, koji ima za cilj da poveže zaštitu prirode, socio-ekonomski razvoj lokalne zajednice i održivo korišćenje prirodnih resursa.

Istraživanje autora je sprovedeno u okviru aktivnosti na jednom od radnih paketa Horizon projekta DALIA⁷ koje je - kao projektni rezultat autorskog tima - sadržavalo izveštaj koji daje pregled karakteristika lokaliteta, analizu relevantnih stakeholdera, rezultate empirijskih istraživanja i identifikaciju ključnih razvojnih izazova i mogućnosti.

Istraživanja u društvenim i sociološkim disciplinama složena su, između ostalog, i zbog specifičnosti društvenog determinizma. U ruralnim područjima on je dodatno kompleksan zbog specifičnosti ruralnog društvenog prostora i karakteristika populacije, kolektivnih navika, običaja, načina ponašanja i sl. Ruralna područja sa svim svojim heterogenostima predstavljaju specifičan društveni prostor koji ima svoje kolektivne navike, zajedničke običaje, moral i životne ideale (vrednosti), načine ponašanja i sl. Pritom važno razumevati životne uslove i njihov uticaj na stvaranje društvenih navika lokalne populacije (Janković, Novakov i Petrović 2017: 47, 50).

Za potrebe prikupljanja, obrade i tumačenja rezultata ovog istraživanja primenjeno je više istraživačkih metoda. Kao opšti istraživački okvir korišćen je metod studije slučaja, uz participativni pristup u istraživanju stavova i percepcija lokalnih aktera putem fokus grupa. Za kreiranje teorijsko-hipotetičkog okvira korišćeni su teorijski pristupi koji se oslanjaju na koncepte ruralnog razvoja, participacije i teritorijalnog kapitala, uključujući socijalni, ekološki, kulturni i ekonomski kapital. Sa ovih teorijskih pozicija, pristupilo se kvalitativnoj analizi ključnih strateških dokumenata relevantnih institucija, koji su predstavljali osnov za kasnije sprovedene SWOT, PESTLE i TOWS analize zasnovane na prikupljenim empirijskim podacima. SWOT analiza je primenjena kao okvir za sistematizaciju unutrašnjih i spoljašnjih faktora

⁷. Project Danube Region Water Lighthouse; Action: 101094070 — DALIA — HORIZON-MISS-2021-OCEAN-02; Type of action: HORIZON Innovation Actions; Granting authority: European Climate, Infrastructure and Environment Executive Agency

kroz identifikovanje snaga, slabosti, mogućnosti i pretnji, što je u skladu sa njenom ulogom u strateškoj analizi i planiranju (Leigh, 2009). PESTLE analiza je korišćena za sagledavanje šireg makrookruženja, odnosno političkih, ekonomskih, društvenih, tehnoloških, pravnih i ekoloških faktora koji mogu uticati na razvoj i implementaciju predloženih strateških pravaca (Christodoulou & Cullinane, 2019). Na kraju, TOWS matrica je primenjena radi povezivanja prethodno identifikovanih unutrašnjih i spoljašnjih faktora i formulisanja konkretnih strateških opcija zasnovanih na kombinovanju snaga, slabosti, mogućnosti i pretnji (Gonan Božac, 2008).

Prva faza istraživanja obuhvatila je analizu dostupnih planskih i strateških dokumenata koji se odnose na upravljanje i zaštitu Parka prirode Begečka jama, uključujući *Plan upravljanja parkom prirode za period 2022–2031. godine*, kao i druge relevantne izvore koji se odnose na zaštitu prirode, upravljanje vodnim resursima i razvoj ruralnih područja. Ova analiza omogućila je identifikaciju ključnih prirodnih, institucionalnih i socio-ekonomskih karakteristika lokaliteta.

U drugoj fazi istraživanja sprovedena je identifikacija relevantnih aktera koji imaju direktan ili indirektan uticaj na upravljanje i razvoj ovog područja. Među identifikovanim akterima nalaze se institucije nadležne za zaštitu prirode i upravljanje vodnim resursima, predstavnici lokalne samouprave i mesne zajednice, ribolovačka i lovačka udruženja, lokalni poljoprivrednici, turistički i ugostiteljski sektor, "kamping-vikend" posetioci (korisnici lokaliteta), organizacije civilnog društva koje se bave zaštitom prirode, kao i predstavnici akademske i naučne zajednice.

Treća faza istraživanja obuhvatila je sprovođenje polustrukturisanih intervjua i fokus grupe sa predstavnicima lokalne zajednice i drugih relevantnih aktera (predstavnici lokalne zajednice, institucija nadležnih za zaštitu prirode i upravljanje vodnim resursima, turističkih organizacija, organizacija civilnog društva i akademske zajednice). Ovo istraživanje sprovedeno je u periodu od juna do novembra 2025. Dobijeni podaci analizirani su primenom kvalitativne analize, pri čemu su identifikovane glavne tematske kategorije koje se odnose na zaštitu prirode, institucionalne izazove i potencijal razvoja održivih socio-ekonomskih aktivnosti. Rezultati ove analize predstavljaju osnovu za identifikaciju ključnih razvojnih prioriteta i formulaciju preporuka za budući akcioni plan razvoja turističke destinacije Begečka jama.

3 Rezultati istraživanja

3.1. Opis lokaliteta Begečka jama i relevantni akteri

Na teritoriji AP Vojvodine nalazi se veliki broj zaštićenih prirodnih područja različitog stepena zaštite, uključujući nacionalni park Fruška gora, specijalni rezervati

prirode, parkovi prirode, predeli izuzetnih odlika i strogi prirodne rezervate. U okviru ove mreže zaštićenih područja, Begečka jama ima status parka prirode i predstavlja područje od lokalnog značaja sa visokim nivoom prirodne i ekološke vrednosti.

Begečka jama predstavlja značajno zaštićeno prirodno područje u AP Vojvodini i deo je šireg ekološkog sistema dunavskog regiona. Lokalitet se nalazi u blizini sela Begeč, na levoj obali Dunava, približno 24 kilometra zapadno od Novog Sada. Begečka jama predstavlja nekadašnji meandar Dunava koji je tokom vremena formirao karakterističan plavni ekosistem površine oko 489,5 hektara, sa velikim delom površine pod vodom i značajnim močvarnim i šumskim staništima (staništa močvarnih ptica, prirodnog mrestilišta dunavskih vrsta riba i važan ekološki koridor za migratorne vrste), bogatim biodiverzitetom i velikim značajem za očuvanje prirodnih staništa (registrovano je više od 120 vrsta viših biljaka, oko 150 vrsta ptica, 14 vrsta riba, 11 vrsta vodozemaca i šest vrsta gmizavaca, kao i značajan broj insekata od nacionalnog i međunarodnog značaja) (JKP "Vode Vojvodine" 2022).⁸

Pored očuvanja biodiverziteta, Begečka jama ima i značajnu ekološku funkciju u regionalnom ekosistemu. Vlažna staništa ovog područja doprinose regulaciji vodnog režima, filtriranju vode i očuvanju prirodnih ekosistemskih procesa. Istovremeno, ovo područje predstavlja važan prostor za naučno-istraživački rad, edukativne aktivnosti, rekreaciju i razvoj održivog turizma.

Upravljanje ovim zaštićenim područjem uključuje više institucija i aktera na različitim nivoima. Pored Javnog vodoprivrednog preduzeća „Vode Vojvodine“ kao formalnog upravljača, važnu ulogu imaju Pokrajinski zavod za zaštitu prirode, Pokrajinski sekretarijat za urbanizam i zaštitu životne sredine, kao i lokalna samouprava Grada Novog Sada i Mesna zajednica Begeč. Pored institucionalnih aktera, u proces upravljanja i korišćenja ovog prostora uključene su i različite gore pomenute društvene institucije, društvene grupe i udruženja.

Sa stanovišta sprovedene analize, uključivanje različitih aktera u procese upravljanja i razvoja ovog područja predstavlja ključni preduslov za dugoročnu socio-ekonomsku i ekološku održivost Begečke jame. Savremeni pristupi ruralnom razvoju naglašavaju značaj participacije lokalne zajednice, jačanja socijalnog kapitala i razvoja partnerstava između lokalnih institucija, organizacija

⁸. Proces zaštite ovog lokaliteta započeo je još sedamdesetih godina prošlog veka inicijativama za zaštitu prirodnih vrednosti ovog područja. Tokom devedesetih godina uvedena je preliminarna zaštita, dok je 1999. godine Skupština grada Novog Sada donela odluku o proglašenju Begečke jame parkom prirode. Najnovija odluka o zaštiti doneta je 2022. godine, kada je usvojen i aktuelni Plan upravljanja parkom prirode „Begečka jama“ za period 2022–2031. godine. Upravljač zaštićenog područja je Javno vodoprivredno preduzeće „Vode Vojvodine“ (JKP Vode Vojvodine 2022).

(uključujući i naučnu zajednicu, kao na primeru ovog projekta), kako bi se obezbedilo održivo korišćenje prirodnih resursa i očuvanje prirodnih vrednosti ovog lokaliteta. Prema brojnim autorima (Lee et al. 2005; Ploeg 2003; Lowe 2003; Lowe et al. 1995; Janković 2020) u cilju izbegavanja diktiranog i zavisnog razvoja, razvoj ruralnog mora da počiva na unutrašnjim snagama i resursima (postojećim ili konstruisanim), koje u kombinaciji sa eksternim resursima i snagama treba da predstavljaju osnovu održivog socio – ekonomskog rasta i razvoja. Za ostvarenje ovih ciljeva nije moguća niti dovoljna jedna politika, već čitav set različitih sektorskih, globalnih, regionalnih, lokalnih politika, koje su međusobno povezane i uslovljene, pri čemu neke od njih nekada mogu biti čak i delimično suprotstavljene. Konceptija ruralnog razvoja koju naglašavamo ima u vidu ovu heterogenost aktera, interesa, pravaca razvoja, politika, institucija, potencijala i nedostataka, koji oblikuju složenost i održivost ruralnog razvoja.

3.2. Analiza relevantnih aktera

Upravljanje i razvoj zaštićenih prirodnih područja podrazumeva uključivanje velikog broja aktera čiji se interesi, nadležnosti i uticaj mogu značajno razlikovati. U slučaju Parka prirode Begečka jama, procesi zaštite prirode, upravljanja resursima i razvoja socio-ekonomskih aktivnosti odvijaju se u okviru kompleksne mreže institucija, organizacija i lokalnih društvenih grupa. Tri ključna međuuticaja prepliću se između državnih institucija, lokalne zajednice i ekoloških (NVO sektora; udruženja i sl.) i naučno-istraživačkih institucija koje imaju svoje aktivnosti u zaštićenom području.

U okviru istraživanja lokaliteta identifikovani su ključni relevantni akteri koji imaju direktan ili indirektan uticaj na upravljanje i korišćenje lokaliteta Begečka jama.

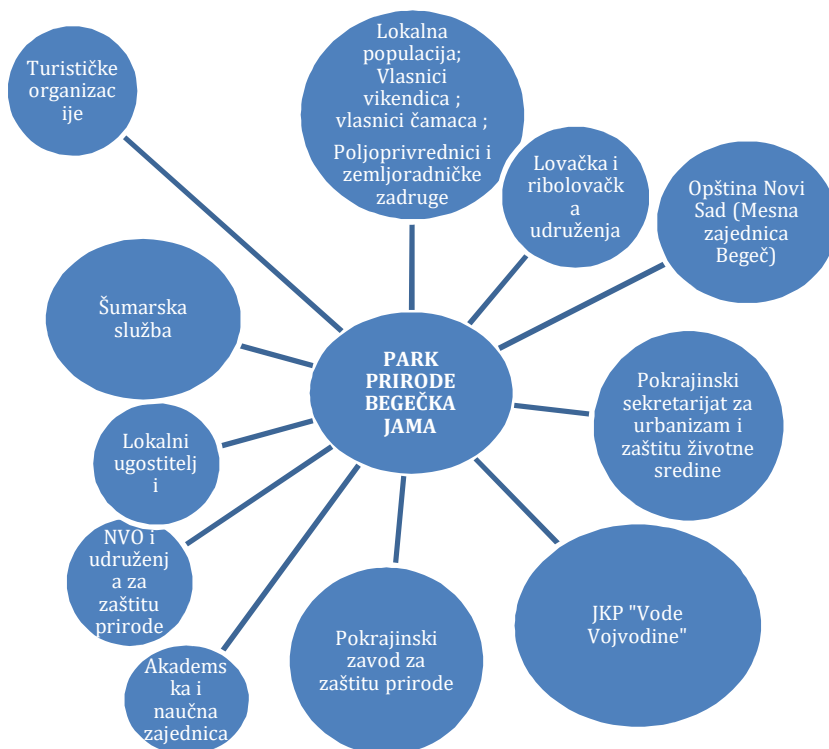
Venn dijagram (Slika 1) prikazuje međusobne odnose, moguće uticaje i značaj različitih aktera koji su uključeni u upravljanje, korišćenje i zaštitu Parka prirode Begečka jama⁹. Centralnu ulogu u institucionalnom okviru ima JKP „Vode Vojvodine“, koje je formalni upravljač zaštićenog područja i odgovorno je za sprovođenje plana upravljanja i održavanje vodnog režima. Važnu institucionalnu ulogu imaju i Pokrajinski zavod za zaštitu prirode i Pokrajinski sekretarijat za urbanizam i zaštitu životne sredine, koji su nadležni za zaštitu prirodnih vrednosti i sprovođenje relevantnih politika zaštite prirode.

Pored institucionalnih aktera, značajnu ulogu imaju i predstavnici lokalne zajednice, uključujući stanovnike sela Begeč, vlasnike čamaca na lokalitetu, lokalne poljoprivrednike i poljoprivredne zadruge, koji su direktno povezani sa

⁹ Venn dijagram po pravilu pokazuje procenjeni značaj aktera za određeno pitanje, predstavljen veličinom kruga na slici i procenjenoj realnoj mogućnosti uticaja, predstavljenu udaljenošću na slici od centralnog predmeta istraživanja.

svakodnevnim korišćenjem ovog prostora, uključujući i vlasnike vikendica, kamping kućica i sl, koji su veoma aktivni korisnici ovog lokaliteta i utiču na mnoga pitanja održivosti, posebno ekološke (problem septičkih jama i ispuštanja otpadnih voda). U mrežu relevantnih aktera uključena su i ribolovačka i lovačka udruženja, koja utiču na riblji i lovni fondom, kao i turističke organizacije i lokalni ugostitelji koji prepoznaju potencijal ovog područja za razvoj rekreativnih i turističkih aktivnosti. Dodatno, važnu ulogu imaju organizacije civilnog društva koje se bave zaštitom prirode, kao i akademska i naučna zajednica, koja kroz istraživanja i edukativne aktivnosti doprinosi boljem razumevanju prirodnih procesa i održivom upravljanju ovim područjem.

Analiza mreže stakeholdera jasno ukazuje na potrebu za jačanjem saradnje i komunikacije između različitih aktera, posebno između institucija nadležnih za upravljanje zaštićenim područjem i lokalne zajednice i lokalnih korisnika. Takva saradnja predstavlja nužan preduslov za uspešnu implementaciju inicijativa usmerenih ka održivom razvoju, očuvanju prirodnih resursa i razvoju turističkih aktivnosti kompatibilnih sa režimom zaštite prirode.



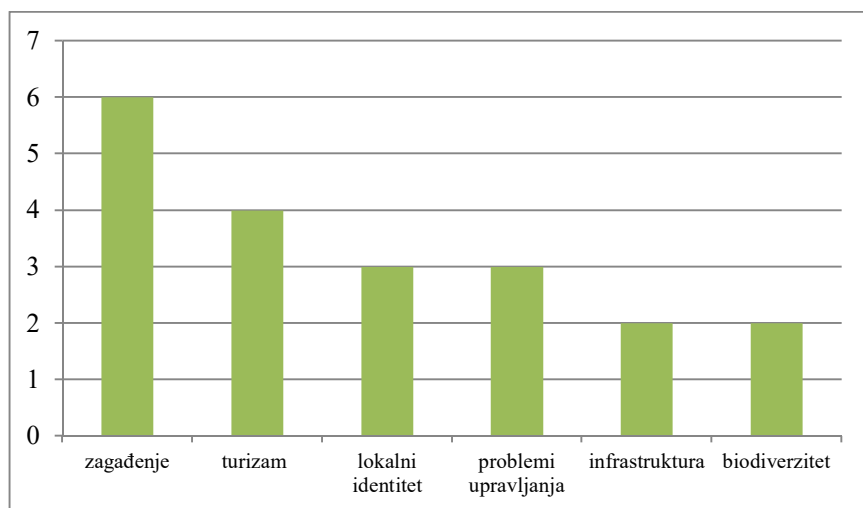
Slika 1: Šema značaja i uticaja relevantnih aktera na lokalnom nivou u formi Venn dijagrama

3.3. Rezultati fokus grupe i identifikacija ključnih razvojnih pitanja

U cilju boljeg razumevanja percepcije lokalnih aktera o stanju, izazovima i razvojnim potencijalima Parka prirode Begečka jama, organizovana je fokus grupa sa predstavnicima relevantnih stakeholdera iz lokalne zajednice i institucija uključenih u upravljanje ovim područjem. Fokus grupa je omogućila identifikaciju ključnih tema koje su učesnici prepoznali kao najvažnije za budući razvoj i upravljanje lokalitetom.

Tokom diskusije učesnici su istakli nekoliko ključnih pitanja koja se odnose na ekološke izazove, institucionalne aspekte upravljanja i razvojne mogućnosti ovog područja. Posebno je naglašena važnost očuvanja prirodnih resursa, unapređenja saradnje između institucija i lokalne zajednice, kao i razvoja održivih ekonomskih aktivnosti koje su kompatibilne sa režimom zaštite prirode.

Rezultati fokus grupe analizirani su metodom kvalitativne analize sadržaja, pri čemu su identifikovane tematske kategorije koje se najčešće pojavljuju u diskusiji učesnika. Učestalost diskusija pojedinih tema prikazana je na grafikonu 1.



Grafikon 1. Učestalost i značaj ključnih tema u fokus grupi

Rezultati analize pokazuju da je pitanje zagađenja identifikovano kao najčešće pominjani problem, što ukazuje na zabrinutost učesnika zbog potencijalnog lokalnog i šireg uticaja zagađenja na kvalitet vode i očuvanje parka prirode. Ovaj problem se manifestuje na više nivoa, od pitanja kvaliteta vode, do smeća i divljih deponija koje se smatraju nedopustivim u parku prirode, naročito sa stanovišta ekološke održivosti, ali i iskorišćenja ekonomskog potencijala. Jedan de kompleksnosti problema tiče se i dugoročnog zakupa lokalnih vikendica i kamp kućica i nedovoljno dobra saradnja sa predstavnicima udruženja tzv. "vikendaša (vikend korisnika) lokaliteta. U tom smislu, učesnici focus grupe istakli su potrebu da

se redovno vrši monitoring i čišćenje obale, redovno izmuljavanje lokaliteta, redovno odnošenje smeća i naplata korisnicima lokaliteta, strožije reguliše korišćenje lokaliteta od strane vikendaša, odnosno, pojača monitoring potencijalnih zagađivača, infrastrukturan obezbedi lokalitet (struja, voda, osvetljenje nasipa) u cilju održivog korišćenja, smanjenja lovokrađa, unapređenja turističkih usluga i sl. Osim toga, potrebno je dosledno sprovesti zakon u vezi sa primenom pesticida i herbicida, kao i odlaganjem takve ambalaže jer lokalni poljoprivrednici imaju značajan uticaj na lokalitet, a time i biodiverzitet parka prirode koji predstavlja jedan od nosilaca prioriteta u očuvanju lokaliteta.

Druga po učestalosti tema odnosi se upravo na (ekonomski) potencijal razvoja turizma, koji učesnici prepoznaju kao jednu od važnih razvojnih mogućnosti za lokalnu zajednicu koja zahteva regulisano i održivo korišćenje prostora, razvoj turističke infrastrukture (plaža, dečije igralište, kupalište, manja marina, eventualno zabrana motornih čamaca i sl.), značajnije naplate dozvola za pecanje i korišćenje čamaca i sl. Od velike je važnosti preveniranje potencijalne nelegalne gradnje i korišćenja prostora kako bi se očuvao integritet parka prirode i na odgovoran način legalno (pre svega adekvatno lokalitetu) gradila infrastruktura i objekti. Preovlađujući je stav focus grupe da postoji loša koordinacija upravljača i korisnika na terenu, usled prevelike centralizacije odlučivanja i određivanja ciljeva i sredstava za investicije.

U diskusiji su istaknuta pitanja značaja Begečke jame za lokalni identitet i institucionalni izazovi u upravljanju zaštićenim područjem, uključujući potrebu za boljom koordinacijom između različitih institucija i korisnika prostora, naročito na nivou povratih kanala komunikacije, kako bi se saslušale lokalne inicijative i obezbedilo održivo korišćenje lokaliteta uz očuvanje biodiverziteta.

“Značaj se ogleda u pre svega u kultu obitavanja na Begečkoj jami koja predstavlja izvanredan prirodni habitat u kojem se stanovništvo lokalne zajednice oseća prijatno i koje od malih nogu smatra za jedno od svojih idealnih mesta za beg od svakodnevnice.

Značaj je više od ekonomskog, Begečka jama u smislu društvene koristi lokalnoj, ali i široj zajednici je upravo ta da lokalno stanovništvo imaju svoju plažu u letnjem period (mnogi mladi iz sela su na jami naučili da plivaju), ima mesto za uživanje u prirodi sa porodicom, bavljenje sportom kao jednom od izuzetnih aktivnosti gde se pored sportskog ribolova mogu uvesti i druge sportske aktivnosti klubskog karatkeru npr. veslački sportovi, i sl.

Na drugoj strani ugostiteljska aktivnost u svim svojim oblicima, takodje je jedna od bitnih društveno korisnih, ali i ekonomski korisnih aspekata kad se uzme u obzir blizina parka prirode. Park prirode i sam po sebi predstavlja idealno mesto za biološka i druga istraživanja prisutne flore i faune, koja za sobom povlače važan pravac za dalji razvoj i očuvanje” (ispitanik x).

Strateški dokument o upravljanju parkom prirode (JKP "Vode Vojvodine" 2022) identifikuje i mnogo drugih pretnji za lokalitet poput širenja invazivnih vrsta, ali antropogenih poput pošumljavanja monokulturama (plantaže topola) čime se narušava prirodan odnos šumske i nešumske vegetacije plavnog područja i menjaju se predeone karakteristike, utiče se na livade i vlažne livade koje nestaju, bare, koje sve više obrastaju i prirodne šume. Takođe se utiče na predeone odlike, tipove staništa, faunu ptica, a posebno gnezdarica, kojima se sećom uništavaju gnezda (JKP "Vode Vojvodine" 2022: 14, 15). Slično rezultatima sprovedenog istraživanja, identifikuju se sledeći problemi: kvalitet vode ugrožen je dotokom nekvalitetne vode iz Tataraničkog kanala i otpadnim vodama iz obližnjih naselja; antropogeni pritisci uključuju širenje invazivnih vrsta, pošumljavanje monokulturama (topole), bespravnu gradnju, zagađenje iz poljoprivrede i naselja, kao i krivolov; hidrološke promene usled sedimentacije, začepljenja kanala i nefunkcionalnosti kanala Begeja remete prirodni režim voda; dodatne pretnje su nelegalno odlaganje otpada, turistički pritisci i fragmentacija staništa; mere upravljanja zabranjuju aktivnosti štetne po staništa, unošenje invazivnih vrsta, nekontrolisan ribolov, gradnju van dozvoljenih zona i odlaganje otpada. U tom smislu se za dugoročne ciljeve i održivi razvoj lokaliteta predlaže:

- očuvanje staništa kao ekoloških koridora, unapređenje vodnog režima u skladu sa prirodnim vrednostima i kontrolisano korišćenje resursa.
- Povećanje autohtone šumske vegetacije, kontrola zagađenja, uključivanje u mreže biodiverziteta, razvoj održivog turizma i očuvanje prirodnog i kulturnog nasleđa.
- Poseban akcenat na adaptaciji na klimatske promene i obezbeđivanju finansiranja.
- Kontinuirani monitoring i primena adaptivnog upravljanja

Kroz mere implementacije i odgovornosti aktivnosti obuhvataju procenu i obnovu staništa, regulisanje vodnog režima, kontrolu invazivnih vrsta i praćenje zaštićenih vrsta; promociju, edukaciju i razvoj eko-turizma uz učešće lokalne zajednice; saradnju naučnih institucija, lokalnih vlasti, ekoloških i ribolovačkih organizacija i NVO i razvoj infrastrukture: posetioci centri, signalizacija, kamping zone i pristani. Strateški plan upravljanja predviđa finansiranje iz više izvora: budžeti, naknade korisnika, turizam i međunarodni fondovi (JKP "Vode Vojvodine" 2022).

Ipak, jasno je da strateški dokumenti često sadrže idealizovanu i formalno ispoljenu viziju i volju za unapređenjem stanja, dok sa druge strane, realni izazovi lokalnog razvoja i očuvanja ovakvog lokaliteta (parka prirode) predstavljaju mnogo kompleksniju socio-ekonomsku dinamiku i interakciju zvaničnih legislativa i procesa, sa lokalnom zajednicom, potencijalnim zagađivačima i prirodnim uticajima. Isto je prepoznato u analizi fokus grupe, jer je jasno ukazano na potrebu za integrisanim pristupom upravljanju Begečkom jamom, koji bi istovremeno

obuhvatio zaštitu prirodnih vrednosti, razvoj održivog turizma i aktivnije uključivanje lokalne zajednice u procese donošenja odluka.

3.3.1. SWOT, PESTLE I TOWS analiza razvojnih potencijala lokaliteta Begečka jama

U cilju identifikacije ključnih razvojnih potencijala i ograničenja lokaliteta Begečka jama sprovedena je SWOT analiza. SWOT analiza predstavlja jedan od najčešće korišćenih analitičkih alata u strateškom planiranju i omogućava sistematizaciju unutrašnjih i spoljašnjih faktora koji mogu uticati na razvoj određenog područja. Ova metoda podrazumeva identifikaciju snaga (Strengths) i slabosti (Weaknesses) kao unutrašnjih karakteristika posmatranog sistema, kao i prilika (Opportunities) i pretnji (Threats) koje proizlaze iz spoljnog okruženja.

U kontekstu predmeta istraživanja, SWOT analiza je zasnovana na rezultatima fokus grupe, analizi relevantne dokumentacije i uvidu u postojeće prirodne, institucionalne i socio-ekonomske karakteristike lokaliteta. Cilj ove analize bio je da se identifikuju ključni faktori koji mogu uticati na budući razvoj održivih ekonomskih aktivnosti, posebno u oblasti turizma i rekreacije, uz istovremeno očuvanje prirodnih vrednosti ovog zaštićenog područja.

Rezultati SWOT analize ukazuju na značajan potencijal Begečke jame za razvoj održivog turizma zasnovanog na prirodnim i edukativnim vrednostima lokaliteta. Međutim, istovremeno su identifikovani i određeni izazovi koji se odnose na infrastrukturna ograničenja, probleme zagađenja i potrebu za boljom koordinacijom između institucija i lokalnih aktera. U tom kontekstu, budući razvoj ovog područja treba da bude usmeren ka održivoj valorizaciji postojećih prirodnih resursa uz istovremeno jačanje institucionalne saradnje i unapređenje sistema upravljanja.

Tabela 1. Rezultati SWOT analize lokaliteta Begečka jama

Strengths (Snage)	Weaknesses (Slabosti)
bogat biodiverzitet i očuvani prirodni ekosistemi	nedovoljno razvijena turistička infrastruktura
blizina Novog Sada i dobra saobraćajna dostupnost	problemi zagađenja i degradacije staništa
status zaštićenog prirodnog područja	nedovoljna koordinacija između institucija
potencijal za razvoj eko-turizma i edukativnih aktivnosti	ograničeni finansijski resursi za upravljanje
Opportunities (Prilike)	Threats (Pretnje)
razvoj održivog turizma	degradacija prirodnih staništa
dostupnost EU fondova i projekata	invazivne vrste
razvoj edukativnog i naučnog turizma	nekontrolisana urbanizacija
saradnja sa akademskim institucijama	klimatske promene

Pored SWOT analize, za sagledavanje šireg konteksta razvoja Begečke jame primenjena je i PESTLE analiza. Ova metoda omogućava sistematsko razmatranje spoljašnjih faktora koji mogu uticati na razvoj određenog područja, uključujući političke, ekonomske, društvene, tehnološke, pravne i ekološke aspekte. PESTLE analiza se često koristi u strateškom planiranju kako bi se identifikovali ključni trendovi i faktori iz spoljnog okruženja koji mogu uticati na realizaciju razvojnih inicijativa. U slučaju Begečke jame, PESTLE analiza omogućila je identifikaciju najvažnijih faktora koji oblikuju institucionalni, društveni i ekološki kontekst razvoja ovog zaštićenog područja.

Rezultati PESTLE analize ukazuju da razvoj Begečke jame u velikoj meri zavisi od institucionalnog okvira zaštite prirode, dostupnosti finansijskih resursa za upravljanje i razvoj infrastrukture, kao i od nivoa saradnje između različitih društvenih aktera. Istovremeno, značajnu ulogu imaju i ekološki faktori, posebno očuvanje biodiverziteta i stabilnost vodnog režima, koji predstavljaju osnovu za dugoročnu održivost ovog područja.

Tabela 2. Rezultati PESTLE analize lokaliteta Begečka jama

Faktor	Ključni elementi
Politički	politike zaštite prirode, institucionalni i efikasan okvir upravljanja zaštićenim područjima
Ekonomski	razvoj turizma, mogućnosti finansiranja kroz EU fondove
Socijalni	stavovi i svest lokalne zajednice, značajan nivo socijalnog kapitala, postojanje lokalnih inicijativa, postojanje regionalnih i međunarodnih inicijativa za očuvanje dunavskog sliva
Tehnološki	monitoring biodiverziteta, digitalna promocija turističkih sadržaja
Legalni	zakonodavni okvir zaštite prirode i upravljanja vodnim resursima
Ekološki	očuvanje biodiverziteta, sprečavanje zagađivanja, promene u vodnom režimu, klimatske promene

Kako bi se identifikovali mogući pravci razvoja i konkretne strateške inicijative za budući razvoj parka prirode Begečka jama, sprovedena je TOWS analiza. TOWS analiza predstavlja prošireni oblik SWOT analize i omogućava povezivanje unutrašnjih faktora (snaga i slabosti) sa spoljnim faktorima (prilika i pretnji) u cilju definisanja potencijalnih razvojnih strategija. Za razliku od SWOT analize koja se prvenstveno fokusira na identifikaciju faktora koji utiču na razvoj određenog sistema, TOWS analiza ima za cilj formulisanje konkretnih strateških pravaca delovanja. U kontekstu istraživanog lokaliteta, ova analiza omogućila je identifikaciju potencijalnih razvojnih strategija koje mogu doprineti održivom upravljanju lokalitetom i razvoju ekonomskih aktivnosti koje su kompatibilne sa principima zaštite prirode.

Rezultati TOWS analize ukazuju na nekoliko potencijalnih strateških pravaca razvoja Begečke jame. Posebno se izdvaja mogućnost razvoja održivog turizma zasnovanog na prirodnim i edukativnim vrednostima ovog područja, uz

istovremeno jačanje sistema zaštite biodiverziteta i unapređenje institucionalne saradnje između različitih aktera.

Razvojne strategije identifikovane kroz TOWS analizu mogu predstavljati osnovu za definisanje budućih razvojnih prioriteta i izradu akcionog plana za razvoj turističke destinacije Begečka jama. Poseban značaj ima integracija zaštite prirodnih vrednosti sa socio-ekonomskim razvojem lokalne zajednice, čime se obezbeđuje dugoročna održivost ovog zaštićenog područja.

Tabela 3. Rezultati TOWS analize

	Opportunities (Prilike)	Threats (Pretnje)
Strengths (Snage)	SO strategije – korišćenje snaga za iskorišćavanje prilika: razvoj eko-turizma zasnovanog na biodiverzitetu, razvoj edukativnih i naučnih programa u saradnji sa univerzitetima, promocija Begečke jame kao destinacije održivog turizma u dunavskom regionu	ST strategije – korišćenje snaga za smanjenje pretnji: jačanje sistema zaštite biodiverziteta, razvoj programa monitoringa prirodnih resursa, edukacija posetilaca o značaju očuvanja prirodnih vrednosti
Weaknesses (Slabosti)	WO strategije – prevazilaženje slabosti korišćenjem prilika: korišćenje EU fondova za razvoj turističke infrastrukture, jačanje institucionalne saradnje kroz projekte i partnerstva, razvoj lokalnih turističkih usluga	WT strategije – smanjenje slabosti i izbegavanje pretnji: unapređenje sistema upravljanja lokalitetom, razvoj planova zaštite od degradacije staništa, jačanje kontrole korišćenja prirodnih resursa

3.4. Identifikacija poslovnih prilika

Na osnovu rezultata socio-ekonomske analize, stakeholder konsultacija i fokus grupe, identifikovane su potencijalne poslovne mogućnosti koje mogu doprineti održivom razvoju lokaliteta Begečka jama i šireg područja sela Begeč. Poseban fokus stavljen je na aktivnosti koje su kompatibilne sa principima zaštite prirode, održivog upravljanja vodnim resursima i primene Nature-based Solutions (NBS).

S obzirom na prirodne karakteristike ovog lokaliteta, blizinu urbanog centra i postojeću mrežu lokalnih aktera, Begečka jama ima potencijal da razvije više komplementarnih ekonomskih aktivnosti koje mogu doprineti lokalnoj ekonomiji, uz istovremeno očuvanje ekosistema:

- Razvoj eko turizma koji doprinosi povećanju turističke atraktivnosti područja, kao i stvaranju novih izvora prihoda za lokalnu zajednicu (posmatranje ptica, vođene ture kroz zaštićeno područje, edukativne šetnje, interpretativni program o biodiverzitetu i plavnim ekosistemima Dunava)
- Rekreativne i sportske aktivnosti u prirodi kompatibilne sa stepenom zaštite (rekreativni ribolov, kajak, kanu, vožnja elektro čamcima, biciklističke i pešačke rute u okolini lokaliteta)
- Edukativni i naučni turizam (organizacija terenskih nastava za studente, učenike, decu; istraživačke radionice, ekološki kampovi i edukativne ekskurzije za škole; lokalitet kao prirodna naučno-istraživačka "laboratorija" biodiverziteta, hidrologije i ekologije plavnih područja za univerzitet)
- Razvoj lokalnih turističkih usluga i ugostiteljstva (lokalni restorani, mali proizvođači hrane koji – putem kratkih lanaca snabdevanja u velikoj meri doprinose lokalnom i regionalnom razvoju u brojnim aspektima (Janković et al. 2025).
- Razvoj ekoloških i edukativnih programa lokalne zajednice, NVO sekotra, obrazovnih institucija i sl. (radionice, javni događaji i edukativni skupovo u vezi značaja aktivnog očuvanja prirodnih ekosistema, klimatskih promena, vodnih resursa i sl.)

Sve identifikovane poslovne mogućnosti zasnivaju se na principima održivog razvoja i primene Nature-based Solutions koji podrazumeva korišćenje prirodnih procesa i ekosistemskih funkcija kao osnove za razvoj socio-ekonomskih aktivnosti koje doprinose očuvanju biodiverziteta, poboljšanju kvaliteta vode i povećanju otpornosti ekosistema na klimatske promene. Integracija ekonomskih aktivnosti sa zaštitom prirodnih resursa predstavlja ključni element dugoročne održivosti lokaliteta Begečka jama i omogućava stvaranje ravnoteže između socio-ekonomskog razvoja i očuvanja prirodnih vrednosti ovog područja. Ovo je, pre svega, determinisano i statutsom lokaliteta Begečke jame kao parka prirode i stepenom njegove zaštite.

3.4.1. Akcioni plan za razvoj održive turističke destinacije Begečka jama

Na osnovu rezultata socio-ekonomske analize, konsultacija sa stakeholderima i identifikovanih razvojnih potencijala lokaliteta, definisan je okvirni akcioni plan za razvoj održive turističke destinacije Begečka jama sa naglaskom na aktivno uključivanje lokalnih aktera, institucija i organizacija civilnog društva u procese planiranja i implementacije razvojnih aktivnosti. Predložene aktivnosti usmerene su na unapređenje turističke infrastrukture, razvoj novih turističkih proizvoda zasnovanih na prirodnim vrednostima lokaliteta, jačanje saradnje između stakeholdera, kao i promociju Begečke jame kao destinacije održivog turizma u dunavskom regionu.

Ovakav akcioni plan ukazuje da razvoj održivog turizma može predstavljati značajan pokretač socio-ekonomskog razvoja lokalne zajednice, uz istovremeno očuvanje prirodnih resursa Begečke jame. Posebno je važno obezbediti ravnotežu između povećanja turističkih aktivnosti i očuvanja ekološke stabilnosti ovog područja, odnosno, održivog turizma. Implementacija predloženih aktivnosti zahteva koordinaciju između različitih institucija i organizacija, kao i aktivno uključivanje lokalne zajednice u procese planiranja i upravljanja i pomoć u monitoring potencijalnih i prisutnih zagađivača. U tom kontekstu, multi-actor i multidisciplinarni pristup, koji se reflektuje u aktivnostima u okviru projekta DALIA, predstavlja važan okvir za razvoj participativnih modela upravljanja i održivog korišćenja prirodnih resursa. Sa druge strane, akcioni plan za razvoj turističke destinacije Begečka jama može predstavljati osnovu za buduće razvojne inicijative, uključujući projekte finansirane iz evropskih fondova, programe zaštite prirode i regionalne strategije razvoja održivog turizma u dunavskom regionu.

Aktivnosti označene kao prioritet I predstavljaju osnovne preduslove za održivi razvoj lokaliteta, jer se odnose na upravljanje, zaštitu prirodnih resursa, monitoring i osnovnu infrastrukturu. Aktivnosti u okviru prioriteta II usmerene su na razvoj konkretnih turističkih proizvoda zasnovanih na prirodnim i edukativnim vrednostima Begečke jame. Aktivnosti označene kao prioritet III imaju razvojni i promotivni karakter i mogu doprineti jačanju lokalne ekonomije, ali ih je potrebno sprovoditi postepeno i u skladu sa kapacitetima prostora i režimima zaštite.

Tabela 4. Predlog ključnih aktivnosti akcionog plana prema prioritetima

Prioritet	Aktivnost	Kratak opis	Ključni akteri	Rok
I	Jačanje saradnje stakeholdera	Redovni sastanci, radionice i koordinacija aktivnosti	Institucije, lokalna zajednica, NVO	Kontinuirano
I	Monitoring životne sredine	Praćenje zagađivača, pritisaka turizma i stanja prirodnih resursa	Zavod za zaštitu prirode, Vode Vojvodine, istraživačke institucije	Kratkoročno/kontinuirano
I	Osnovna turistička infrastruktura	Informativne table, pristupne tačke i odmorišta	Lokalna samouprava, upravljač područja, turističke organizacije	Kratkoročno/srednjoročno
II	Eko-turističke rute	Pešačke i edukativne staze sa interpretativnim sadržajem	Vode Vojvodine, Zavod, turističke organizacije	Srednjoročno
II	Posmatranje ptica	Vođene ture i promocija lokaliteta za ljubitelje prirode	Turističke organizacije, NVO, lokalni vodiči	Kratkoročno
II	Edukativni programi	Terenska nastava, radionice i ekološki kampovi	Univerziteti, škole, NVO	Kontinuirano
III	Lokalni proizvodi i gastronomija	Povezivanje turizma sa lokalnim proizvođačima i ugostiteljima	Proizvođači, ugostitelji, turističke organizacije	Srednjoročno
III	Dodatni sadržaji održivog turizma	Kupalište, električni čamci i slični sadržaji uz procenu uticaja	Lokalna samouprava, upravljač, stručne institucije	Dugoročno

4 ZAKLJUČAK

Sprovedena socio-ekonomska analiza lokaliteta Begečka jama pruža jasniji uvid u institucionalni, društveni i razvojni kontekst ovog zaštićenog prirodnog područja. Analiza je pokazala da Begečka jama predstavlja značajan prirodni resurs sa visokim ekološkim i društvenim vrednostima, ali i sa izraženim potencijalom za razvoj održivih socio-ekonomskih aktivnosti koje su kompatibilne sa principima zaštite prirode.

Rezultati analize stakeholdera ukazali su na postojanje kompleksne mreže aktera uključenih u upravljanje i korišćenje ovog područja, uključujući institucije nadležne za zaštitu prirode i upravljanje vodnim resursima, lokalnu samoupravu, organizacije civilnog društva, lokalne korisnike prirodnih resursa i akademsku zajednicu. U tom kontekstu, identifikovani su isprepleteni uticaji, često opterećeni centralizovanim odlučivanjem, nedovoljnom inicijativom za koordinacijom i rešavanjem konkretnih problema i potrebom jačanja saradnje i komunikacije između različitih aktera, što predstavlja ključni preduslov za uspešnu implementaciju razvojnih inicijativa i dugoročno održivo upravljanje lokalitetom.

Rezultati fokus grupe i sprovedene strateške analize (SWOT, PESTLE i TOWS) ukazali su na nekoliko ključnih razvojnih pitanja i potencijala. Među najvažnijim izazovima izdvajaju se problemi zagađenja, potreba za unapređenjem institucionalne koordinacije i ograničena turistička infrastruktura. Istovremeno, identifikovan je značajan potencijal za razvoj održivog turizma zasnovanog na prirodnim vrednostima lokaliteta, kao i za razvoj edukativnih, rekreativnih i naučnih aktivnosti.

Definisani okvirni akcioni plan za razvoj turističke destinacije Begečka jama predviđa unapređenje turističke infrastrukture, razvoj novih turističkih proizvoda zasnovanih na biodiverzitetu i prirodnim resursima, jačanje saradnje između lokalnih aktera i promociju ovog područja kao destinacije održivog turizma u dunavskom regionu. Rezultati ovog istraživanja doprinose ciljevima projekta DALIA kroz primenu multi-actor pristupa i uključivanje lokalnih stakeholdera u procese planiranja i donošenja odluka što je omogućilo bolje razumevanje socio-ekonomskih aspekata upravljanja pilot lokalitetima i doprinosi razvoju inovativnih modela održivog upravljanja slatkovodnim ekosistemima u slivu reke Dunav. U tom smislu, Begečka jama može predstavljati značajan primer integracije zaštite prirode, primene Nature-based Solutions i socio-ekonomskog razvoja lokalne zajednice.

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Izjava o sukobu interesa

Autori izjavljuju da ne postoji sukob interesa.

5 Literatura:

1. Bogdanov, N. and D. Janković (2013). Territorial capital of rural areas: an example of analysis of the potential for rural tourism development in Serbia. In Škorić, D, Tomić, D. and Vesna, Popović (Ed.). AGRI-FOOD SECTOR IN SERBIA STATE AND CHALLENGES. Serbian Association of Agricultural Economics and Serbian Academy of Sciences and Arts. Belgrade. pp. 201-233; ISBN 978-86-86087-27-0 DOI: 10.22004/ag.econ.157552
2. Christodoulou, A., & Cullinane, K. (2019). Identifying the Main Opportunities and Challenges from the Implementation of a Port Energy Management System: A SWOT/PESTLE Analysis. *Sustainability*, 11(21), 6046.
<https://doi.org/10.3390/su11216046>
3. Gonan Božac, M. (2008). SWOT analiza i TOWS matrica – sličnosti i razlike. *Economic Research – Ekonomska istraživanja*, 21(1), 19–34.
4. Hodge I. and P. Midmore (2008). Models of Rural Development and Approaches To Analysis Evaluation And Decision-Making. *Économie rurale [En ligne]*. Vol. 307.
<https://doi.org/10.4000/economierurale.406>
5. Janković, D. (2020). Društvene promene i ruralni razvoj: značaj socijalnog kapitala, participacije i društvenih mreža. Poljoprivredni fakultet Novi Sad. ISBN 978-86-7520-518-0
6. Janković, D; Novakov, M. i M. Petrović (2017). Iskustva empirijskih istraživanja u ruralnim područjima: izazovi intervju a i ankete. *Agroekonomika*. ISSN 0350-5928. Vol. 46/74. Str.47-62.
7. Janković, D; Zekić, V; Trkulja, G. (2025). Kratki lanci snabdevanja i potrošnja tradicionalnih prehrambenih proizvoda u Sremu. *Agroekonomika*. Vol. 54/106. Poljoprivredni fakultet Novi Sad. ISSN 0350-5928
8. JKP "Vode Vojvodine" (2022). Plan upravljanja parkom prirode "Begečka jama" za period 2022. do 2031. Vode Vojvodine.
9. Lee, J. Árnason, A., Nightingale, Andrea and M. Shucksmith (2005). Networking: social capital and identities in European rural development. *Sociologia Ruralis*. Vol 45 (4). P. 269-283.
10. Leigh, D. (2009). SWOT Analysis. In K. H. Silber, W. R. Foshay, R. Watkins, D. Leigh, J. L. Moseley, & J. C. Dessinger (Eds.), *Handbook of Improving Performance in the Workplace: Volumes 1–3* (pp. 115–140). John Wiley & Sons.
<https://doi.org/10.1002/9780470592663.ch24>
11. Lowe, P. (2003). Neo-Endogenous Development, Territory and Rural Innovation. Internet stranica: http://www.sociologia.unical.it/rural_areas/paper/eng/lowe.ppt.
12. Lowe, P., Murdoch, J., and N. Ward (1995). Networks in Rural Development: Beyond Exogenous and Endogenous Models. U Ploeg, J. D. van der and G. van, Dijk (eds). Beyond modernization. Royal Van Gorcum. Assen.
13. Ploeg, J. D. van der (2003). Rural development and the mobilisation of local actors. EU Rural Development Conference. Salzburg. Internet stranica: <http://ec.europa.eu/comm/agriculture/events/salzburg/panels/ploeg.pdf>

SOCIO-ECONOMIC ANALYSIS OF A PROTECTED NATURAL AREA: A CASE STUDY OF BEGEČKA JAMA

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Rezime

This paper analyzes the socio-economic aspects of the Begečka Jama Nature Park with the aim of identifying its development potentials and key challenges. The research is based on a case study approach and qualitative methods, including document analysis, focus groups, and SWOT/PESTLE/TOWS analyses.

The results indicate that the area has significant potential for the development of sustainable tourism and other activities based on natural resources. However, the locality is faced with problems related to pollution, weak institutional coordination, and insufficiently developed infrastructure.

The study concludes that sustainable development requires an integrated approach involving cooperation among institutions and the active participation of the local community.

Keywords: nature park, socio-economic analysis, rural development

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1

Introduction

In order to understand the specific characteristics of society and the development of rural areas, it is necessary to analyze relevant factors that may influence the speed, course, and consequences of social changes in rural regions. The context and importance of rural development require consideration of the complexity of different levels of analysis and policies (national, regional, and local), as well as the specific characteristics of heterogeneous rural areas, which deserve to be reflected in territorial policies of rural and regional rural development.

Historically, different policies aimed at rural areas have pursued different objectives and have been based on various foundations, such as natural resources, technological development and transfer, human resources, economic capital, social capital, and social networks. From the perspective of the evolution of these policies, both theoretically and in terms of their practical application in the conceptualization of rural development measures, there has been a clear transition from sectoral policies toward multisectoral, territorial, and local rural development policies (Hodge and Midmore, 2008), that is, a transition from predominantly agrarian policy measures to broader rural policy measures.

Within the context of this research, the authors apply the territorial and local capital approach, which emphasizes that territorial development dimensions (capitals) should be transformed through appropriate territorial policies and utilized in the development of specific areas. Recognizing the presence or absence of particular types of capital and their significance for development represents the basis for creating sustainable development plans and programs for rural areas of interest (Bogdanov and Janković, 2013).

From the perspective of these theoretical approaches, the authors analyze one of the protected natural areas in Serbia, namely the Begečka Jama area, which represents an important protected natural site located in the immediate vicinity of the city of Novi Sad and forms part of the broader ecological system of the Danube region. Due to its natural characteristics, rich biodiversity, and proximity to an urban center, this area has significant potential for the development of sustainable socio-economic activities compatible with nature protection principles.

The authors point out that the locality faces various challenges, including pressures on natural resources, changes in the water regime, pollution, and the need for better coordination among institutions and local stakeholders. The conducted analysis focuses on broadly understood socio-economic aspects, potential opportunities and challenges in the protection of this area, as well as recommendations emphasizing the necessity of coordination and participation of a larger number of institutional and non-institutional actors. Particular attention is given to several key development issues and potentials, such as pollution

problems, the need to improve institutional coordination, and limited tourism infrastructure.

2 Research methods and data sources

The socio-economic analysis of the Begečka Jama locality was conducted with the aim of identifying key stakeholders, their interests, and perceptions regarding the development potential of this area. The analysis was based on the theoretical principles of the territorial approach to (rural) development, which involves examining natural, economic, and social resources through their interrelationships and possibilities for joint valorization. Particular attention was devoted to assessing the potential for the development of sustainable tourism and other economic activities that may contribute to local development while preserving the natural values of this protected area. The results of this analysis may serve as a basis for preparing an action plan for the development of the Begečka Jama tourist destination, aimed at linking nature protection, the socio-economic development of the local community, and the sustainable use of natural resources.

The authors' research was carried out within the activities of one of the work packages of the Horizon project DALIA⁷ and, as a project result of the authors' team, included a report providing an overview of the site characteristics, an analysis of relevant stakeholders, the results of empirical research, and the identification of key development challenges and opportunities.

Research in social and sociological disciplines is complex, among other reasons, due to the specific nature of social determinism. In rural areas, this complexity is further intensified by the characteristics of rural social space and the features of the population, collective habits, customs, behavioral patterns, and similar aspects. Rural areas, with all their heterogeneity, represent a specific social environment characterized by collective habits, shared customs, morals, life ideals (values), and behavioral patterns. It is therefore important to understand living conditions and their influence on the formation of social habits among the local population (Janković, Novakov and Petrović, 2017: 47, 50).

For the purposes of collecting, processing, and interpreting the research results, several research methods were applied. The general research framework was based on the case study method, combined with a participatory approach in examining the attitudes and perceptions of local stakeholders through focus groups. Theoretical and hypothetical frameworks were developed using

⁷ Project Danube Region Water Lighthouse; Action: 101094070 — DALIA — HORIZON-MISS-2021-OCEAN-02; Type of action: HORIZON Innovation Actions; Granting authority: European Climate, Infrastructure and Environment Executive Agency

approaches related to rural development, participation, and territorial capital, including social, ecological, cultural, and economic capital.

From these theoretical perspectives, a qualitative analysis of key strategic documents of relevant institutions was conducted, serving as the basis for the subsequently performed SWOT, PESTLE, and TOWS analyses based on collected empirical data. SWOT analysis was applied as a framework for systematizing internal and external factors through the identification of strengths, weaknesses, opportunities, and threats, in accordance with its role in strategic analysis and planning (Leigh, 2009). PESTLE analysis was used to assess the broader macro-environment, including political, economic, social, technological, legal, and environmental factors that may influence the development and implementation of proposed strategic directions (Christodoulou & Cullinane, 2019). Finally, the TOWS matrix was applied to connect previously identified internal and external factors and formulate concrete strategic options based on the combination of strengths, weaknesses, opportunities, and threats (Gonan Božac, 2008).

The first phase of the research included an analysis of available planning and strategic documents related to the management and protection of the Begečka Jama Nature Park, including the Nature Park Management Plan for the period 2022–2031, as well as other relevant sources concerning nature protection, water resource management, and rural development. This analysis enabled the identification of key natural, institutional, and socio-economic characteristics of the locality.

In the second phase of the research, relevant stakeholders with direct or indirect influence on the management and development of this area were identified. These stakeholders included institutions responsible for nature protection and water resource management, representatives of local self-government and local communities, fishing and hunting associations, local farmers, representatives of the tourism and hospitality sector, camping and weekend visitors (users of the locality), civil society organizations dealing with nature protection, and representatives of the academic and scientific community.

The third phase of the research involved conducting semi-structured interviews and focus groups with representatives of the local community and other relevant stakeholders (representatives of the local community, institutions responsible for nature protection and water resource management, tourism organizations, civil society organizations, and the academic community). This research was conducted during the period from June to November 2025. The obtained data were analyzed using qualitative analysis methods, through which the main thematic categories related to nature protection, institutional challenges, and the potential for developing sustainable socio-economic activities were identified. The

results of this analysis represent the basis for identifying key development priorities and formulating recommendations for a future action plan for the development of the Begečka Jama tourist destination.

3 Results and discussion

3.1. Description of the Begečka jama locality and relevant stakeholders

The territory of the Autonomous Province of Vojvodina contains a large number of protected natural areas with different levels of protection, including the Fruška Gora National Park, special nature reserves, nature parks, landscapes of exceptional features, and strict nature reserves. Within this network of protected areas, Begečka Jama has the status of a nature park and represents an area of local importance with a high level of natural and ecological value.

Begečka Jama is an important protected natural area in the Autonomous Province of Vojvodina and forms part of the broader ecological system of the Danube region. The locality is situated near the village of Begeč, on the left bank of the Danube River, approximately 24 kilometers west of Novi Sad. Begečka Jama represents a former meander of the Danube that, over time, formed a characteristic floodplain ecosystem covering approximately 489.5 hectares, with a large portion of the area under water and significant wetland and forest habitats. These include habitats for wetland birds, natural spawning grounds for Danube fish species, and an important ecological corridor for migratory species, characterized by rich biodiversity and great importance for the preservation of natural habitats. More than 120 species of higher plants, around 150 bird species, 14 fish species, 11 amphibian species, and six reptile species have been recorded, along with a significant number of insects of national and international importance (Public Water Management Company "Vode Vojvodine", 2022)⁸.

In addition to biodiversity conservation, Begečka Jama also performs an important ecological function within the regional ecosystem. The wetland habitats of this area contribute to water regime regulation, water filtration, and the preservation of natural ecosystem processes. At the same time, this area represents an important site for scientific research, educational activities, recreation, and the development of sustainable tourism.

⁸ The protection process for this site began as early as the 1970s through initiatives aimed at preserving the area's natural values. During the 1990s, the site was placed under preliminary protection, and in 1999, the Assembly of the City of Novi Sad adopted a decision proclaiming Begečka Jama a Nature Park. The most recent protection decision was adopted in 2022, when the current *Management Plan for the Begečka Jama Nature Park* for the period 2022–2031 was also approved. The protected area is managed by the Public Water Management Company *Vode Vojvodine* (JKP Vode Vojvodine, 2022).

The management of this protected area involves several institutions and stakeholders at different levels. In addition to the Public Water Management Company "Vode Vojvodine" as the formal manager, important roles are played by the Provincial Institute for Nature Protection, the Provincial Secretariat for Urban Planning and Environmental Protection, as well as the local self-government of the City of Novi Sad and the Local Community of Begeč. Besides institutional actors, the management and use of this area also involve various previously mentioned social institutions, social groups, and associations.

From the perspective of the conducted analysis, the inclusion of different stakeholders in the management and development processes of this area represents a key prerequisite for the long-term socio-economic and ecological sustainability of Begečka Jama. Contemporary approaches to rural development emphasize the importance of local community participation, strengthening social capital, and developing partnerships among local institutions and organizations, including the scientific community, as demonstrated in this project, in order to ensure the sustainable use of natural resources and the preservation of the natural values of this locality.

According to numerous authors (Lee et al., 2005; Ploeg, 2003; Lowe, 2003; Lowe et al., 1995; Janković, 2020), in order to avoid imposed and dependent development, rural development must rely on internal strengths and resources (existing or constructed), which, in combination with external resources and capacities, should form the basis of sustainable socio-economic growth and development. Achieving these goals is neither possible nor sufficient through a single policy alone, but rather requires a whole set of different sectoral, global, regional, and local policies that are interconnected and mutually conditioned, although some of them may occasionally be partially contradictory. The concept of rural development emphasized in this paper takes into account this heterogeneity of stakeholders, interests, development directions, policies, institutions, potentials, and limitations, all of which shape the complexity and sustainability of rural development.

3.2. Analysis of relevant stakeholders

Management and development of protected natural areas involve the participation of a large number of stakeholders whose interests, responsibilities, and influence may significantly differ. In the case of the Begečka Jama Nature Park, the processes of nature protection, resource management, and development of socio-economic activities take place within a complex network of institutions, organizations, and local social groups. Three key interactions overlap among state institutions, the local community, and environmental NGOs, associations, and scientific-research institutions that conduct activities within the protected area.

Within the conducted research, key relevant stakeholders with direct or indirect influence on the management and use of the Begečka Jama locality were identified.

The Venn diagram (Figure 1) illustrates the interrelationships, potential influences, and significance of different stakeholders involved in the management, use, and protection of the Begečka Jama Nature Park⁹. The central role within the institutional framework is held by the Public Water Management Company "Vode Vojvodine", which acts as the formal manager of the protected area and is responsible for implementing the management plan and maintaining the water regime. An important institutional role is also played by the Provincial Institute for Nature Protection and the Provincial Secretariat for Urban Planning and Environmental Protection, which are responsible for the protection of natural values and the implementation of relevant environmental protection policies.

In addition to institutional stakeholders, an important role is played by representatives of the local community, including residents of the village of Begeč, boat owners located within the area, local farmers and agricultural cooperatives, who are directly connected to the daily use of this space. This also includes owners of weekend houses and camping trailers, who are highly active users of the locality and significantly influence many sustainability issues, particularly environmental ones, such as problems related to septic tanks and wastewater discharge. The network of relevant stakeholders also includes fishing and hunting associations, which influence fish and wildlife resources, as well as tourism organizations and local hospitality providers that recognize the potential of this area for the development of recreational and tourism activities. Furthermore, an important role is played by civil society organizations engaged in nature protection, as well as the academic and scientific community, which contributes through research and educational activities to a better understanding of natural processes and the sustainable management of this area.

The stakeholder network analysis clearly indicates the need to strengthen cooperation and communication among different stakeholders, particularly between institutions responsible for managing the protected area and the local community and local users. Such cooperation represents a necessary prerequisite for the successful implementation of initiatives aimed at sustainable development, preservation of natural resources, and the development of tourism activities compatible with the nature protection regime.

⁹ A Venn diagram typically illustrates the **perceived importance of stakeholders** with respect to a specific issue, represented by the **size of the circles**, and their **perceived actual influence**, represented by the **distance of each circle from the central subject of the study**.

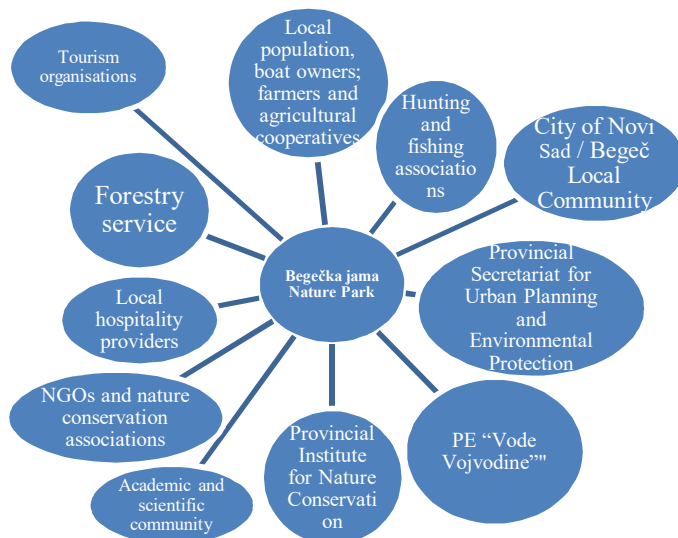


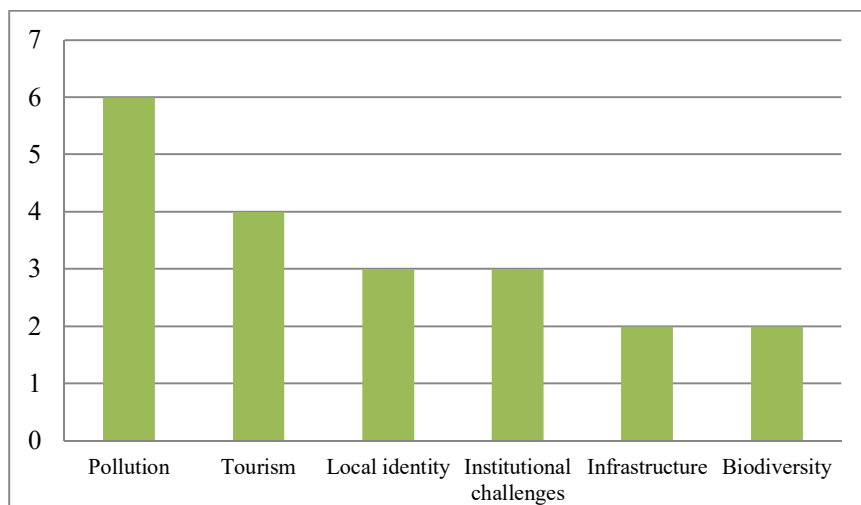
Figure 1. Key stakeholders involved in the protection, management and sustainable development of Begečka Jama Nature Park

3.3. Focus group results and identification of key development issues

In order to gain a better understanding of local stakeholders' perceptions regarding the current condition, challenges, and development potential of the Begečka Jama Nature Park, a focus group was organized with representatives of relevant stakeholders from the local community and institutions involved in the management of this area. The focus group enabled the identification of key topics recognized by participants as the most important for the future development and management of the locality.

During the discussion, participants highlighted several key issues related to environmental challenges, institutional aspects of management, and development opportunities within the area. Particular emphasis was placed on the importance of preserving natural resources, improving cooperation between institutions and the local community, and developing sustainable economic activities compatible with the nature protection regime.

The focus group results were analyzed using qualitative content analysis, through which thematic categories most frequently appearing in participants' discussions were identified. The frequency and importance of individual topics are presented in Graph 1.



Graph 1. Frequency and significance of key themes identified in the focus group

The results of the analysis indicate that pollution was identified as the most frequently mentioned problem, reflecting participants' concerns regarding the potential local and broader impacts of pollution on water quality and the preservation of the nature park. This issue manifests itself at several levels, ranging from water quality problems to waste accumulation and illegal dumping sites, which are considered unacceptable within a protected natural area, particularly from the perspective of ecological sustainability and the utilization of the locality's economic potential.

Part of the complexity of this problem is related to the long-term use of weekend houses and camping trailers, as well as insufficient cooperation with representatives of associations of so-called "weekend users" of the locality. In this regard, focus group participants emphasized the need for regular monitoring and cleaning of the shoreline, periodic dredging of the locality, regular waste collection and user fee payments, stricter regulation of locality use by weekend users, and increased monitoring of potential polluters. Participants also stressed the need for infrastructural improvements, including electricity supply, water access, and embankment lighting, in order to support sustainable use, reduce illegal hunting activities, and improve tourism services.

Furthermore, participants emphasized the importance of consistent implementation of regulations related to the use of pesticides and herbicides, as well as the disposal of related packaging materials, considering that local farmers have a significant impact on the locality and consequently on the biodiversity of the nature park, which represents one of the key priorities in preserving the area.

The second most frequently discussed topic concerned the (economic) potential for tourism development, which participants recognized as one of the most important development opportunities for the local community. However, such development requires regulated and sustainable use of space, as well as the development of tourism infrastructure, including beaches, children's playgrounds, swimming areas, small marinas, and potentially restrictions on motorboats. Participants also mentioned the possibility of increasing fees for fishing permits and boat usage.

Of great importance is the prevention of illegal construction and inappropriate land use in order to preserve the integrity of the nature park and ensure that infrastructure and facilities are developed in a responsible and locality-appropriate manner. A prevailing opinion within the focus group was that poor coordination exists between managers and local users due to excessive centralization in decision-making and in defining investment priorities and development objectives.

The discussion also emphasized the importance of Begečka Jama for local identity, as well as institutional challenges in managing the protected area, including the need for better coordination between different institutions and users of the space, especially through improved communication channels that would allow local initiatives to be heard and would ensure sustainable use of the locality while preserving biodiversity.

"Its importance is reflected primarily in the culture of living connected to Begečka Jama, which represents an exceptional natural habitat where the local population feels comfortable and which many residents have considered, since childhood, one of their ideal places for escaping everyday life.

The importance of Begečka Jama goes beyond economics. In terms of social benefits for both the local and wider community, it provides the local population with their own beach during the summer period (many young people from the village learned to swim there), a place to enjoy nature with family, and opportunities for sports activities. In addition to sport fishing, other organized sports activities such as rowing sports could also be developed.

On the other hand, hospitality-related activities in all their forms also represent important socially and economically beneficial aspects, especially considering the proximity of the nature park. The nature park itself also represents an ideal location for biological and other scientific research related to the existing flora and fauna, which constitutes an important direction for future development and conservation." (Respondent X)

The strategic management document for the nature park (Public Water Management Company "Vode Vojvodine", 2022) identifies numerous additional

threats to the locality, including the spread of invasive species, as well as anthropogenic threats such as afforestation with monocultures (poplar plantations), which disrupt the natural balance between forest and non-forest vegetation in the floodplain area and alter landscape characteristics. Such practices negatively affect meadows, wet meadows, ponds, and natural forests, while also influencing habitat types, landscape features, and bird fauna, particularly nesting birds whose nests are destroyed during logging activities (Public Water Management Company "Vode Vojvodine", 2022: 14–15).

Similarly to the results of the conducted research, the strategic document identifies the following problems: water quality is threatened by the inflow of low-quality water from the Tataranički Canal and wastewater from nearby settlements; anthropogenic pressures include the spread of invasive species, afforestation with monocultures (poplar plantations), illegal construction, pollution originating from agriculture and settlements, as well as illegal hunting; hydrological changes caused by sedimentation, blocked canals, and the malfunctioning of the Begej canal disrupt the natural water regime; additional threats include illegal waste disposal, tourism pressures, and habitat fragmentation. Management measures prohibit activities harmful to habitats, the introduction of invasive species, uncontrolled fishing, construction outside designated zones, and waste disposal.

In this context, the following long-term goals and sustainable development priorities are proposed for the locality:

- preservation of habitats as ecological corridors, improvement of the water regime in accordance with natural values, and controlled resource use;
- increase of native forest vegetation, pollution control, inclusion in biodiversity networks, development of sustainable tourism, and preservation of natural and cultural heritage;
- special emphasis on climate change adaptation and securing financial resources;
- continuous monitoring and implementation of adaptive management practices.

Implementation measures and responsibilities include habitat assessment and restoration, regulation of the water regime, control of invasive species, and monitoring of protected species; promotion, education, and development of eco-tourism with the participation of the local community; cooperation among scientific institutions, local authorities, environmental and fishing organizations, and NGOs; as well as infrastructure development, including visitor centers, signage, camping zones, and docking facilities. The strategic management plan foresees financing from multiple sources, including public budgets, user fees, tourism revenues, and international funds (Public Water Management Company "Vode Vojvodine", 2022).

Nevertheless, it is evident that strategic documents often contain idealized and formally expressed visions and intentions for improving existing conditions, while, on the other hand, the real challenges of local development and conservation of such a locality represent a much more complex socio-economic dynamic and interaction between official legislation and processes, the local community, potential polluters, and natural influences. This was also recognized through the focus group analysis, which clearly indicated the need for an integrated management approach for Begečka Jama that would simultaneously encompass the protection of natural values, the development of sustainable tourism, and the more active involvement of the local community in decision-making processes.

3.3.1. WOT, PESTLE, AND TOWS Analysis of the development potential of the Begečka jama locality

In order to identify the key development potentials and limitations of the Begečka Jama locality, a SWOT analysis was conducted. SWOT analysis is one of the most commonly used analytical tools in strategic planning and enables the systematisation of internal and external factors that may influence the development of a particular area. This method involves the identification of strengths and weaknesses as internal characteristics of the observed system, as well as opportunities and threats arising from the external environment.

In the context of this research, the SWOT analysis was based on the results of the focus group, the analysis of relevant documentation and insights into the existing natural, institutional and socio-economic characteristics of the locality. The aim of this analysis was to identify the key factors that may influence the future development of sustainable economic activities, particularly in the field of tourism and recreation, while simultaneously preserving the natural values of this protected area.

Table 1. Results of the SWOT analysis of the Begečka Jama locality

Strengths	Weaknesses
Rich biodiversity and preserved natural ecosystems	Insufficiently developed tourism infrastructure
Proximity to Novi Sad and good transport accessibility	Problems of pollution and habitat degradation
Status of a protected natural area	Insufficient coordination between institutions
Potential for the development of ecotourism and educational activities	Limited financial resources for management
Opportunities	Threats
Development of sustainable tourism	Degradation of natural habitats
Availability of EU funds and projects	Invasive species
Development of educational and scientific tourism	Uncontrolled urbanisation
Cooperation with academic institutions	Climate change

The results of the SWOT analysis indicate that Begečka Jama has significant potential for the development of sustainable tourism based on the natural and educational values of the locality. However, certain challenges were also identified, relating to infrastructure limitations, pollution problems and the need for better coordination between institutions and local actors. In this context, the future development of this area should be directed towards the sustainable valorisation of existing natural resources, while simultaneously strengthening institutional cooperation and improving the management system.

In addition to the SWOT analysis, a PESTLE analysis was also applied in order to examine the broader development context of Begečka Jama. This method enables the systematic consideration of external factors that may influence the development of a particular area, including political, economic, social, technological, legal and environmental aspects. PESTLE analysis is often used in strategic planning to identify key trends and factors from the external environment that may affect the implementation of development initiatives. In the case of Begečka Jama, the PESTLE analysis enabled the identification of the most important factors shaping the institutional, social and ecological context of the development of this protected area.

Table 2. Results of the PESTLE analysis of the Begečka Jama locality

Factor	Key elements
Political	Nature protection policies; institutional and effective framework for the management of protected areas
Economic	Tourism development; financing opportunities through EU funds
Social	Attitudes and awareness of the local community; significant level of social capital; existence of local initiatives; existence of regional and international initiatives for the conservation of the Danube basin
Technological	Biodiversity monitoring; digital promotion of tourism content
Legal	Legislative framework for nature protection and water resource management
Environmental	Biodiversity conservation; pollution prevention; changes in the water regime; climate change

The results of the PESTLE analysis indicate that the development of Begečka Jama largely depends on the institutional framework for nature protection, the availability of financial resources for management and infrastructure development, and the level of cooperation between different social actors. At the same time, environmental factors also play a significant role, particularly biodiversity conservation and the stability of the water regime, which represent the basis for the long-term sustainability of this area.

In order to identify possible development directions and concrete strategic initiatives for the future development of Begečka Jama Nature Park, a TOWS analysis was conducted. TOWS analysis represents an extended form of SWOT

analysis and enables the connection of internal factors, namely strengths and weaknesses, with external factors, namely opportunities and threats, in order to define potential development strategies. Unlike SWOT analysis, which primarily focuses on identifying factors that influence the development of a particular system, TOWS analysis aims to formulate concrete strategic directions for action.

In the context of the researched locality, this analysis enabled the identification of potential development strategies that may contribute to the sustainable management of the locality and the development of economic activities compatible with the principles of nature protection.

Table 3. Results of the TOWS analysis

	Opportunities	Threats
Strengths	SO strategies – using strengths to take advantage of opportunities: development of ecotourism based on biodiversity; development of educational and scientific programmes in cooperation with universities; promotion of Begečka Jama as a sustainable tourism destination in the Danube region	ST strategies – using strengths to reduce threats: strengthening the biodiversity protection system; development of natural resource monitoring programmes; educating visitors about the importance of preserving natural values
Weaknesses	WO strategies – overcoming weaknesses by using opportunities: use of EU funds for the development of tourism infrastructure; strengthening institutional cooperation through projects and partnerships; development of local tourism services	WT strategies – reducing weaknesses and avoiding threats: improvement of the locality management system; development of plans for protection against habitat degradation; strengthening control over the use of natural resources

The results of the TOWS analysis indicate several potential strategic directions for the development of Begečka Jama. The possibility of developing sustainable tourism based on the natural and educational values of this area is particularly important, together with the strengthening of the biodiversity protection system and the improvement of institutional cooperation among different stakeholders. The development strategies identified through the TOWS analysis may serve as a basis for defining future development priorities and preparing an action plan for the development of the tourist destination Begečka Jama. Particular importance should be given to integrating the protection of natural values with the socio-economic development of the local community, thereby ensuring the long-term sustainability of this protected area.

3.4. Identification of business opportunities

Based on the results of the socio-economic analysis, stakeholder consultations, and focus group discussions, several potential business opportunities were identified that may contribute to the sustainable development of the Begečka Jama locality and the wider area of the village of Begeč. Particular attention was focused on activities compatible with the principles of nature protection, sustainable water resource management, and the application of Nature-based Solutions (NBS).

Considering the natural characteristics of this locality, its proximity to an urban center, and the existing network of local stakeholders, Begečka Jama has the potential to develop several complementary economic activities that may contribute to the local economy while simultaneously preserving the ecosystem:

- Development of eco-tourism that contributes to increasing the tourist attractiveness of the area and creating new income sources for the local community (birdwatching, guided tours through the protected area, educational walks, interpretative programs on biodiversity and Danube floodplain ecosystems);
- Recreational and sports activities in nature compatible with the protection regime (recreational fishing, kayaking, canoeing, electric boat rides, cycling and hiking routes in the surrounding area);
- Educational and scientific tourism (organization of field classes for students and pupils, research workshops, ecological camps, educational excursions for schools; the locality as a natural scientific "laboratory" for biodiversity, hydrology, and floodplain ecology research for universities);
- Development of local tourism services and hospitality activities (local restaurants and small food producers that, through short supply chains, significantly contribute to local and regional development in multiple aspects (Janković et al., 2025));
- Development of environmental and educational programs for the local community, NGOs, educational institutions, and similar actors (workshops, public events, and educational gatherings related to the importance of active preservation of natural ecosystems, climate change, water resources, etc.).

All identified business opportunities are based on the principles of sustainable development and the application of Nature-based Solutions, which imply the use of natural processes and ecosystem functions as the foundation for the development of socio-economic activities that contribute to biodiversity conservation, improvement of water quality, and increased ecosystem resilience to climate change. The integration of economic activities with the protection of natural resources represents a key element of the long-term sustainability of the

Begečka Jama locality and enables the creation of a balance between socio-economic development and the preservation of the natural values of this area. This is primarily determined by the status of Begečka Jama as a nature park and the corresponding level of protection.

3.4.1. Action plan for the development of a sustainable tourism destination - Begečka jama

Based on the results of the socio-economic analysis, stakeholder consultations and the identified development potential of the locality, a preliminary action plan for the development of Begečka Jama as a sustainable tourist destination was defined. The plan places emphasis on the active involvement of local actors, institutions and civil society organisations in the processes of planning and implementing development activities.

The proposed activities are aimed at improving tourism infrastructure, developing new tourism products based on the natural values of the locality, strengthening cooperation among stakeholders, and promoting Begečka Jama as a sustainable tourism destination in the Danube region.

Such an action plan indicates that the development of sustainable tourism can represent an important driver of socio-economic development for the local community, while at the same time preserving the natural resources of Begečka Jama. It is particularly important to ensure a balance between the increase in tourism activities and the preservation of the ecological stability of this area, that is, to ensure the development of sustainable tourism.

The implementation of the proposed activities requires coordination among different institutions and organisations, as well as the active involvement of the local community in planning and management processes, including support in monitoring potential and existing polluters. In this context, the multi-actor and multidisciplinary approach reflected in the activities of the DALIA project represents an important framework for the development of participatory management models and the sustainable use of natural resources.

On the other hand, the action plan for the development of the tourist destination Begečka Jama may serve as a basis for future development initiatives, including projects financed from European funds, nature protection programmes and regional strategies for the development of sustainable tourism in the Danube region.

Table 4. Proposal of key action plan activities according to priorities

Priority	Activity	Short description	Key actors	Time frame
I	Strengthening stakeholder cooperation	Regular meetings, workshops and coordination of activities	Institutions, local community, NGOs	Continuous
I	Environmental monitoring	Monitoring of polluters, tourism pressures and the condition of natural resources	Institute for Nature Conservation, Vode Vojvodine, research institutions	Short-term / continuous
I	Basic tourism infrastructure	Information boards, access points and rest areas	Local self-government, area manager, tourism organisations	Short-term / medium-term
II	Ecotourism routes	Walking and educational trails with interpretive content	Vode Vojvodine, Institute for Nature Conservation, tourism organisations	Medium-term
II	Birdwatching	Guided tours and promotion of the locality for nature enthusiasts	Tourism organisations, NGOs, local guides	Short-term
II	Educational programmes	Field teaching, workshops and ecological camps	Universities, schools, NGOs	Continuous
III	Local products and gastronomy	Linking tourism with local producers and hospitality providers	Producers, hospitality providers, tourism organisations	Medium-term
III	Additional sustainable tourism facilities	Swimming area, electric boats and similar facilities, subject to impact assessment	Local self-government, managing authority, expert institutions	Long-term

The activities in Table 4 marked as Priority I represent the basic prerequisites for the sustainable development of the locality, as they relate to management, protection of natural resources, monitoring and basic infrastructure. Activities under Priority II are aimed at developing concrete tourism products based on the natural and educational values of Begečka Jama. Activities marked as Priority III have a developmental and promotional character and may contribute to strengthening the local economy, but they should be implemented gradually and in accordance with the carrying capacity of the area and the protection regimes.

4 Conclusion

The conducted socio-economic analysis of the Begečka Jama locality provides clearer insight into the institutional, social, and developmental context of this protected natural area. The analysis demonstrated that Begečka Jama represents an important natural resource with high ecological and social values, as well as significant potential for the development of sustainable socio-economic activities compatible with the principles of nature protection.

The stakeholder analysis results indicated the existence of a complex network of actors involved in the management and use of the area, including institutions responsible for nature protection and water resource management, local self-government, civil society organizations, local users of natural resources, and the academic community. In this context, intertwined influences were identified, often burdened by centralized decision-making, insufficient coordination initiatives, and the need to strengthen cooperation and communication among different stakeholders, which represents a key prerequisite for the successful implementation of development initiatives and long-term sustainable site management.

The results of the focus group and the conducted strategic analyses (SWOT, PESTLE, and TOWS) identified several key development issues and potentials. Among the most important challenges are pollution problems, the need to improve institutional coordination, and limited tourism infrastructure. At the same time, significant potential was identified for the development of sustainable tourism based on the natural values of the locality, as well as for the development of educational, recreational, and scientific activities.

The defined framework action plan for the development of the Begečka Jama tourism destination envisages the improvement of tourism infrastructure, development of new tourism products based on biodiversity and natural resources, strengthening cooperation among local stakeholders, and promotion of this area as a sustainable tourism destination in the Danube region. The results of this research contribute to the objectives of the DALIA project through the application of a multi-actor approach and the involvement of local stakeholders in planning and decision-making processes, which enabled a better understanding of the socio-economic aspects of pilot site management and contributes to the development of innovative models for sustainable freshwater ecosystem management within the Danube River basin. In this regard, Begečka Jama may represent an important example of integrating nature protection, the application of Nature-based Solutions, and the socio-economic development of the local community.

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Conflict of interest

The authors declare that there is no conflict of interest.

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References:

1. Bogdanov, N. and D. Janković (2013). Territorial capital of rural areas: an example of analysis of the potential for rural tourism development in Serbia. In Škorić, D, Tomić, D. and Vesna, Popović (Ed.). *AGRI-FOOD SECTOR IN SERBIA STATE AND CHALLENGES*. Serbian Association of Agricultural Economics and Serbian Academy of Sciences and Arts. Belgrade. pp. 201-233; ISBN 978-86-86087-27-0 DOI: 10.22004/ag.econ.157552
2. Christodoulou, A., & Cullinane, K. (2019). Identifying the Main Opportunities and Challenges from the Implementation of a Port Energy Management System: A SWOT/PESTLE Analysis. *Sustainability*, 11(21), 6046. <https://doi.org/10.3390/su11216046>
3. Gonan Božac, M. (2008). SWOT analiza i TOWS matrica – sličnosti i razlike. *Economic Research – Ekonomska istraživanja*, 21(1), 19–34.
4. Hodge I. and P. Midmore (2008). Models of Rural Development and Approaches To Analysis Evaluation And Decision-Making. *Économie rurale [En ligne]*. Vol. 307. <https://doi.org/10.4000/economierurale.406>
5. Janković, D. (2020). Društvene promene i ruralni razvoj: značaj socijalnog kapitala, participacije i društvenih mreža. Poljoprivredni fakultet Novi Sad. ISBN 978-86-7520-518-0
6. Janković, D; Novakov, M. i M. Petrović (2017). Iskustva empirijskih istraživanja u ruralnim područjima: izazovi intervjuva i ankete. *Agroekonomika*. ISSN 0350-5928. Vol. 46/74. Str.47-62.
7. Janković, D; Zekić, V; Trkulja, G. (2025). Kratki lanci snabdevanja i potrošnja tradicionalnih prehrambenih proizvoda u Sremu. *Agroekonomika*. Vol. 54/106. Poljoprivredni fakultet Novi Sad. ISSN 0350-5928
8. JKP "Vode Vojvodine" (2022). Plan upravljanja parkom prirode "Begečka jama" za period 2022. do 2031. Vode Vojvodine.
9. Lee, J. Árnason, A., Nightingale, Andrea and M. Shucksmith (2005). Networking: social capital and identities in European rural development. *Sociologia Ruralis*. Vol 45 (4). P. 269-283.

10. Leigh, D. (2009). SWOT Analysis. In K. H. Silber, W. R. Foshay, R. Watkins, D. Leigh, J. L. Moseley, & J. C. Dessinger (Eds.), *Handbook of Improving Performance in the Workplace: Volumes 1–3* (pp. 115–140). John Wiley & Sons.
<https://doi.org/10.1002/9780470592663.ch24>
11. Lowe, P. (2003). Neo-Endogenous Development, Territory and Rural Innovation. Internet stranica: http://www.sociologia.unical.it/rural_areas/paper/eng/lowe.ppt.
12. Lowe, P., Murdoch, J., and N. Ward (1995). Networks in Rural Development: Beyond Exogenous and Endogenous Models. U Ploeg, J. D. van der and G. van, Dijk (eds). Beyond modernization. Royal Van Gorcum. Assen.
13. Ploeg, J. D. van der (2003). Rural development and the mobilisation of local actors. EU Rural Development Conference. Salzburg. Internet stranica: <http://ec.europa.eu/comm/agriculture/events/salzburg/panels/ploeg.pdf>