

THE RE/BUFFING EFFECTS OF TOURISM ON LANDSCAPE

CEETO CONFERENCE ON PROTECTED AREAS AND SUSTAINABLE TOURISM
24TH OCTOBER 2018 - OPATIJA



BIRO

Zagreb based architectural office, founded in 2016



DESIGN OF LJ. ŠRAM STREET
Zagreb

1ST PRIZE



DESIGN OF A SQUARE IN
HABDELIĆ STREET
Varaždin

1ST PRIZE



MEMORIAL IN '12 VETERANS' PARK
Lepoglava

2ND PRIZE



HOLOCAUST VICTIMS MEMORIAL
Zagreb

2ND PRIZE



DESIGN OF FOOD MARKET 'GRAD'
Zadar

PARTICIPATION



DESIGN OF OLD TOWN MARKET
Šibenik

1ST PRIZE



DESIGN OF
STROSSMAYER STREET
Crikvenica

1ST PRIZE



DESIGN OF TRADITIONAL
CRAFTS SQUARE
Varaždin

4TH PRIZE

THE RE/BUFFING EFFECTS OF TOURISM ON LANDSCAPE

buff

verb, /bʌf/

1. to polish or shine (something)

rebuff

verb, /rɪˈbʌf/

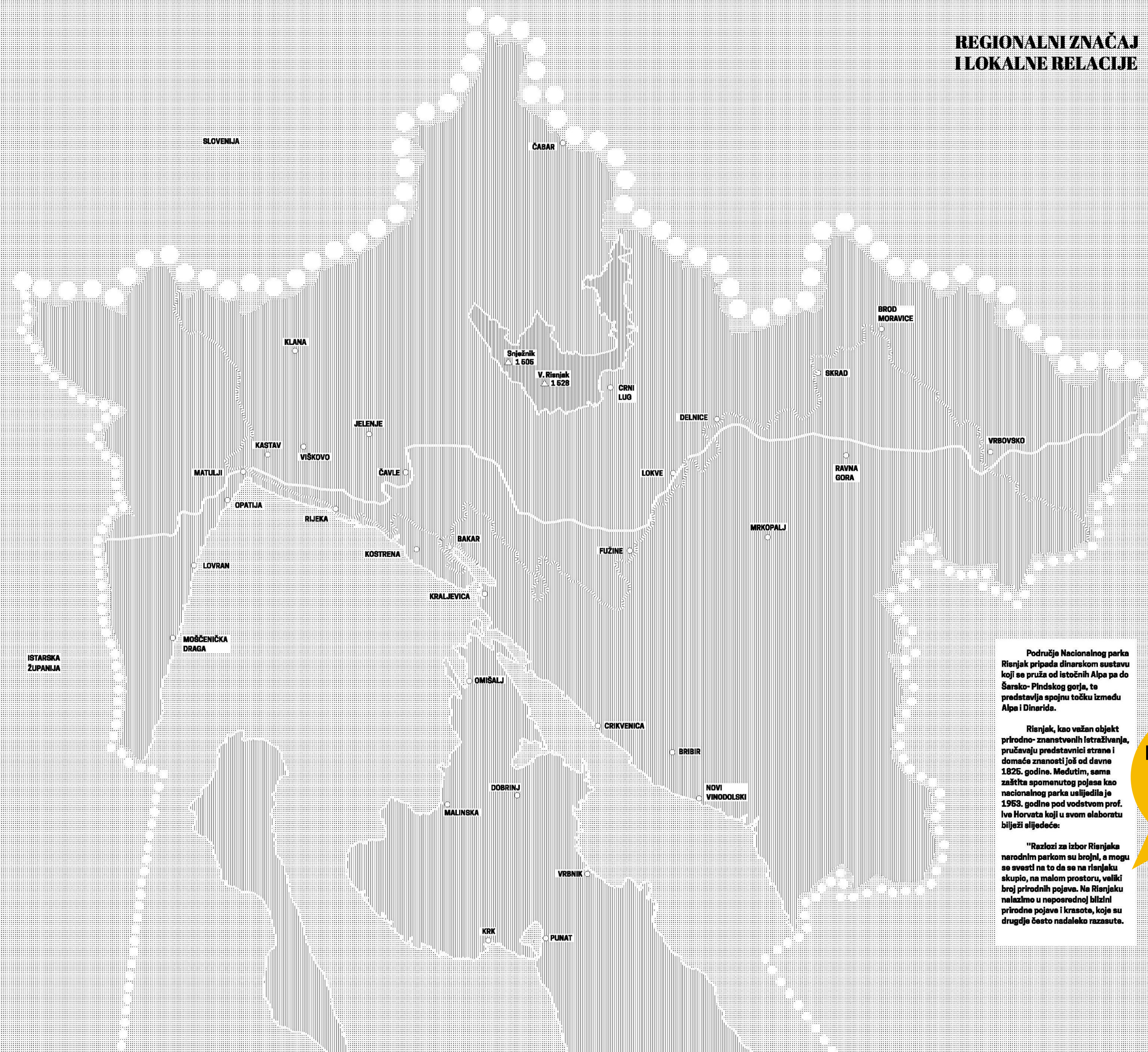
1. to reject (someone or something)



LANDSCAPE SCALES › NP RISNJAK ‹

NATIONAL PARK RISNJAK, CROATIA

Graduate thesis, Saša Košuta, 2015
Faculty of Architecture, University of Zagreb



PROMETNE UDALJENOSTI
(CESTOVNI PROMET)

RIJEKA	- CRNI LUG	MINS	43
ZAGREB			93
LJUBLJANA			111
TRST			111
BRIJUNI			108
PLITVIČKA			
JEZERA			124
PAKLENICA			141



Područje Nacionalnog parka Risnjak pripada dinarskom sustavu koji se pruža od istočnih Alpa pa do Šarsko-Plinskog gorja, te predstavlja spojnu točku između Alpe i Dinarida.

Risnjak, kao važan objekt prirodno-znanstvenih istraživanja, pružavaju predstavnici strane i domaće znanosti još od davne 1825. godine. Međutim, sama zaštita spomenutog pojasa kao nacionalnog parka uslijedila je 1963. godine pod vodstvom prof. Iva Horvata koji u svom elaboratu bilježi sljedeće:

"Razlozi za izbor Risnjaka narodnim parkom su brojni, a mogu se svesti na to da se na risnjaku skupio, na malom prostoru, veliki broj prirodnih pojava. Na Risnjaku nalazimo u neposrednoj blizini prirodne pojave i krasote, koje su drugdje često nadaleko razasute.

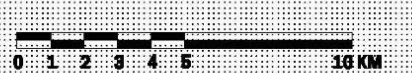
Risnjak je usto u prošlosti toliko pošteđen od gospodarskih utjecaja, da je u njemu prirodna vegetacijska slika gotovo nepromjenjena, a ukoliko je bila izmjenjena povremeno, to je bilo u utjecaju...

Ujedno, proširenjem parka na kupesku dolinu, ovo područje je dobilo i međunarodni značaj, kao kulturni krajolik s jedinstvenim krškim pojavama, jer se nadovezuje na područje između Triglava i Risnjaka, što čini predmet istraživanja međunarodnih institucija (Ruronatur, Eu Cost projekt 65).

U visinskom pogledu NP Risnjak se proteže od 290 metara nadmorske visine u dolini rijeke Kupe, pa do 1 628 metara koliko iznosi visina najvišeg vrha u masivu Risnjak-Veliki Risnjak. Veliki Risnjak zajedno s masivom Snježnika predstavlja veliku klimataku i vegetacijsku pregradu između primorskih i kopnenih dijelova Hrvatske što kao posljedicu nudi bogatstvo prirodnih fenomena.

LOCATION AND FOUNDING OF NATIONAL PARK

SITUACIJA 1:200 000





Snježnik



Ursus arctos



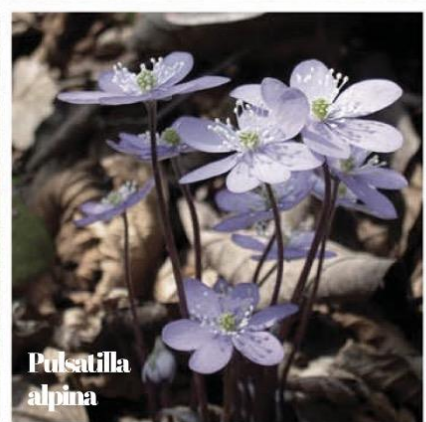
početna staza Leska



košnice-Razlog



Apis alpina



Pulsatilla alpina



Salamandra atra



Vulpes vulpes



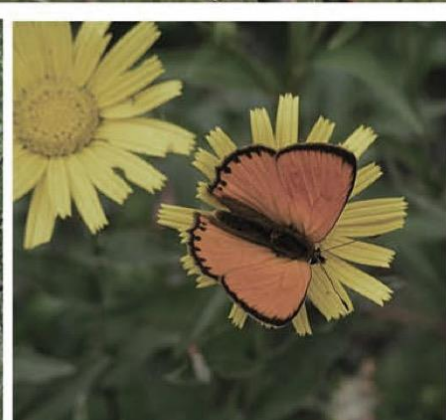
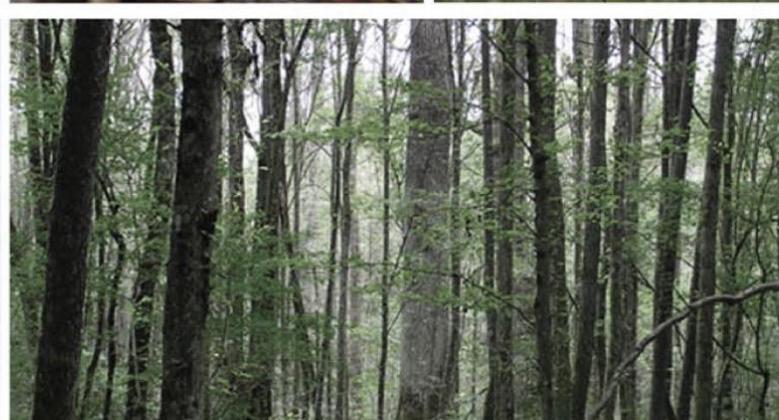
Razlog



Abies Fagetum dimorpha



Lynx lynx



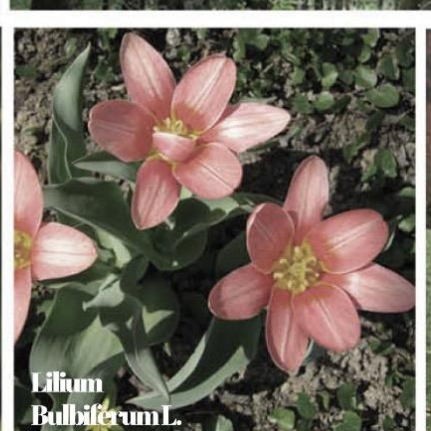
črka-Razlog



Lonicera linnetum mugii



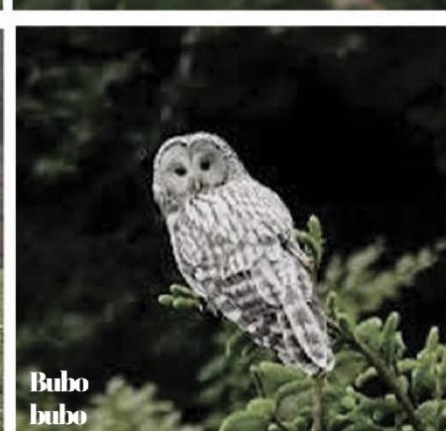
Menyanthes trifoliata



Filium Bulbiferum L.



Cervus elaphus



Bubo bubo



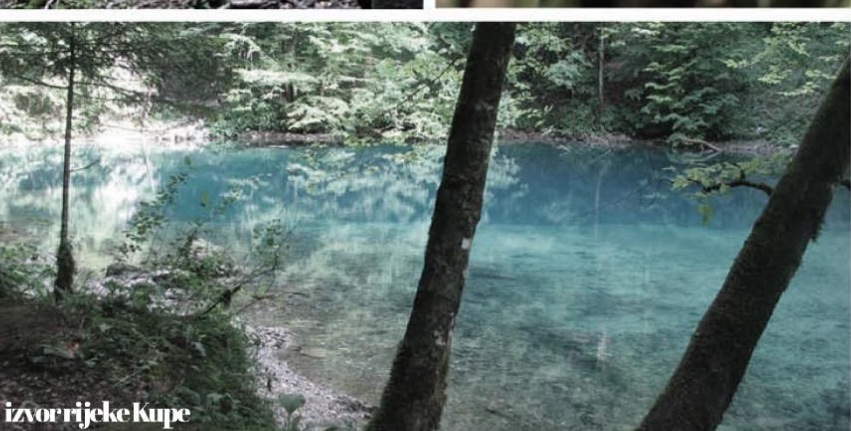
šindra



Konjci



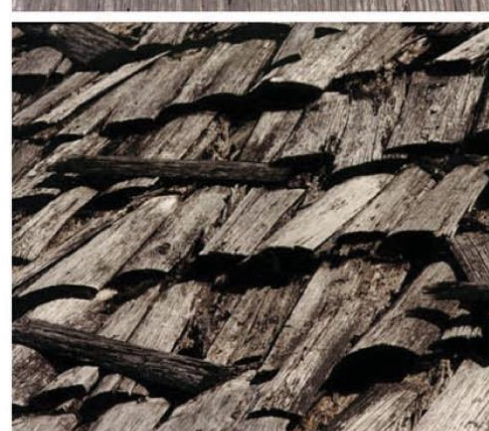
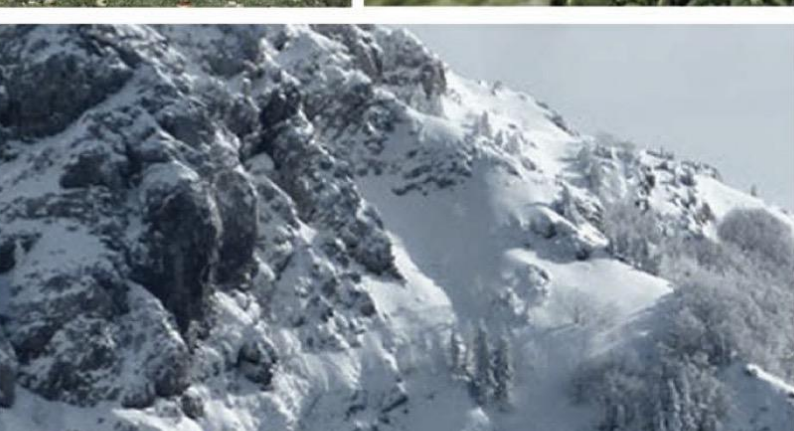
Buteo buteo



izvor rijeke Kupe



Tetrao urogallus



Busionym leontopodium alpinum



Canis lupus



Leska, stara kuća za odmor



Crni Lug

PRIJEDLOG PROGRAMSKO-PROSTORNOG UNAPREĐENJA SELA RAZLOGE KROZ FORMIRANJE JEDINSTVENOG ZNANSTVENO-EDUKACIJSKOG LABORATORIJA NAMJENJENOG ISTRAŽIVANJU IN-SITU TE SADRŽAJEM PRILAGOĐENOM ŠIROKOM SPEKTRU INTERESA, OD STRUČNIH DJELATNIKA DO ŠKOLSKE POPULACIJE.

ZNANSTVENO-EDUKACIJSKI LABORATORIJ IN-SITU

RAZLOGE

SCIENTIFIC AND EDUCATIONAL LABORATORY IN-SITU RAZLOGE

1 REGULACIJA VLASNIŠTVA

1.1 OBJEKTI U PRIVATNOM VLASNIŠTVU

1.1.1 RAZINA A PARTICIPATIVNO SUDJELOVANJE USTUPANJEM NEKRETNINE NA KORIŠTENJE UZ UNAPRIJED DOGOVORENE REŽIME UPOTREBE

1.1.2 RAZINA B POTPUNO PREPUŠTANJE, T.J. PRODAJA/ OTKUP OD STRANE OPĆINE (NACIONALNOG PARKA)

1.2 OBJEKTI U VLASNIŠTVU OPĆINE (NACIONALNO PARKA) PRAVNO SPREMNI ZA UVRŠTAVANJE U PROJEKT

1.3 OBJEKTI U VLASNIŠTVU CRKVE NISU OBUHVAĆENI PROJEKTOM

2 USTROJ SUSTAVA

2.1 UPRAVA NACIONALNOG PARKA DUŽNA ORGANIZIRATI SPECIJALNIZIRANI ODJEL UNUTAR SVOG KADRA NAMJENJENOG ZA UPRAVLJANJE PREDLOŽENIM SMJEŠTAJNO-RADNIM SKLOPOM

2.2 POZADINSKI USTROJ SKLOPA NALAZI SE IZVAN GRANICA NACIONALNOG PARKA (SELA KAO CRNI LUG, MALO SELO, HRIB, HRVATSKO, MRZLE VODICE, GEROVO, DELNICE)

2.3 POD POZADINSKIM USTROJOM MISLI SE NA SLJEDEĆE:
- ADMINISTRATIVNO- UPRAVNI UREDI
- SMJEŠTAJNI KAPACITET ORGANIZACIJSKOG KADRA
- TEHNIČKI PROSTORI I POGONI (GLAVNA KUHINJA, PRAONICA RUBLJA, GENERALNO SKLADIŠTE, RADIONICE I SL.)

3 TRANSPORT UNUTAR NACIONALNOG PARKA

3.1 UKIDA SE MOGUĆNOST KORIŠTENJA PRIVATNIH VOZILA TE SE POVEĆAVA PARKIRNI KAPACITET NA SAMOJ GRANICI NACIONALNOG PARKA

3.2 UVODI SE SUSTAV ORGANIZIRANOG GRUPNOG PRIJEVOZA ZA NEKOLIKO RAZINA KORISNIKA TZV. 'SHUTTLE' BUSOM

3.3 STANICE 'SHUTTLE' BUSA RASPOREĐENE SU NA SVIM INTERESNIM TOČKAMA PARKA ILI SE PO POTREBI ORGANIZIRA VANREDNA VOŽNJA

3.4 CIJENA KORIŠTENJA PRIJEVOZA UKLJUČENA JE U CIJENU ULAZNIKE NACIONALNOG PARKA

3.5 OZNAKA STANICE 'SHUTTLE' BUSA

4 INTERESNE SKUPINE POSJETITELJA

4.1 ZNANSTVENO- ISTRAŽIVAČKI STRUČNI RADNICI, IZ POLJA:

- BOTANIKE
- ZOOLOGIJE
- GEOLOGIJE
- HIDROLOGIJE
- METEOROLOGIJE
- AGROKULTURE

4.2 TURISTIČKO- REKREATIVNI POSJETITELJI

- VIKEND IZLETNICI
- PLANINARI
- REKREATIVCI I PROFESIONALNI SPORTAŠI
- ŠKOLSKA POPULACIJA

4.3 PRAKTIČARI ZANATA I OBRADNE ZEMLJE

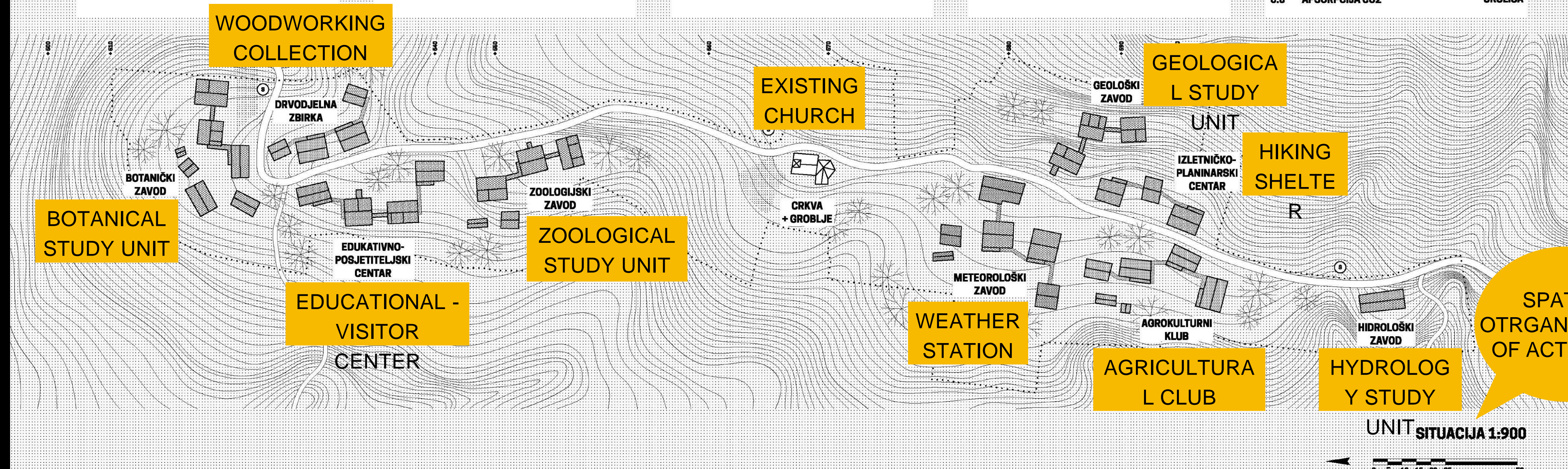
- TRADICIONALNI DRVNI OBRT
- TRADICIONALNA POLJOPRIVREDA

5 KAPACITETI

5.1 LEŽAJEVI	98 KREVETA
5.2 RADNE JEDINICE	60 MJESTA
5.3 EDUKATIVNI PRIHVAT	140 POSJETITELJA
5.4 UGOSTITELJSKI PRIHVAT	110 GOSTIJU

6 SAMOPROIZVODNJA

6.1 GRIJANJE/ HLAĐENJE	100%
6.2 ELEKTRIČNA ENERGIJA	KORIŠTENJE
6.3 KIŠNICA	OBNOVLJIVIH
6.4 ZAGRIJAVANJE VODE	IZVORA
6.5 PROIZVODNJA HRANE	ENERGIJE
6.6 RAZGRADNJA ORGANSKOG	
OTPADA	0%
6.7 HUMUS	ZAGAĐENJA
6.8 APSORPCIJA CO2	OKOLIŠA



*sklopište, m (mn sklopišta)
reg. od sklop

*vezak, m
hip. od veza

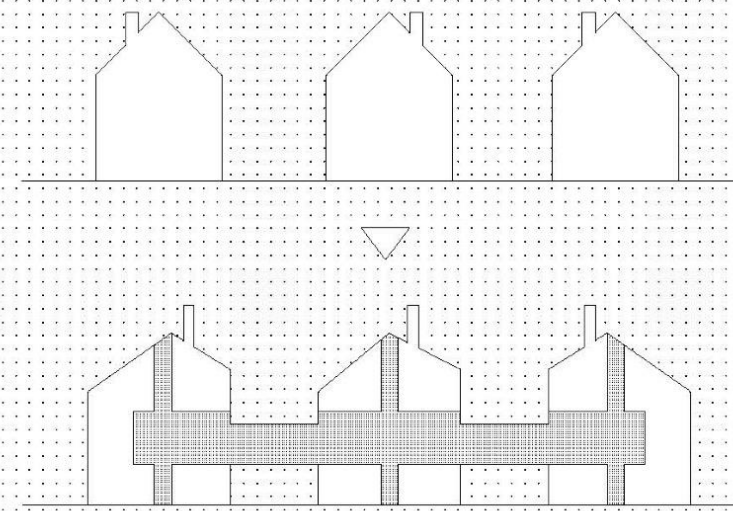
1. (organizirana) cjelina koja se sastoji
od više međusobno povezanih
elemenata

1. suodnos između predmeta u
prostoru ili u vremenu

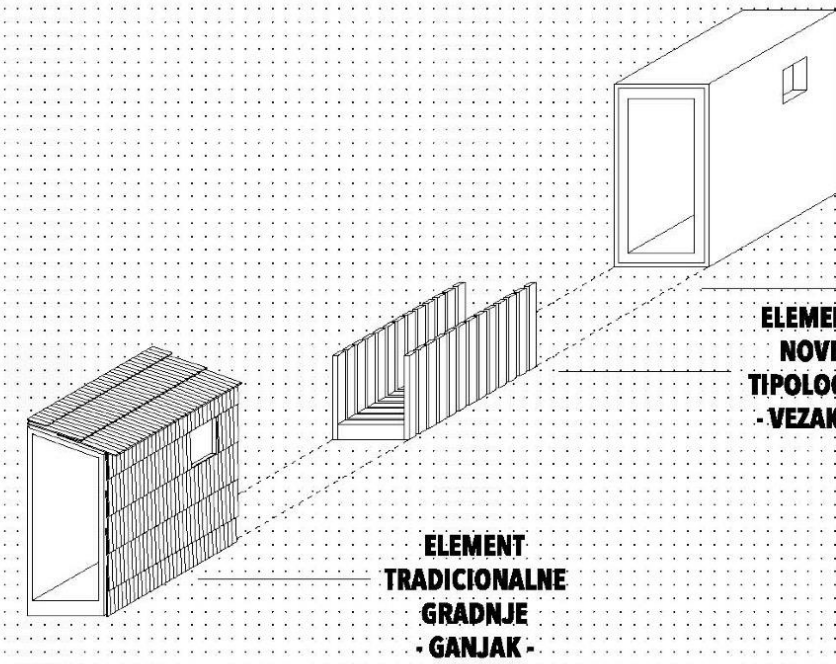
STVARANJE
CJELINA

SKLOPIŠTA*

CREATING UNITS
SKLOPIŠTA



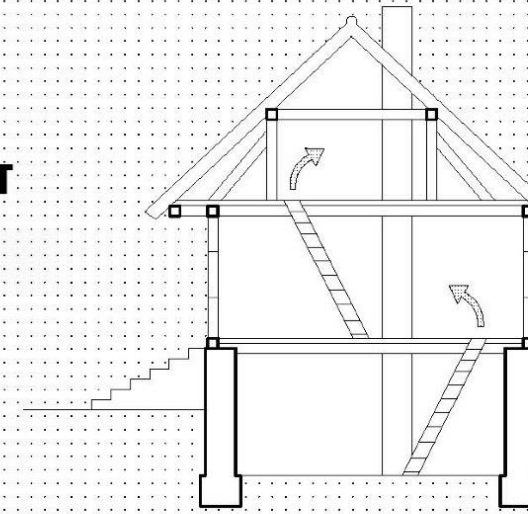
POVEZIVANJE



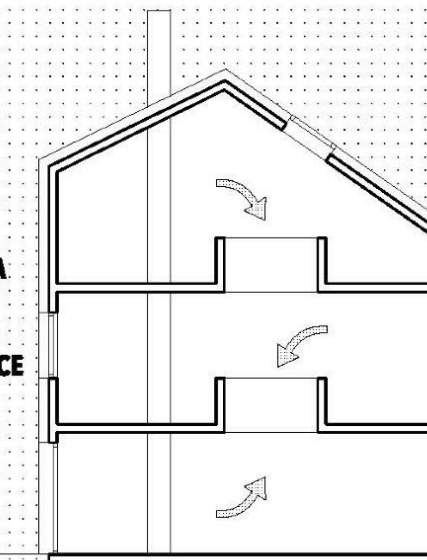
ELEMENT
TRADICIONALNE
GRADNJE
- GANJAK -

ELEMENT
NOVE
TIPOLOGIJE
- VEZAK* -

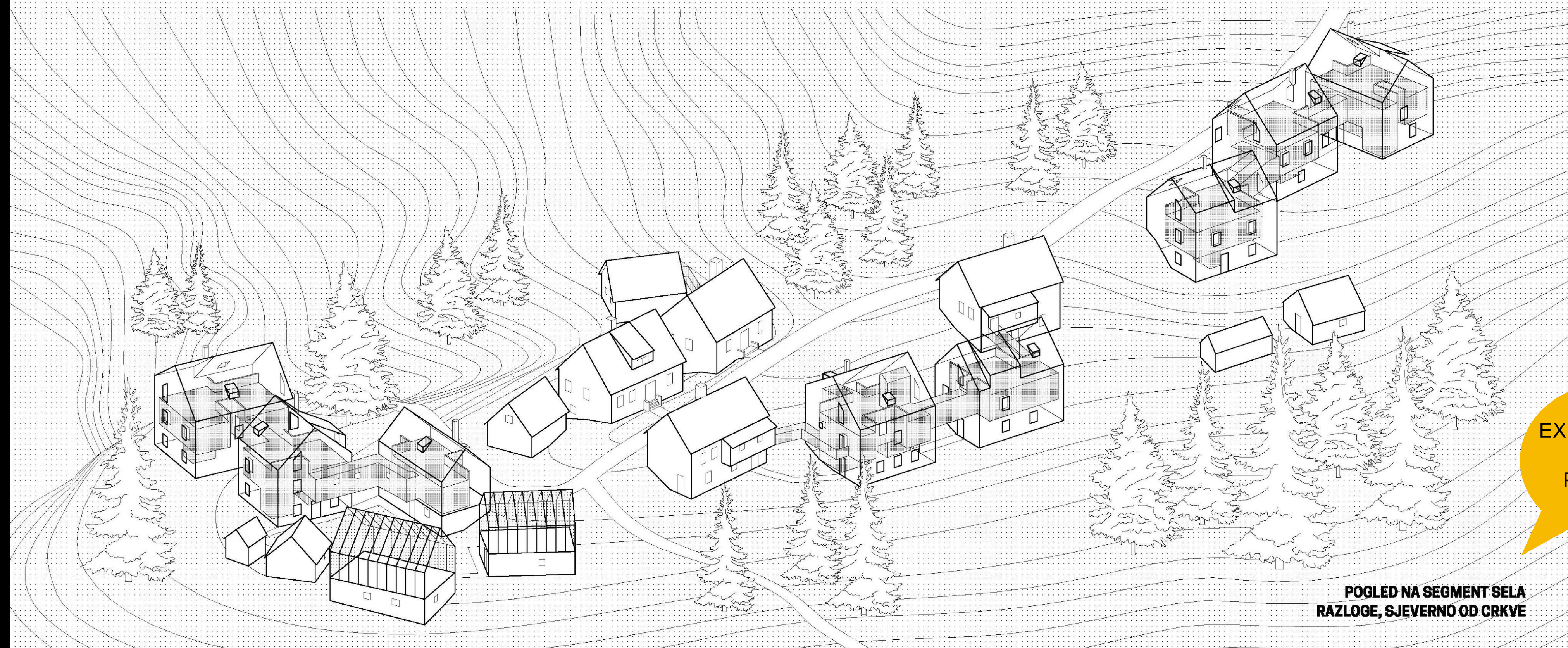
MATERIJALNOST
/
PROSTORNOST



ZRAČNI PROSTOR
PROSTOR
BORAVLJENJA
ŽIVOTINJE
SAV POTREBAN SADRŽAJ
U SUODNOSU
POD JEDNIM KROVOM



RESPECTING
TRADITIONAL
CONSTRUCTION
ELEMENTS



EXISTING AND
NEWLY
PLANNED
UNITS

POGLED NA SEGMENT SELA
RAZLOGE, SJEVERNO OD CRKVE





Cjelokupni sustav odnosi se na 27 objekata, prosječne kvadrature 140 m² te 98 osoba koje privremeno borave u prostoru.

Objekti su projektirani da bi zadovoljili
 U=0,2-0,25 W/m²K za zidove i krov te
 U=1,1-1,4 W/m²K za prozore.

KONCEPT ENERGETSKE
 UČINKOVITOSTI

SAMOODRŽIVOST

ENERGY
 EFFICIENCY
 SELF-SUFFICIENCY

A. VODA I ODVODN

1. SUSTAV ZA SKUPLJANJE KIŠNICE I PROIZVODNJU PITKE VODE

- potrebno je da osigura (230-270 lit/dan x 27 objekata) = 6200-7300 lit/dan

WATER AND
 SEWAGE

3. NAVODNJAVANJE POLJOPRIVREDNIH POVRŠINA

- osigurava se djelomično iz biopročišćivača
 - ostatak se nadoknađuje iz bušotine za iskoristavanje podzemne vode koja ujedno služi za potrebe temperiranja betonske jezgre

B. GRIJANJE I HLAĐENJE

1. TEMPERIRANJE BETONSKE JEZGRE (KOJA GRANIČI S VANJSKIM PROSTOROM) = DIZALICA TOPLINE, KORIŠTENJEM TEMPERATURE ZEMLJE I PODZEMNIH VODA

- za 27 objekata pri proračunskoj snazi grijanja od 4,7-5,2 kW/kuća, 4800-5200 kWh/sezona grijanja potrebno je za temperiranja betonske jezgre iz geo izvora 90-110 kW ili 6 l/s podzemne vode uz T=5 °C

HEATING AND
 COOLING

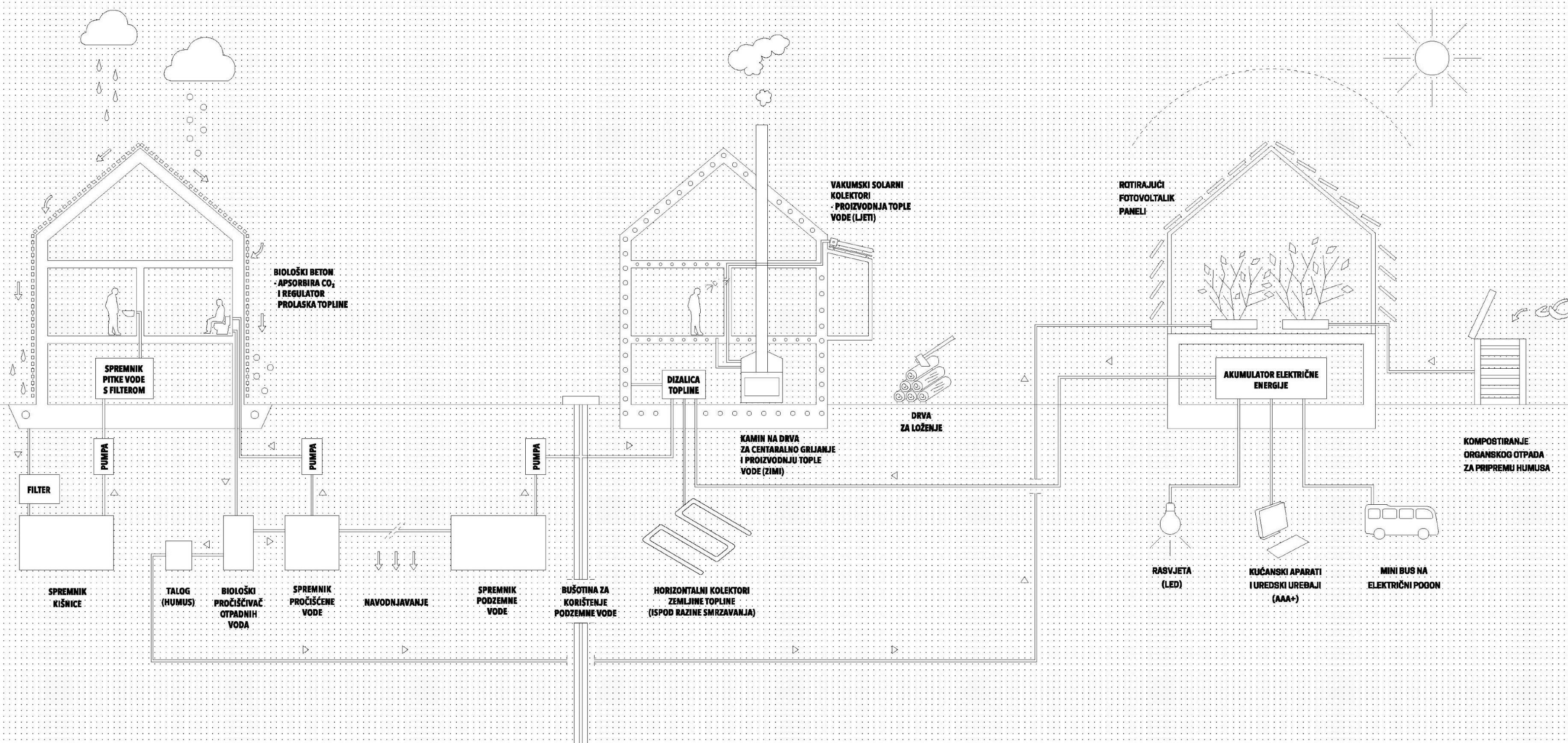
C. ELEKTRIČNA

1. PROIZVODNJA ELEKTRIČNE ENERGIJE = ROTIRAJUĆI FOTOVOLTAIK

- potrebna proizvodnja električne energije i temperiranje betonske jezgre = 1,1-1,3 kW/kući ili oca 8-10 m²
 - za led rasvjetu = 0,25-0,30kW
 - za AAA+ kućanske aparate = oca 350-600 kWh/god

ELECTRICAL
 ENERGY

direktno emisije CO₂
 tone biomase ne uzima se
 nodno apsorbirana za razvoj i

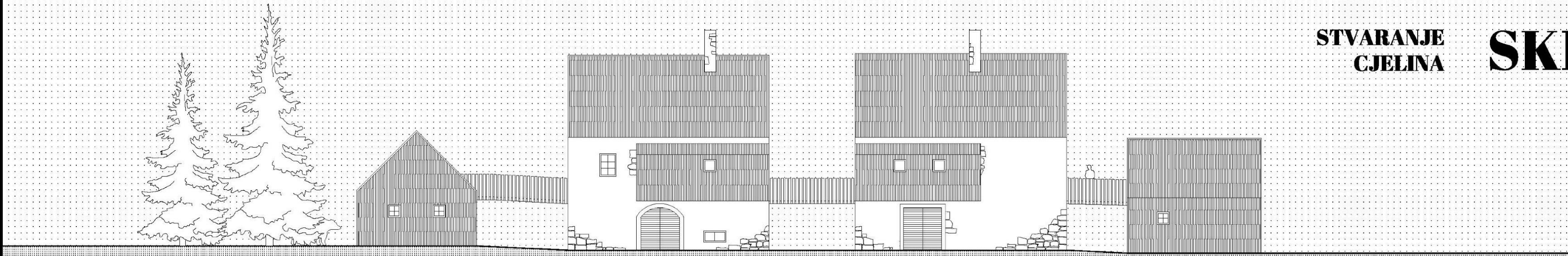


100% KORIŠTENJE OBNOVLJIVIH IZVORA ENERGIJE
 0% ZAGAĐENJA OKOLIŠA

STVARANJE
CJELINA

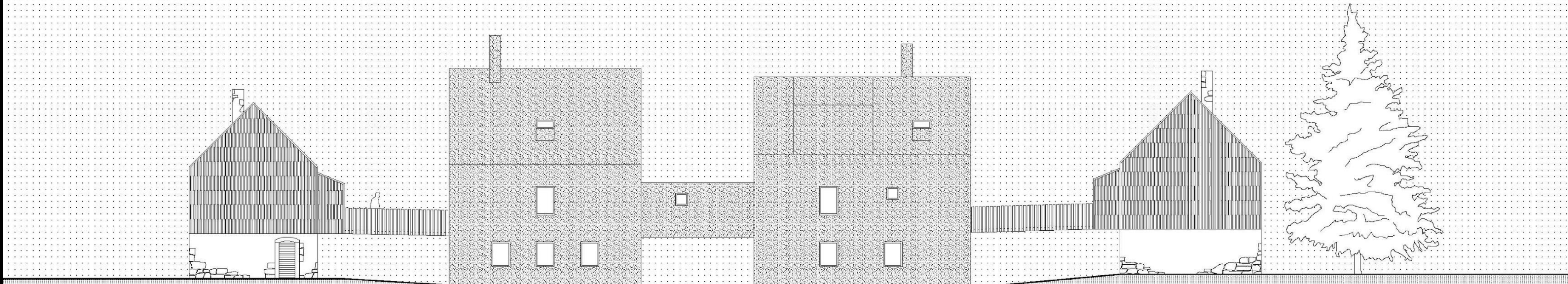
SKLOPIŠTA

CREATING
UNITS
SKLOPIŠTA



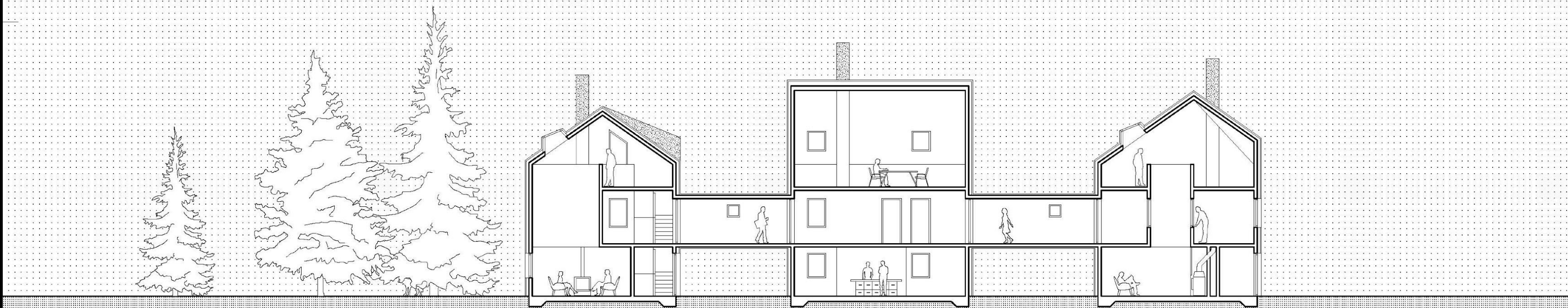
DRVODJELNA ZBIRKA

WOODWORKING
COLLECTION



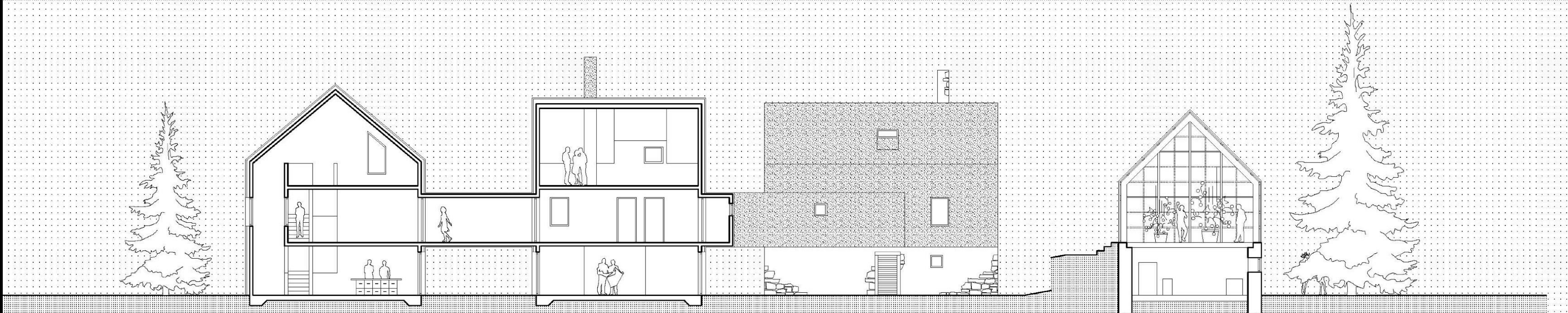
EDUKATIVNO-
POSJETITELJSKI CENTAR

EDUCATIONAL -
VISITOR
CENTER



ZOOLOGIJSKI ZAVOD

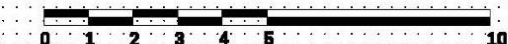
ZOOLOGICAL
STUDY UNIT



BOTANIČKI ZAVOD

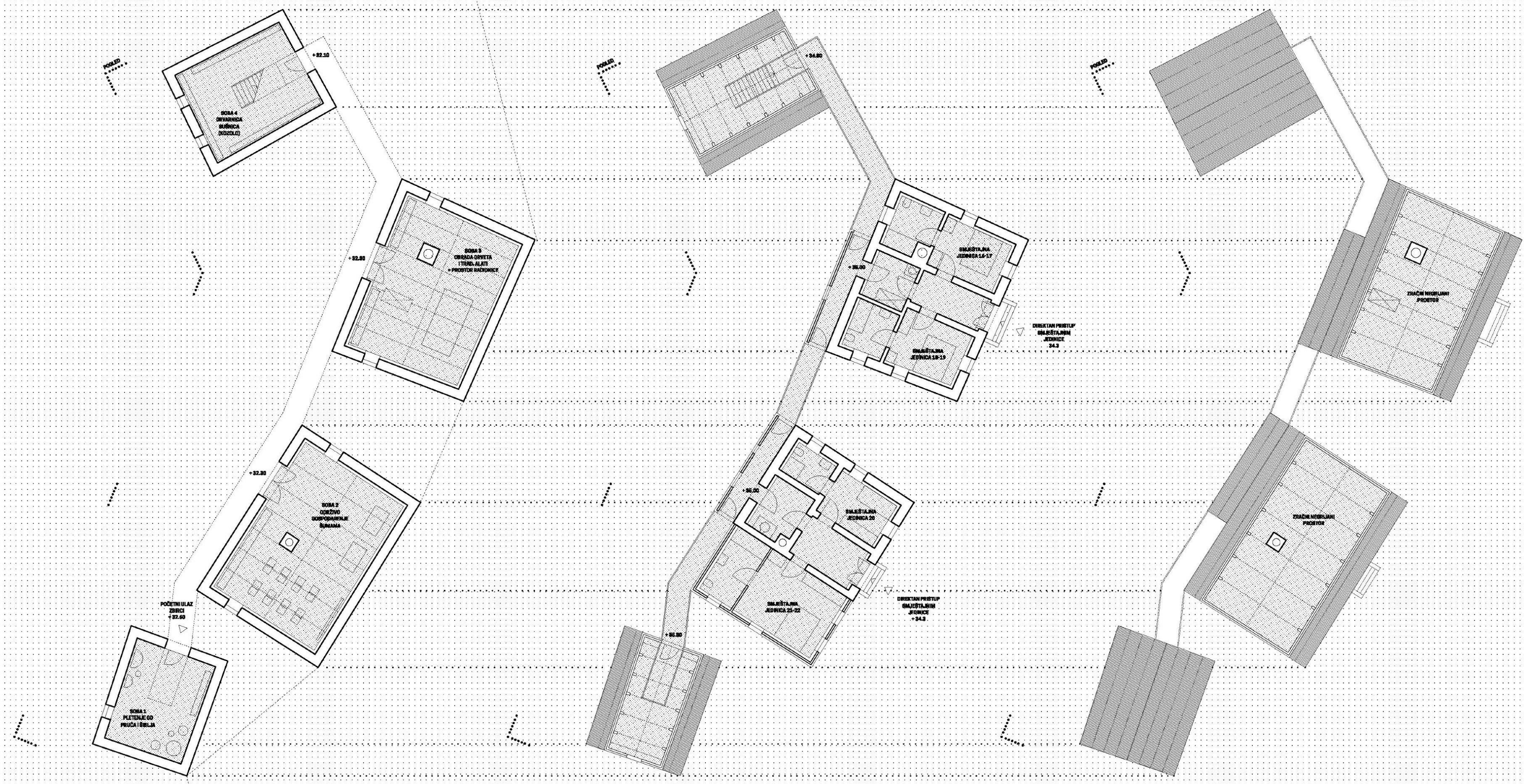
BOTANICAL
STUDY UNIT

PROČELJA I PRESJECI 1:150



2. DRVODJELNA ZBIRKA

WOODWORKING
COLLECTION

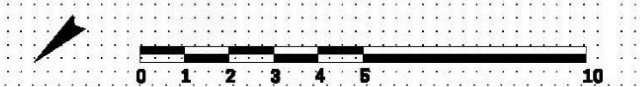


PODRUM

PRIZEMLJE

POTKROVLJE

TLOCRT 1:150



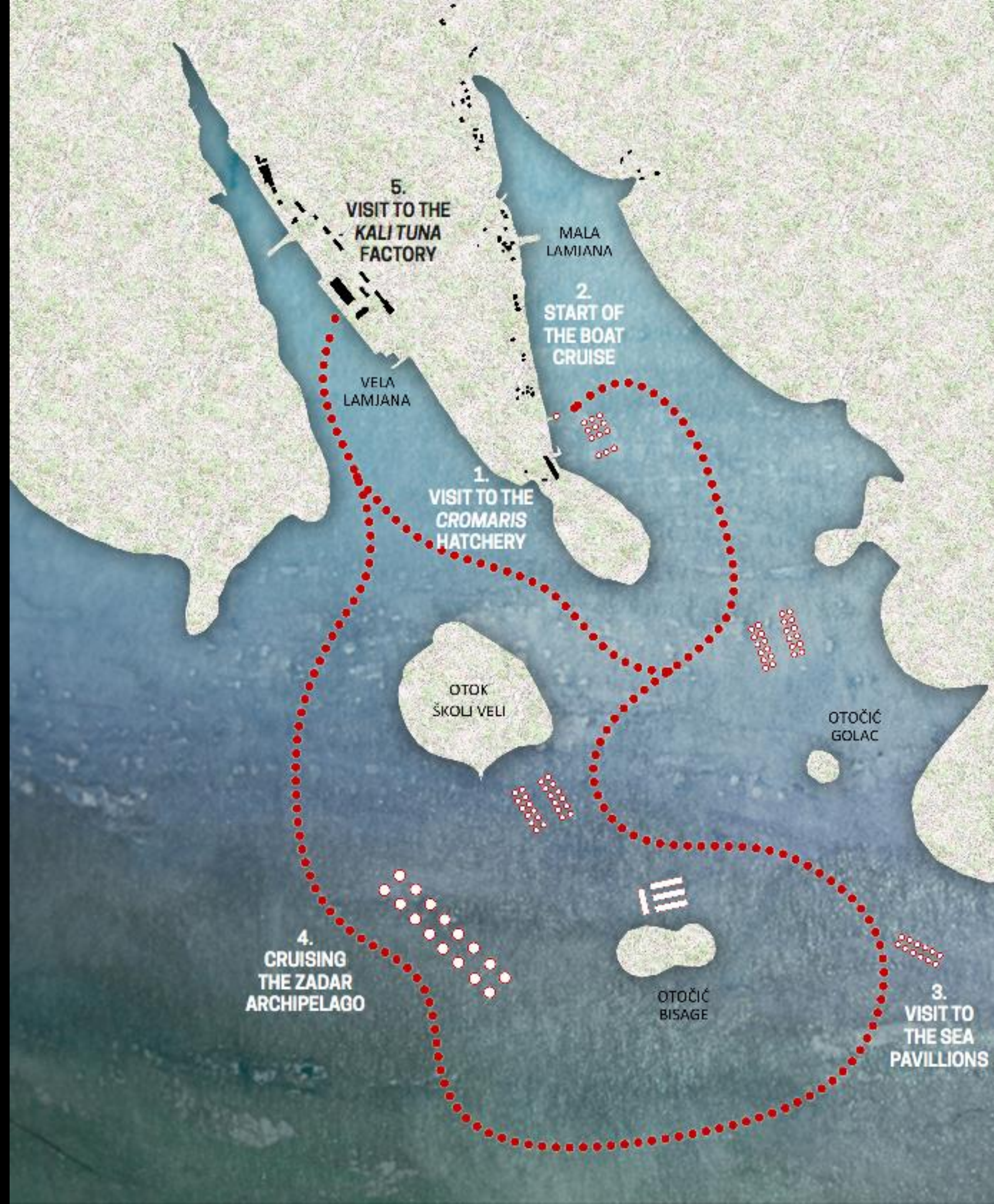


LIVING MUSEUM

› KULAF ‹

MALA LAMJANA, ISLAND OF UGLJAN,
CROATIA

Project is part of *Spatial testing of tourism development potential in Kali*, BIRO, 2016 based on *Strategic Tourism Development Plan of Kali Municipality 2015-2020*, Institute for Tourism, 2015 commissioned by Kali Municipality, island of Ugljan



The concept of a living museum is rooted in the ongoing discussion of the co-existence of society and its heritage and at the same time in the questioning of roles museums have as social institutions.

Offering a new and additional format to museum practice, living museums seek to protect and interpret heritage in situ including the local population as active participants living this fragmented exhibit. They seem to be especially well-suited to rural communities, rich in tangible and especially intangible heritage typically dispersed over large territory.

With such broadening of museum concepts, the focus of interest has shifted from 'the building' to 'territory' being covered by a museum. Conventional notions of borders and ownership over heritage are being replaced by relationships and cooperation generating interdisciplinary cultural systems.

Translating these ideas to the Adriatic island of Ugljan and specifically to Kali Municipality has resulted in a project exploring the notion of a fragmented museum as a means of both interpreting local heritage of this still dominantly fishing community and of linking it to tourism as a newly developing economic activity.

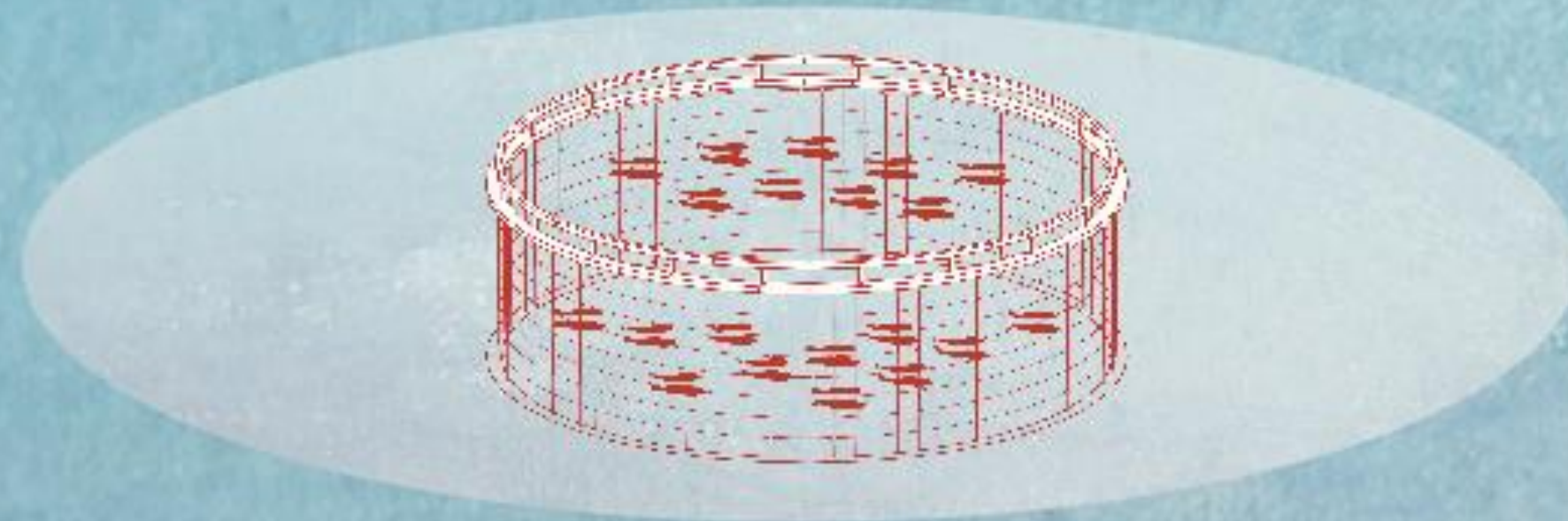
Spanning over two deep coves, named Velika and Mala Lamjana, the project proposes creating a system where fishing and tourism co-exists benefiting from existing potential and creating new possibilities. Visitors would be given the opportunity to view the aquaculture process first-hand, from a fish nursery, on to open sea fish farms and back to processing and packaging facilities, enhancing this experience further with a visit to a sea aquarium in the sea.

Built as a set of sea floating pavilions, the aquarium is a steel structure shaped in the form of fish farming systems nearby. It is composed of an arrival deck, a semi-covered auditorium for small lectures, events or just rest and tranquil enjoyment of the open sea or kulaf in the Kali dialect, an enclosed underwater viewing deck and walkways joining the system.

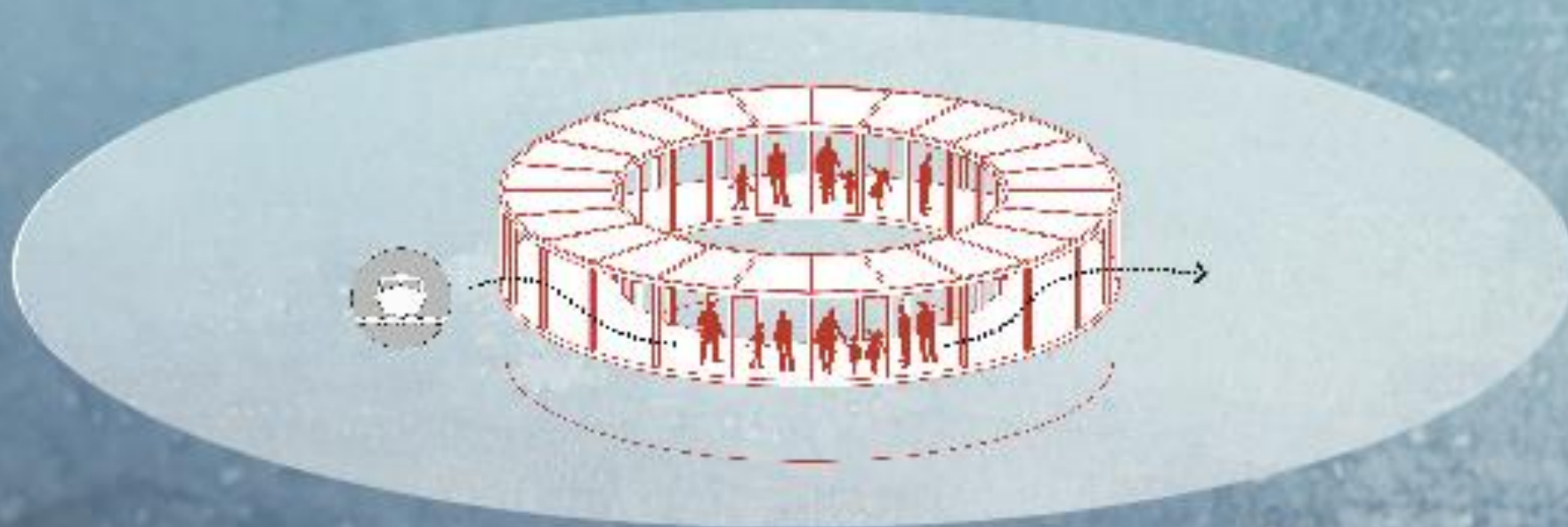
Presenting Kali's fishing heritage, the aquaculture facilities which drive today's economic activity and the natural sea environment makes this museum genre an exciting new cultural and economic development for the local community while at the same time creating impressive and memorable experiences for their guests.



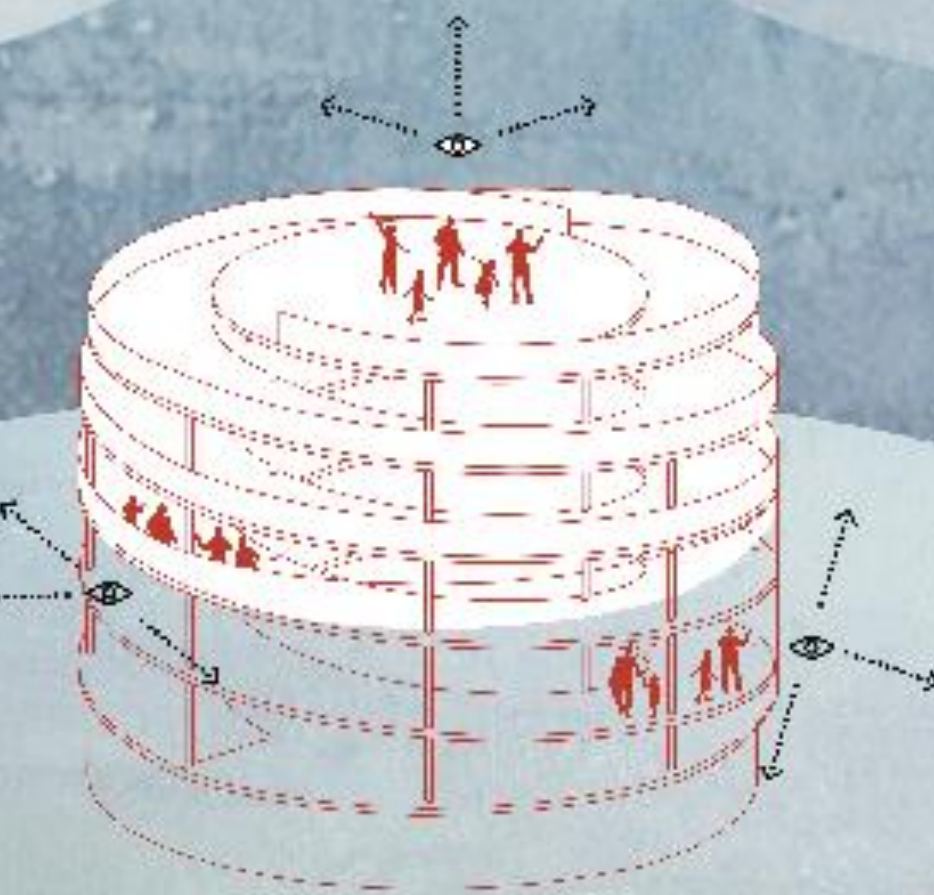
FLOATING FISH CAGES



BOAT DOCK



AUDITORIUM STAGE



UNDERWATER WATCHTOWER

FLOATING BOAT DOCK - ARRIVING GROUP OF VISITORS





UNDERWATER WATCHTOWER - OBSERVING THE SEASCAPE





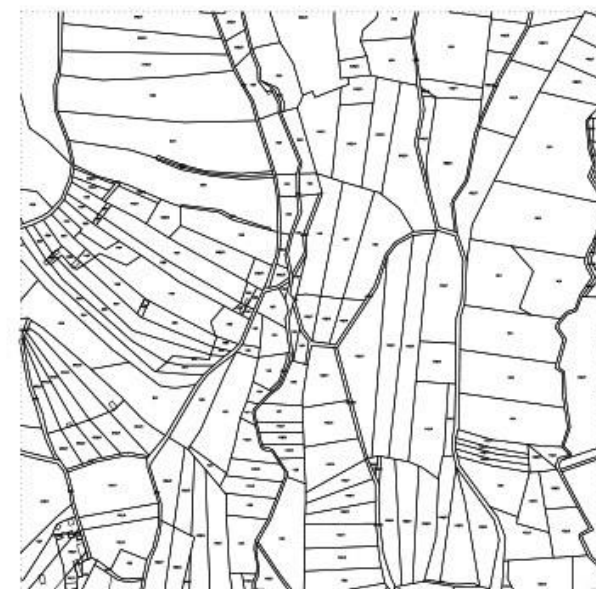
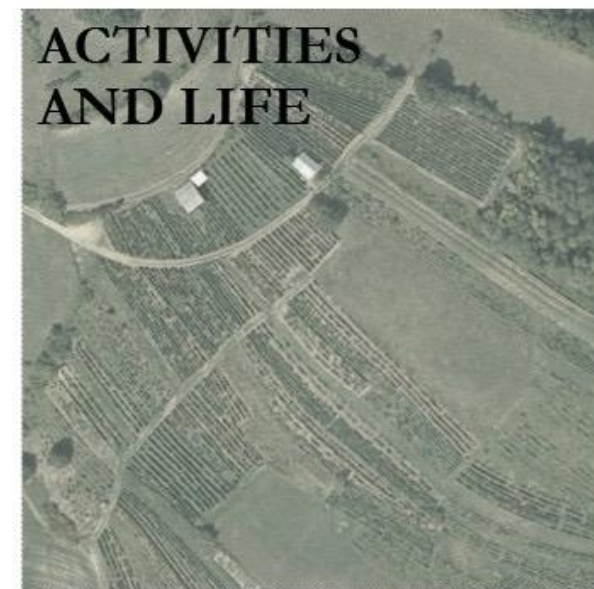
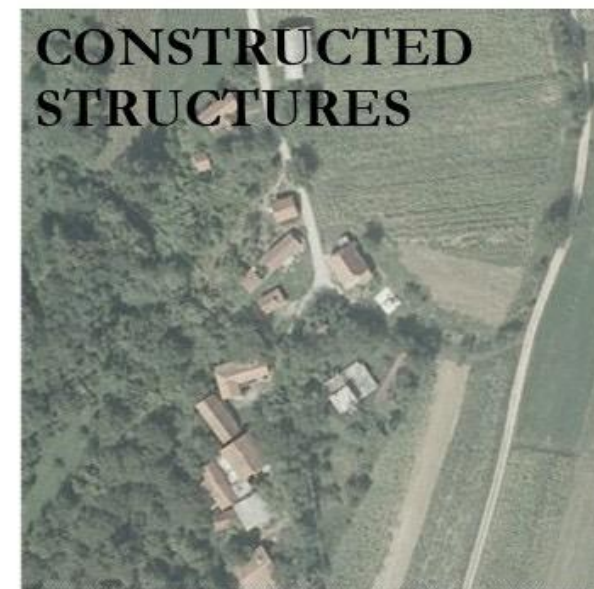
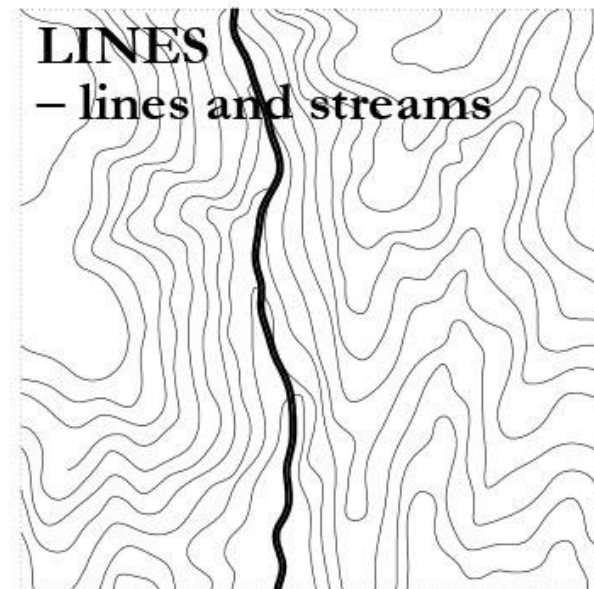
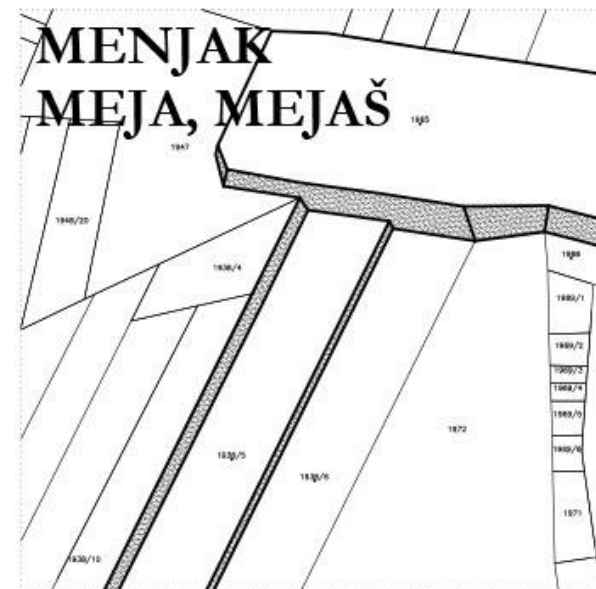
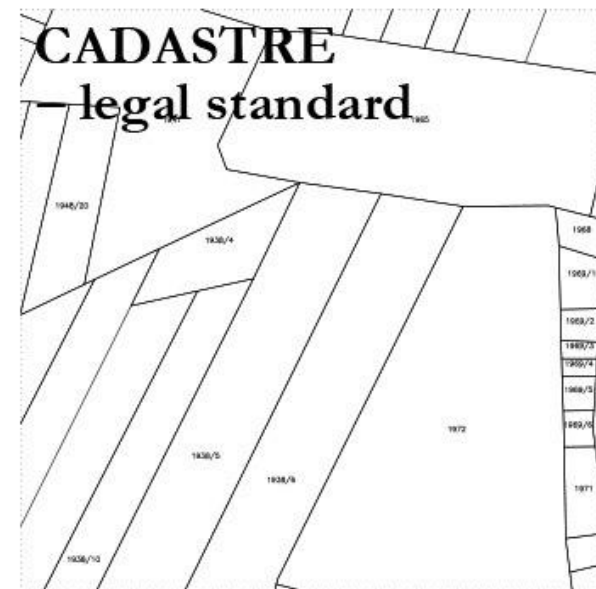
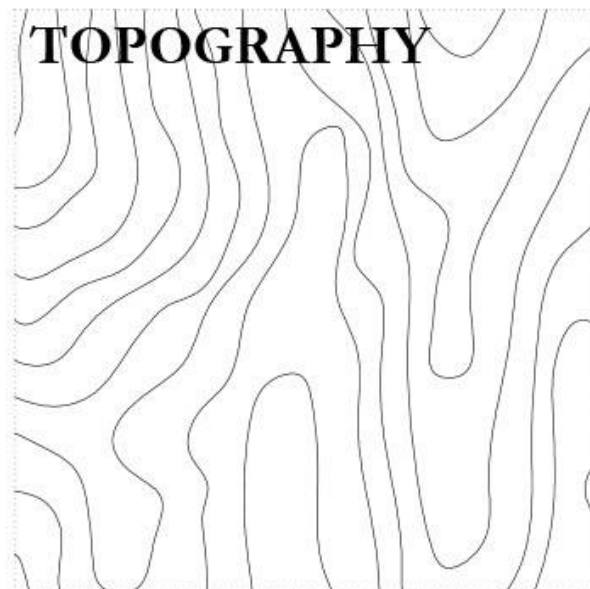


› HOUSE FOR
PUMPKINS,
GOATS & PEOPLE



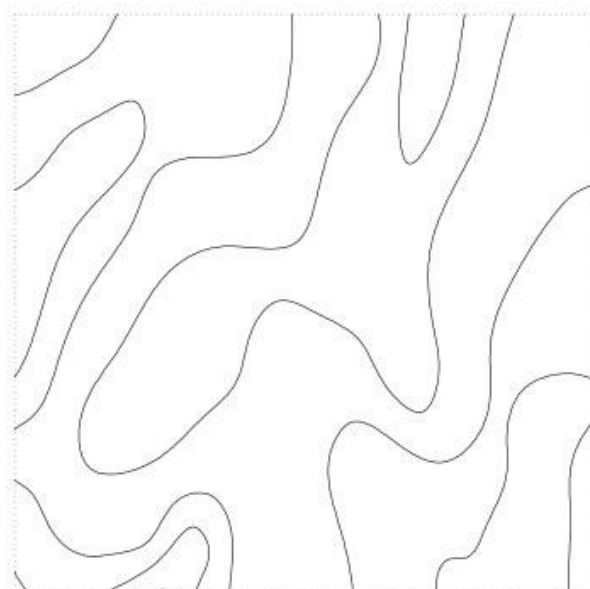
GRAD ZLATAR, NASELJE MARTINŠČINA

Graduate thesis, Mario Kralj, 2016
Faculty of Architecture, University of Zagreb



**CONSTRUCTED
STRUCTURES**

Compact hamlets, comprised of a smaller number of houses, scattered across the Zagorje hills. They are often dominated by **gabled roofs** that follow the hilly topography, most often lined along the ridge of the hill.



MEJAKI/MEJE/MEJAŠI

A layer of the landscape (territory) that developed as a result of human agricultural activities and of the cadastre as an abstract legal standard and hilly topography. A ***mejak*** is the altitude difference between plots of arable land that belong to different owners.

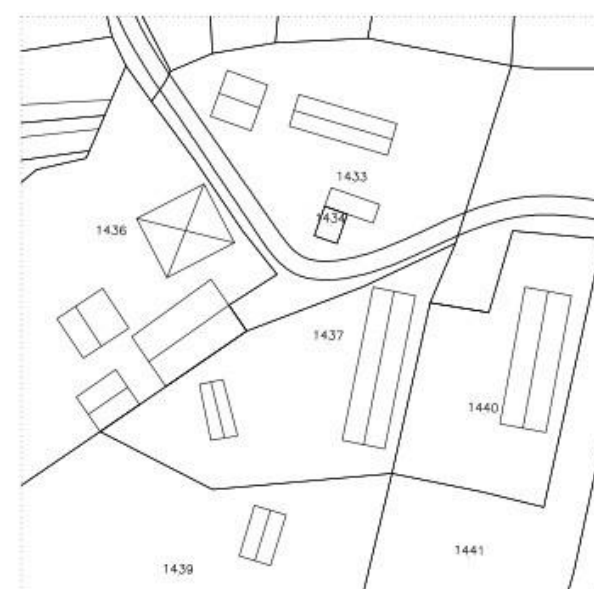
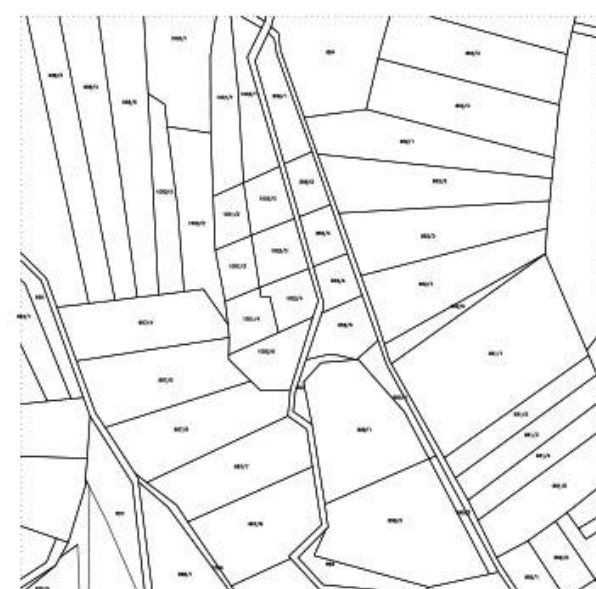


ACTIVITIES AND LIFE

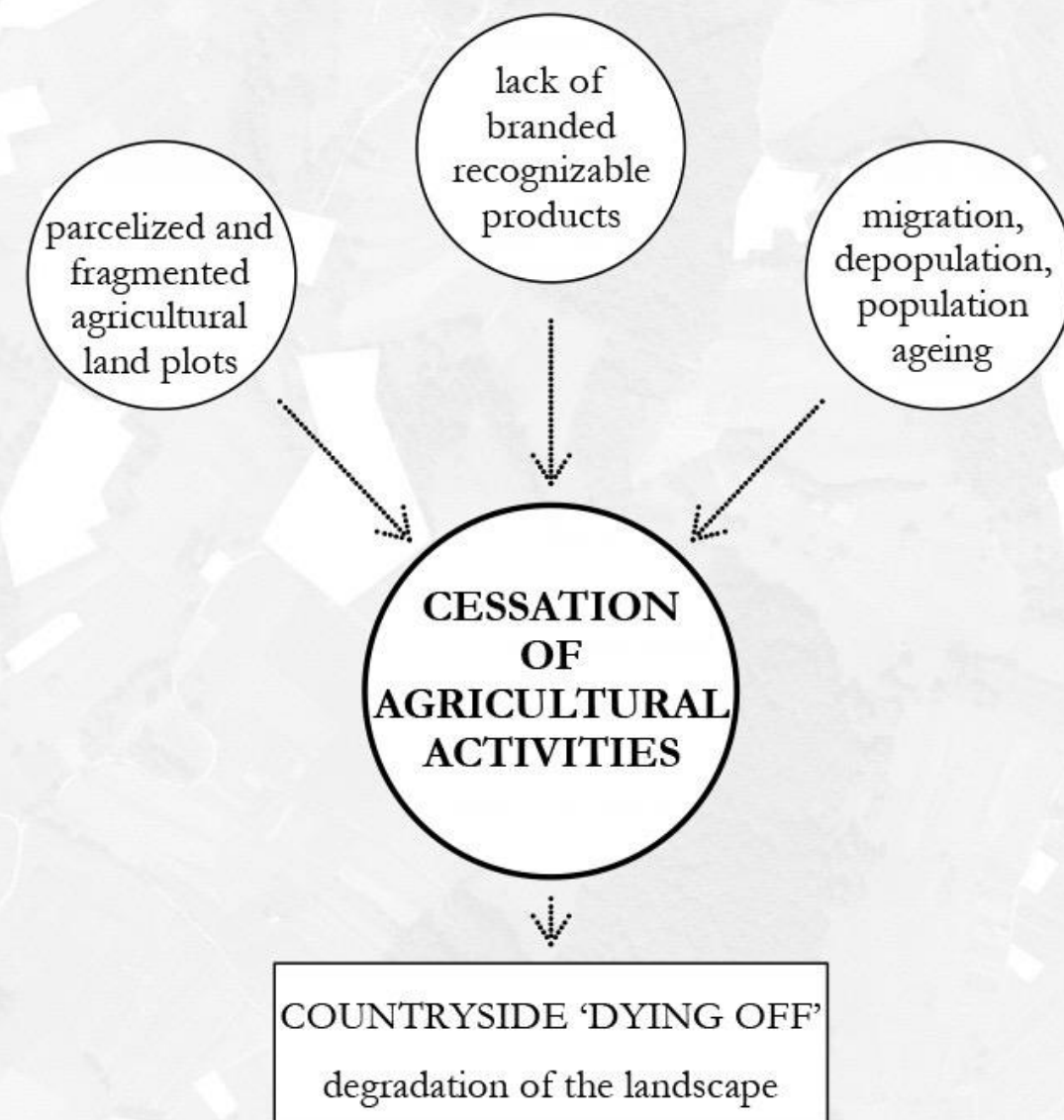
The most significant components of the Zagorje cultural landscape are the human activities that have given it its final image in the form of agricultural cultures or sinuous lines of the Zagorje vineyards. The landscape is a reflection of human activities.

**COMPONENTS OF THE
LANDSCAPE**

A holistic definition of landscape comprises the total character of an area; as the physiognomy of man's material surroundings, the landscape is made out of both material and immaterial components.
D. Bilušić: Landscape as cultural heritage, p. 41

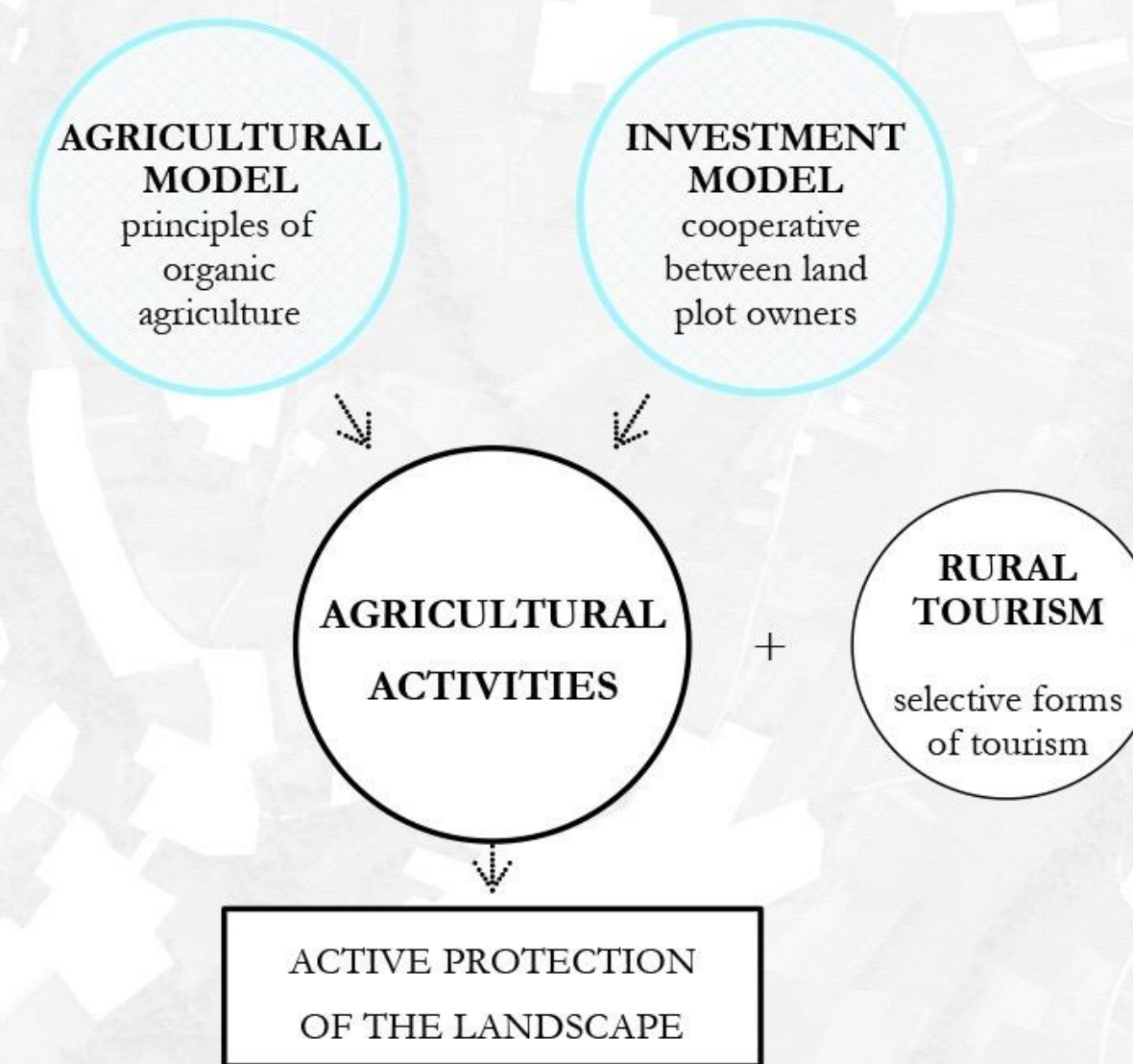


EXISTING CONDITION

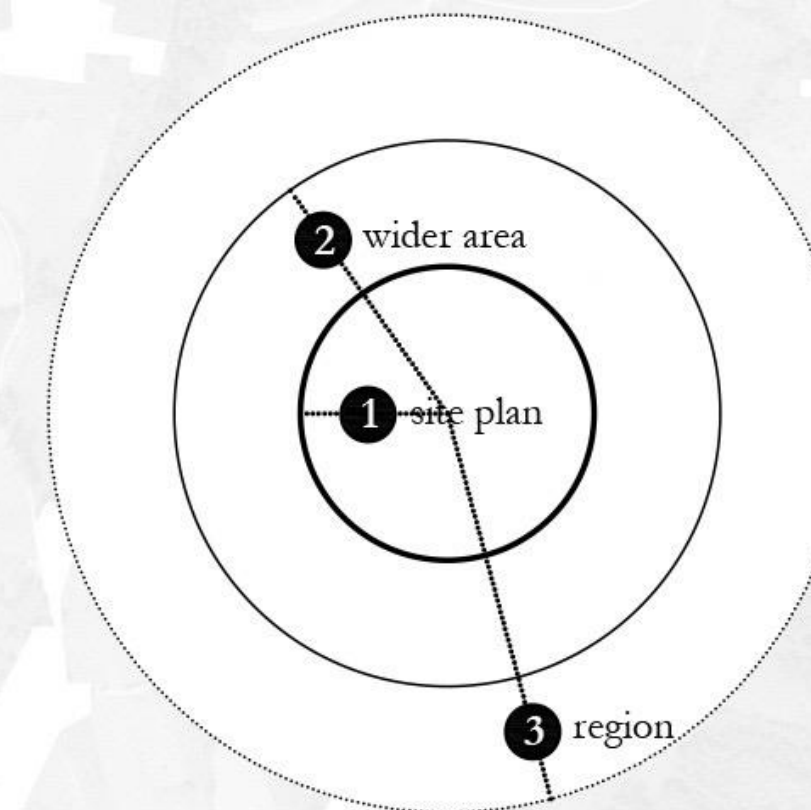


On the one hand, the development strategy should support, to the fullest extent, the determined qualities of the space and landscape, and on the other it should allow a contemporary development of agricultural activities as a precondition for the development of the countryside. A reconciliation of the different requirements can be established via the application of the **principle of organic agriculture** and an **investment model** that involves several land plot owners without land consolidation aimed at the preservation of the fragmentation of the land plots and plurality of owners. An additional factor of **rural development is tourism**, which is becoming increasingly sophisticated in its offering.

DEVELOPMENT STRATEGY



ACTIVITIES and their spatial scope



- 1 BASIC AGRICULTURAL ACTIVITIES
- 2 AGRICULTURAL SERVICE ACTIVITIES
- 3 RURAL TOURISM



AGRICULTURAL LAND 25.2%

map of the village Martinščina

MEADOWS AND PASTURES 6.8%




total 616 922 m²

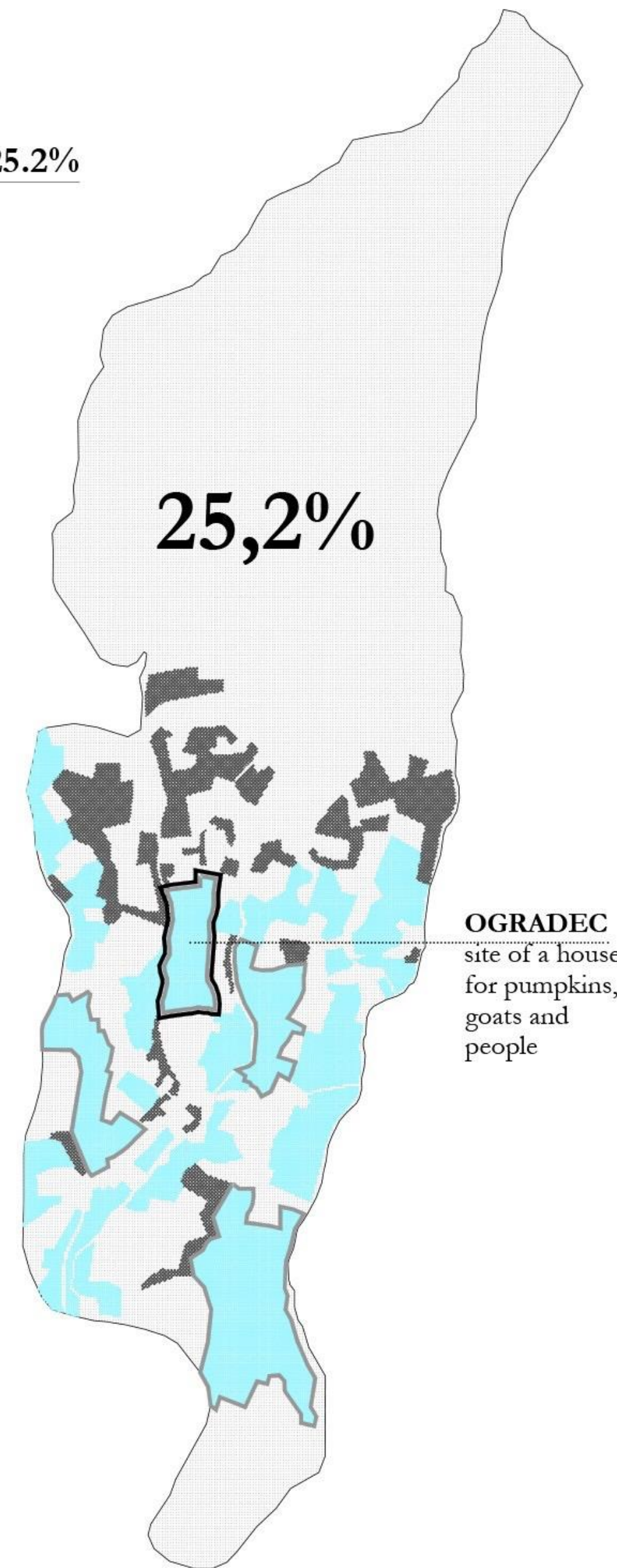
ARABLE LAND 18.4%

total 1 665 494 m²

- 44% of the arable land surface are zones of organic agricultural production; each zone is developing a different scenario; one of these is the **House for pumpkins, goats and people – zone Ogradeč** (108 356 m²)

- other agricultural land plots are used for private purposes, with the possibility of inclusion in the proposed zones

-  meadows and pastures
-  arable agricultural land
-  arable agricultural land – eco zones



TOURISM

map of the village Martinščina

HIKING TRAILS AND PATHS





- the existing system of hiking trails to be connected with the lower altitudes of the settlement

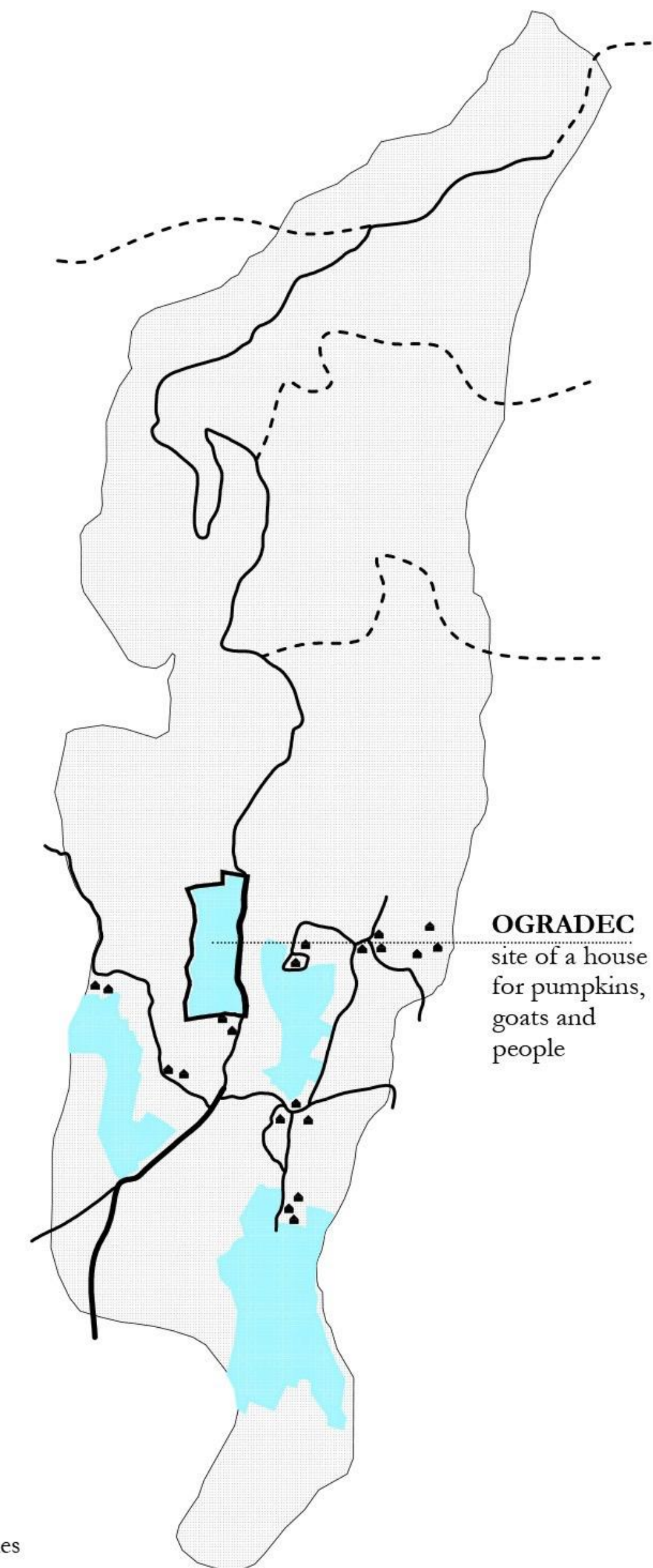
ACCOMODATION CPACITIES

- Mountain Lodge Majer (16 beds)
- hamlets/abandoned structures; stimulation of conversion for tourism purposes (accommodation capacities) of greater quality
- zones for organic agricultural production; depending on the type of tourism, development for greater groups of people (30 beds)

NEW ECO ZONES

- development of selective types of rural tourism: educational, ecological, rural, recreational

-  hiking trails
-  local roads
-  hamlets
-  arable agricultural land plots – eco zones





VRIJEME - AKTIVNOSTI - PROSTOR

VRIJEME
U GODINI

I

II

III

IV

V

VI

VII

VIII

IX

X

XI

XII

AKTIVNOST KOZA

ŽIVOT U KOZARNIKU

ishrana, spavanje i izpast



SUHOSTAJ 60 - 145 dana / bez mlijeka

JARENJE



PROIZVODNJA SIRA u vremenu laktacije

prjem mlijeka proces prerade preranje zrenje sira



DOJENJE 60 dana

ISPAŠA proljeće, ljeto, jesen



PROIZVODNJA MLIJEKA 200 - 250 dana / vrijeme laktacije

PARENJE

individualno parenje u odvojenom boksu



GRAVIDNOST



SUHOSTAJ

AKTIVNOSTI BUČA

OBRADA ZEMLJE & SJETVA

plitko oranje usitnjavanje držanje



UZGOJ

okopavanje šišenje dohrana



BERBA kraj kolovoza



PROIZVODNJA ULJA od jeseni do proljeća

zelenje i pranje koštica mljevenje koštica kondicioniranje smjese pečenje i preranje



AKTIVNOSTI LJUDI

EDUKACIJSKI / SEOSKI / EKOLOŠKI TURIZAM proljeće i jesen



ZAPOSLENI cijele godine



KUŠAONA & DOGAĐAJI povremeno

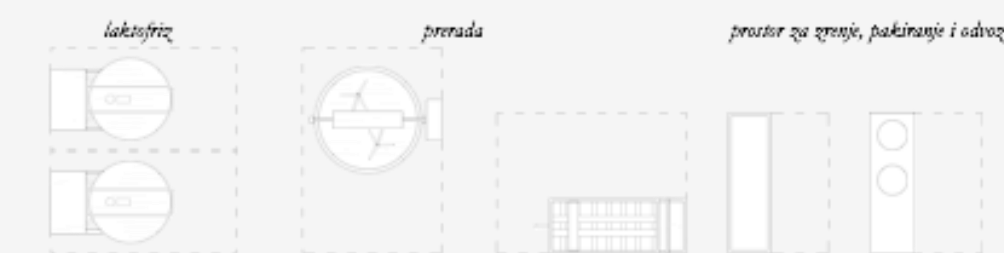


PROSTORI KOZA

GOSPODARSKO *DVORIŠĆE*

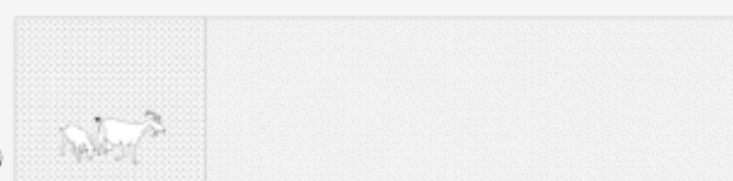
odvoz sira i ostalih mliječnih proizvoda
dovoz koze dohrane
odvoz jareta na klanje
spremanje slame

SIRANA 140 m²



POLJA & ORANICE 6.94 ha prostori izvan kuće

koze u izpasti 1.73 ha 25%
70 % krmno bilje
30 % ispaša (lišnada, sjetenine)



KOZARNIK sa izmuzištem 320 m²

boks za koze 1.7 m²/koza
boks za koze i jareta 1.2 m²
boks za jareta 9 m²
boks za jareta 3.0 m²/jareta
boks - karantena i parenje
stjenik i spremište hrane



PROSTORI BUČA

TEHNIČKI POGON

držalica topljine
gospodarenje vodom

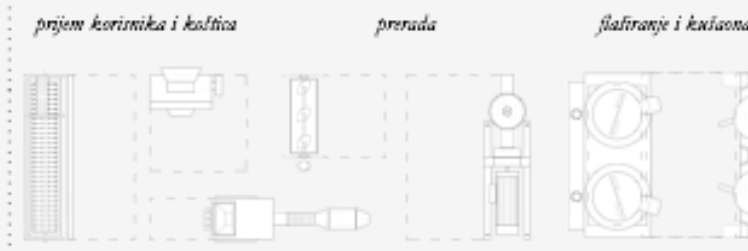
GARAŽA 150 m²



buča goštica 5.25 ha 75%



USLUŽNA ULJARA 110 m²



DVORIŠĆE

kušona i kuhinjom
višefunkcionalan prostor
organizirani događaji
zgrade i vesele
odkucija i seminari

PROSTORI LJUDI

TEHNIČKI POGON

držalica topljine
gospodarenje vodom

PROSTORI ZAPOSLENIH 93 m²

priprema za rad posvjetilarska soba
garderoba kuhinja
sanitarnje spremišta
veleraj administracija

uči obuhvat
poje hokaido bilje
poje mulkeatne bilje
posteljak
voćnjak i livada



EDUKACIJSKI TURIZAM 175 m²

spavaonica 80 m²
kapacitet 1 školskog razreda 4x8 kreveta
edukacijski prostor 95 m²
učionica / staklenik
edukacijska trstina



...TO CONCLUDE

buff

verb, /bʌf/

1. to polish or shine (something)

rebuff

verb, /rɪˈbʌf/

1. to reject (someone or something)