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Research Report

National workshop in Golubac, Serbia

10 June 2017

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Acknowledgements

We would like to thank the following people for their contribution in the student workshop carried in Golubac in March 2017, and preparation of this report:

Local representatives and experts as hosts:

- Nebojša Mijović, PhD., Municipality of Golubac, President
- Jelena Petrović, Tourist organisation of Golubac, executive manager
- Saša Bogičević, Municipality of Golubac, representative for international and regional cooperation
- Snežana Arsić Rakić, Tourist organisation of Golubac, territorial development

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- Milica Lazarević
- Aleksandar Lukić
- Nevena Mandić
- Miloš Mandić
- Antonio Mareš
- Uroš Marković
- Jana Milovanović
- Srđan Mićanović
- Srđan Radovanović
- Milica Ristović
- Ivana Savić
- Mila Stojanović
- Simona Tajčić
- Ana Marija Veljović
- Vanja Vujanović
- Milica Zukanović
- Boško Žakula

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Acronyms

EU European Union

Executive Summary

Background

Many small places and towns along the Danube are rich by valuable natural and cultural heritage and attractive for tourists thereof. However, due to their lack of accessibility and infrastructure, these places are facing many socio-economic challenges today. A good example is Golubac area in Serbia. Although this area is positioned in the widest part of the Danube and has the notable medieval Golubac Fortress at the entrance of Iron Gate/Đerdap gorge, the greatest one on the river, it is in decline for decades. The newest incentives and investments have made little influence to overcome this situation. They are mainly based on conventional planning and strategic documents, which have not carried adequate research *in situ*. Therefore, the aim of this research is to fulfil this gap by conducting real on-site investigations. Trying to include all major stakeholders in Golubac area, it is conducted in the centre of the town of Golubac as a key space for all of them.

Methodology

The aforementioned investigations in Golubac centre are based on two methods: space syntax and survey with questionnaire. 10 questions in the survey are derived by the use of city image theory of K. Lynch. The first method is strictly quantitative and with acquired statistical techniques and data. For this investigation, 44 crossroads in the central part of Golubac are selected. They were nodes to collect necessary data for space syntax. The second method is qualitative and related to the psychological experience of urban space. Moreover, accompanied questionnaire is customised to be relatively short and easy; in that way, all stakeholders can participate and the significant threshold of 10% of town population can be achieved. Both investigations were successfully conducted by 19 students during Golubac workshop in March 2nd, 2017. The acquired data were later processed by statistic tests in MC Excel programme and graphically elaborated into schematic maps (space syntax) and pie charts (survey). Shaping these data in such way, they became suitable for the final findings and recommendations.

Key Findings

- Although the major investments and interventions have bypassed the main street in Golubac, it is obvious by conducted investigations that this street is still the most viable and popular place in the town despite the necessity to refurbish it.
- The urban part of the Danube riverside is well redesigned and made available for the wide range of users, but many streets which connect it with the major street and the rest of Golubac are in bad state and without attractive and vibrant facilities;
- The prospective viewpoints on the hills around the town centre are recognised by survey respondents as a prospective backbone for new urban development. However, they are mainly undetected by competent documents and local authorities as a development potential.

- There is a great difference in liveability between the western and eastern part of the town centre. The problem is eastern part, because it is closer to major tourist assets, but it lacks the facilities and space which will make it more vibrant and attractive for both locals and tourists.
- The centre of Golubac has a seasonal competition with local summer-active centres in the north-eastern and eastern parts of urban zone, which function during holiday period and which are more attached to seasonal residents and tourists.

Key Recommendations

- The main street should be revitalised and redesigned to fulfil its potential, identified by this research.
- Many small streets between the main street and the urban part of the Danube riverside need upgrading and renovation that should be done in more deliberate way, through their characterisation or thematisation.
- Viewpoints around the town centre should be included into tourist promotion and adequately designed and linked with already vibrant places in Golubac.
- All named recommendations need strategic and research-driven approach, which be materialised through urban plans and design projects, dedicated for different urban levels.

1 Introduction

1.1 Thematic Background

The difference in development pace between central-metropolitan and peripheral areas in the European Union (EU) has been in the main development agenda of the EU for years. It got an attention with the territorial widening of the EU during the 1990s-2000s and it was thereby embedded in the main document relating to EU spatial development - European Spatial Development Perspective (ESDP). The problems are noticeably explained in the Point No 69:

“The current spatial trends in the EU reveal a further concentration of activities, particularly high-quality and global functions in the core area of the EU and in a few metropolises. In view of the enlargement of the EU, a further concentration of spatial development in just one single globally outstanding, dynamic integration zone would not lead to a reduction of the disparities between the central part and an increasingly large periphery. A new strategy for spatial development is therefore necessary.”
(EC, 1999, p. 20)

Even this conclusion was revealed 18 years ago, it is very up-to-date, because spatial imbalance across the EU is still evident (Madeiros, 2016).

Similar situation can be observed in the case of the Republic of Serbia. Peripheral municipalities in the country, far away from the central axis of development that links three major Serbian cities (Novi Sad-Belgrade-Niš), face many socio-economic obstacles due to their weak accessibility (Image 1). This is particularly true in the case of those areas and municipalities located at national borders - isolation and remoteness (RASP, 2010). However, many of them are rich with natural and cultural heritage. Limited local resources in the underdeveloped parts of Serbia condition that this heritage is rarely adequately promoted and appropriately exploited as valuable tourist asset (Bjelac et al, 2009).

The good example is the Municipality of Golubac, located in Eastern Serbia, on national border to Romania (Image 1). Actually, the border is the Danube, which is widest in this area along its flow. Therefore, this major river is a potential and an obstacle for municipality at the same time; being an important transport and tourist corridor, it links the Golubac area with the rest of Europe; at contrary, the size and width of Danube in Golubac area complicates cooperation with neighbour Romania (Arhiplan, 2011).

The major natural asset in the municipality is also related to the Danube (Figure 3). It is Đerdap/Iron Gate gorge, the greatest gorge along the Danube. The river enters the gorge from Pannonian basin at Golubac, making its position very unique. At the very entrance of the gorge, on the first hill on the right bank of the river, the medieval Fortress of Golubac is situated (Figure 4). Standing there as a “guardian”, Golubac fortress is one of the most notable and picturesque elements of cultural heritage in Serbian Danube region (Ćirković, 2008). Finally, both Đerdap/Iron Gate gorge and Golubac fortress are under national

protection; the first one is among five national parks in Serbia (Crnčević et al, 2012); the fortress is a national monument of exceptional Importance (SASU, n.d.).

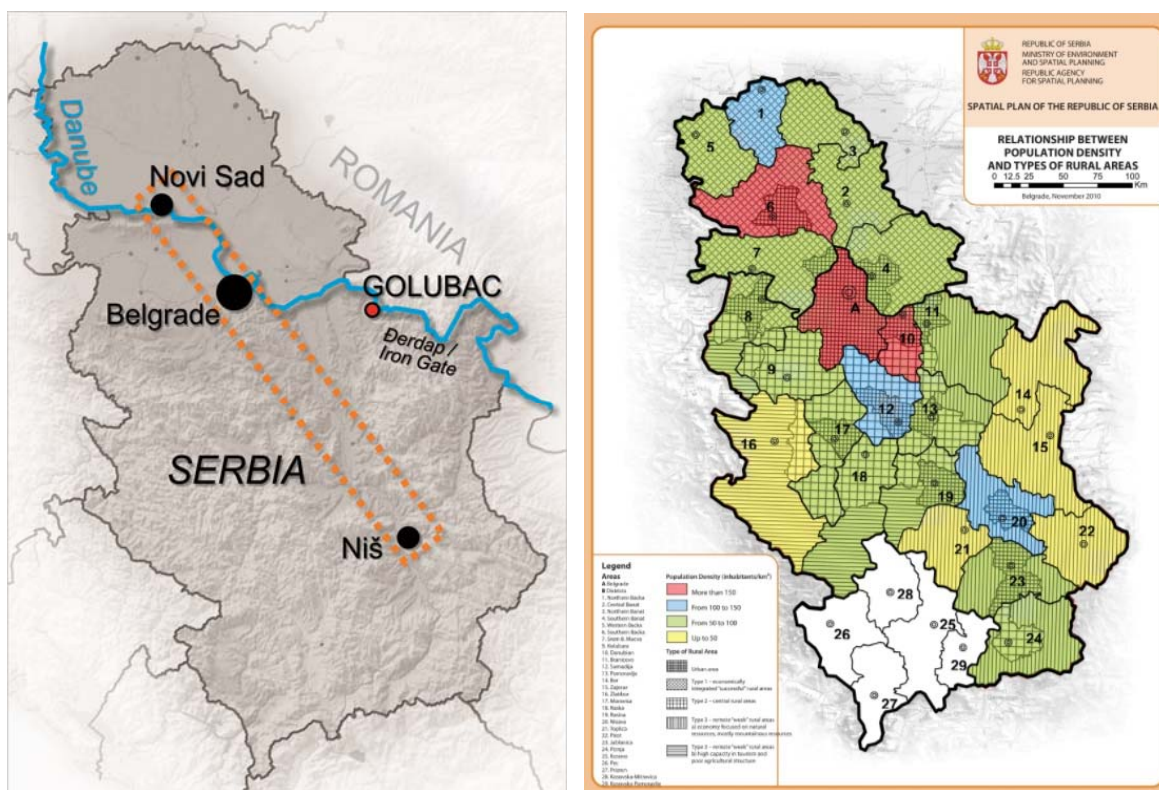


Figure 1: Position of Golubac in Serbia; Figure 1: Analytical (thematic) map of the Spatial Plan of the Republic of Serbia - Relationship between population density and types of rural areas. The weak and remote areas, marked with horizontal and vertical linear hatch, are widespread along western, southern and eastern borders of Serbia.



Figures 3 and 4: Major assets of natural and cultural heritage in the Municipality of Golubac: the Danube with Derdap/Iron Gate gorge and Golubac fortress at its entrance.

1.2 Research background

Taking in account the previous facts regarding natural and cultural heritage in Golubac area, the potential for its use in tourist economy is obvious. Nevertheless, the impact of the heritage on the prosperity of local community has been insufficient (Arhiplan, 2011). Therefore, all figures indicate that Golubac is in decline:

- Demographic indicators: The municipality has lost more than 55% of its population since the end of the Second World War (SORS, 2013). Consequently, the other demographic indicators (emigration patterns, aging, educational attainment, computer literacy, etc.) are generally negative and more severe than at national level;
- Economic indicators: The state of local economy in Golubac follows demographic patterns. The municipality has been among 20% of Serbian municipalities which economic performance is below 50% of national average last years (MRDRS, 2009-15).



Figures 5 and 6: Reflection of decline of Golubac – demographic reflection (elderly population) and spatial reflection (empty and unfinished buildings)

The response of national authorities in the last 17 years of post-socialist transition can be observed in several directions¹:

- The enactment of relevant development documents (agendas, strategies plans and projects) at national and regional level as well as the financial and expert assistance in the creation of local documents;
- Support to trans-border cooperation with nearby Romania and with Danube region. For example, *EuroVelo* projects have been an facilitator to enable wider urban development - the (re)construction of the kilometres of new riverside quay;
- The improvement of nationally important infrastructure in Golubac area, especially national roads and water terminal;

¹ This is based on acquired research material and the talks with local representatives and experts.

- The investment in the protection, revitalisation and promotion of heritage: the revitalisation and reconstruction of Golubac fortress, the investments in key places in Derdap/Iron Gates national park, etc.

Nevertheless, the most of these doings has pertained to the general estimations of state bodies or the exchange of information with local representatives and experts. Hence, many of proposed actions can be described as pretty conventional and applicable in many cases throughout Serbia. In the other hand, more sensitive research *in situ* has been scarce, usually solely conducted and excluded from the creation of development document thereof. This is especially true for the research at the tier of urban planning and design, where there is also the lack of accurate statistical accurate.

In line with this gap/problem, the main goal of this research is to conduct real investigations *in situ* in the central part of Golubac and to give solutions and recommendations for its future development. This part of the town is chosen as a research unit because it is the most common place for the merging of interests of all users: permanent and seasonal residents as well as domestic and foreign tourists. This approach thereby tries to support the research, evaluation and development of common elements for all of them.

The workshop and investigations *in situ* were conducted in Golubac in March 2, 2017. However, they were the part of the broader research platform, carried by University of Belgrade - Faculty of Architecture, by the mentorship of Aleksandra Đukić (Professor), Ivica Nikolić (teaching assistant), Branislav Antonić (researcher) and Tamara Radić (student-teaching fellow). Thus, the entire research lasted four months (February-May 2017) and it passed through several phases, with special focus on the results of the investigations conducted in Golubac.



Figures 7, 8 and 9: Workshop in Golubac: investigations in town centre, talks with local experts and visit of Golubac fortress.

1.3 Objectives

The objectives of the whole research and related workshop are to:

- To understand the uniqueness of local natural and cultural heritage as major assets for the development of the municipality and the town of Golubac;
- To appropriately use the potential of the Danube as the main link between Golubac and wider region;

-
- To include all important stakeholders in the evaluation of current challenges and in the creation of new solutions and recommendations thereof;
 - To recognise the main nodes and their network in the centre of Golubac as a key space for all stakeholders in the municipality;
 - To use those research methods and techniques in urban planning and design which have never been implemented in Golubac and which consequently can bring a 'new value' for the aforementioned intentions.

2 Methodology

2.1 Research Questions

The research questions to be answered by the workshop in Golubac are:

1. Which places (streets, squares, neighbourhoods) of Golubac centre people more use daily?
2. Which are ratios between the different types of subjects in traffic (pedestrians, cyclists, cars, lorries, buses) in these places?
3. Is the opinion of people in Golubac on the same theme concurs with real figures?
4. Are these places also the main symbols of Golubac (i.e. “local proud”)?
5. Which is significance of those places in Golubac centre which are connected with major natural and cultural heritage – especially in the case the Danube quay, which is also the important viewpoint to Golubac fortress and the entrance of Đerdap/Iron Gate gorge?

2.2 Research Design

The research in Golubac will use both qualitative and quantitative methods to answer the research questions. The following table summarises the methods used to answer each question:

Table 1 Methods used to answer research questions

Research Question	Method Used to Answer Question
Which places (streets, squares, neighbourhoods) of Golubac centre people more use daily?	Space syntax – statistical / quantitative method
Which types of transport subjects (pedestrians, cyclists, cars, lorries, buses) are more often in these places?	Space syntax – statistical / quantitative method with focus groups
Is the opinion of people in Golubac on the same theme concurs with real figures?	Survey with questionnaire with semi-closed questions – indirect and qualitative method, based on the city image theory by Kevin Lynch
Are these places also the main symbols of Golubac (i.e. “local proud”)?	Survey with questionnaire with semi-closed questions – indirect and qualitative method, based on the city image theory by Kevin Lynch
Which is significance of those places in Golubac centre which are connected with major natural and cultural heritage – especially in the case the Danube quay, which is also the important viewpoint to the widest part of the Danube, Golubac fortress and the entrance of Đerdap/Iron Gate gorge?	Both mentioned methods

2.3 Instruments

Two methods are included into the research of Golubac: a space syntax and a survey with questionnaire with semi-closed questions. Both methods have been previously tested by the

same research team in the various parts of central Belgrade (Đukić and Antonić, 2016), but this is their first use of this method in Golubac, which without doubt differs greatly by many characteristics.

SPACE SYNTAX: The method of space syntax belongs to applied statistical methods and techniques. The application is in architectural and urban scale (Al Sayed et al, 2013). In the other words, this method is relevant for urban planning and design, transport, building design, social interaction and spatial economics. This method can be implemented to the architectural and urban networks of various sizes and complexities; even the biggest megalopolises, such as London, Beijing or Tokyo can be tested (Hillier, n.d.).

Spatial syntax is an analysis of spatial configurations during characteristic period. In the case of urban research, it consists of the following steps (Hillier, 1999):

1. Selected urban area as a network broken into its primary elements - nods, usually crossroads in street and urban-block structure;
2. The analysis is based on the choices of users' movement throughout the area as possible paths between its nods;
3. All choices of the users are represented in schematic maps as straight sight-lines with the scale of colours, where colour intensity illustrates the intensity of the use of such path.

The method of space syntax is relatively new; it was developed in the early 1980s at London Bartlett School of Architecture of the University College of London, with the rise of computer modelling (Hillier, 2002). Nevertheless, it is among the rare methods in urban practice which has got an international attention from early beginnings (Jiang and Claramunt, 1999). The noticed inconsistencies in the method (Ratti, 2003) have not faded its global recognition. However, it is still relatively new method for Serbia, being used in several occasions in Belgrade, Pančevo and Vršac (Đukić and Vukmirović, 2012).

See Appendix 7.1 for the map of central Golubac with marked points for spatial syntax.

SURVEY WITH QUESTIONNAIRE: A survey is a well known and very common method in social sciences as well as in the scientific disciplines where social sciences are applied as theoretical foundations. Urban planning and design are among them.

City image theory By Kevin Lynch: In accordance with a plenty of information and instructions to conduct a survey by a questionnaire, theoretical focus to form a survey and a questionnaire was done by customisation of the principles of City image theory. It is created by Kevin Lynch, famous American urban planner, and published in the book "The Image of the City" in 1960. The theory describes that a city image in the eyes of an observer is formed by five physical forms as its elements (Lynch, 1960):

1. Paths,
2. Edges,
3. Districts,
4. Nodes, and
5. Landmarks.

Landmarks distinguish in this group, because they are the only elements to be external and utterly symbolic; the other ones are more spatial elements for an observer. Furthermore, according to K. Lynch (1981), the concentration of landmarks in urban space is greatly important for dynamic city image – maximal distance between landmarks should be 200-300 metres.

2.4 Sample

In the investigations done by both methods (space syntax and survey), preparations were carried three weeks before the research *in situ*. As it was the aforementioned, the centre of Golubac was chosen for this research. The first two weeks were related to the overview of the data available via internet:

- Official data: documents (plans, strategies, and projects), statistics (historic and current demographic and economic figures), and information regarding different fields (tourism, heritage, transportation and routes, external relations);
- News from or relating to the town and the municipality;
- Graphical data: photos, maps, charts, diagrams; and
- Subjective reactions on all these data: blogs, forums, comments on news, tags and hashtags.

The last week was more related to concrete preparations regarding the investigations *in situ* – the formation of questionnaire and the distribution of the nodes to be analysed by space syntax:

SPACE SYNTAX: First, the urban fabric of Golubac centre was defined by imaginary close line, which encompassed all major central facilities and key open public spaces. Its surface was approximately 25 ha. Then, this area was fragmented into nodes. All 44 obtained nodes were street intersections, including all kinds of intersected streets (with roadways and/or footways). At the end, the groups of 2-3 near nodes were organised to be appropriate for one investigator.

See Appendix 7.1 for the map of central Golubac with marked points for spatial syntax.

SURVEY: The survey in Golubac was planned by staff with a simplified and shorter questionnaire, where every element of city image theory was a base for two questions. A special aspiration was made to make the questionnaire understandable and receptive for the wide range of respondents. The targeted threshold was 10% of permanent town population (or >150 respondents). Almost all questions are thereby shaped as semi-closed, where several concrete choices, well-known physical elements in Golubac, are given and the last one was left as a blank for additional and unexpected choice. Respondents could choose just one choice. The last question was different, because it was settled as a specific “synthesis” of the previous ones. Hence, there were no given choices in the question and a respondent could give one answer on his/her own.

See Appendix 7.2 for the English translation of questionnaire form and for the sample of a fulfilled questionnaire and for the map accompanying with questionnaire

The entire research was created to be simple and countable; obtained numbers by each method were numerically expressed to give understandable and unambiguous results and conclusions.

2.5 Data Collection

The entire research *in situ* was conducted in Golubac centre in March 2, 2017. The conductors were programme staff and 21 students.

SPATIAL SYNTAX: The counting of pedestrians, cyclists, cars and long/heavy road vehicles (lorries and buses) was conducted in two 60-minutes periods. The date of the research *in situ* was intentionally chosen – it was the Thursday, the only market day in Golubac in a week. Two open-air markets² enabled high concentration of people in the centre ('weekly peak'), which makes the biggest pressure on urban fabric and easily show its significant challenges. The first period of the counting was between 10 and 11 am, because this is a 'rush hour' for each market. The second counting was between 2 and 3 pm, which was the calmest period during usual working hours, just before the end of the ordinary working time of public institutions as the main employers in the centre of Golubac. Both countings were successfully finalised.



Figures 10: Survey in Golubac: Volunteers wait for prospective respondents; Figure 11: Spatial syntax: the volunteer (right) counts pedestrians, cyclists and vehicles in the middle of related crossroad.

SURVEY was conducted in the same day, between noon and 2 pm. It was a face-to-face survey with a hardcopy questionnaire in Serbian language. All 19 volunteers got 20 copies, with instructions to bring at least 8 completed questionnaires, in accordance to the stated threshold. It was also advised to everybody tries to bring all of them completed. Volunteers were not just technical conductors in the survey – they were prepared for it and they had duty to help respondents to fill correctly in the questionnaire. At the end, the threshold was exceeded – there were 174 correctly completed questionnaires.

²These two markets are in the form of traditional open-air bazaars. The first one is a food or, locally called, "green" market; the second one is a flea market.

Aside these major investigations in Golubac, a workshop in municipal building and a visit to Golubac fortress and adjoint visitor centre were held the same day. The workshop was organised in the main hall of municipal building and lead by local experts: Jelena Petrović (tourism), Saša Bogičević (international and regional cooperation), and Snežana Arsić Rakić (territorial development). It started with short presentations of each expert, which triggered research conductors to put questions. Finally, it was developed into an affirmative and professional discussion between two sides.



Figure 12: Workshop in municipal building; Figure 13: Visit to Golubac fortress.

The visit of Golubac fortress was limited by ongoing reconstructions activities, which prevented the entry to the inner complex of the fortress. Therefore, the visit is realised in nearby visitor centre. The researchers got information regarding the reconstruction projects and investments.

2.6 Data Analysis

All acquired data from conducted investigations by space syntax and survey in Golubac was processed by programme staff and 3 remaining students in two following weeks.

The data processing was done by statistic tests in MC Excel programme. Three mentioned students organised online platform for data collecting from the students who carried investigations *in situ*. After these students set-up their numbers for all investigated issues, 3 students-“processors” calculated the final numbers (sums) and ratios and their graphical framing in the form of thematic maps (space syntax) and graphical pies (survey). It that way, quantitative results are obtained.

In the other hand, qualitative results were more challenging to acquire. Aiming to do this, the quantitative results are combined with the previous investigations of literature and internet resources. Both kinds of data are confronted in open discussions between programme staff and students, which was the “prelude” for the evaluation of current conditions of Golubac, with focus on the town centre. This evaluation was arranged as a SWOT analysis.

2.7 Limitations

Both used methods have limitations and their impact should be clarified:

LIMITATIONS IN SPACE SYNTAX:

- Daily limitations: The measurement of the flow of people and vehicles in Golubac was conducted twice in a day. The less frequent hours in late afternoon and in the evening were not measured. If they were included, it would give better understanding of the quality of life, because these hours generally refers to the “leisure and free time” part of day. The offer and variety of related activities are usually problematic in small towns and rural regions in Serbia, such as Golubac;
- Seasonal limitations: Even though the day with the highest expected frequency of people in Golubac in a week is chosen for investigations *in situ*, the day of investigations was in March, i.e. out of summer holiday and tourist season, when “peaks” are traditionally achieved in Golubac. This fact suggests that annual maximum of users of town centre is bigger than the maximum by this research;
- Spatial limitations: Some important locations in the Municipality of Golubac, such as Golubac fortress, were excluded from space-syntax investigations, because they do not belong to the central part of the town. Actually, the fortress is approximately 3 km far from the town. Therefore, some points with huge frequency of visitors could not be counted by this method, which has affected a bit in the later work.

LIMITATIONS IN SURVEY / QUESTIONNAIRE:

- Understanding of urban space: In line with city image theory of Kevin Lynch, questions were oriented to space and physical appearance, which made problems for people who were not used to spatial orientation. All researchers have hereby the maps of central Golubac as a support. Interestingly, younger respondents proved better understanding of space in survey than elderly people, who were used to the older and vernacular names of these places;
- Open choices: It was already pointed that almost all questions had the last option as open choice. Some respondents opted for problematic answers, such as the whole Đerdap/Iron Gate gorge. Its importance is at regional level, far away from the settlement level of Golubac. These answers were eliminated. They were very rare, so they did not disturb the entire investigation.

3 Results

3.1 Which places (streets, squares, neighbourhoods) of Golubac centre people more use daily?

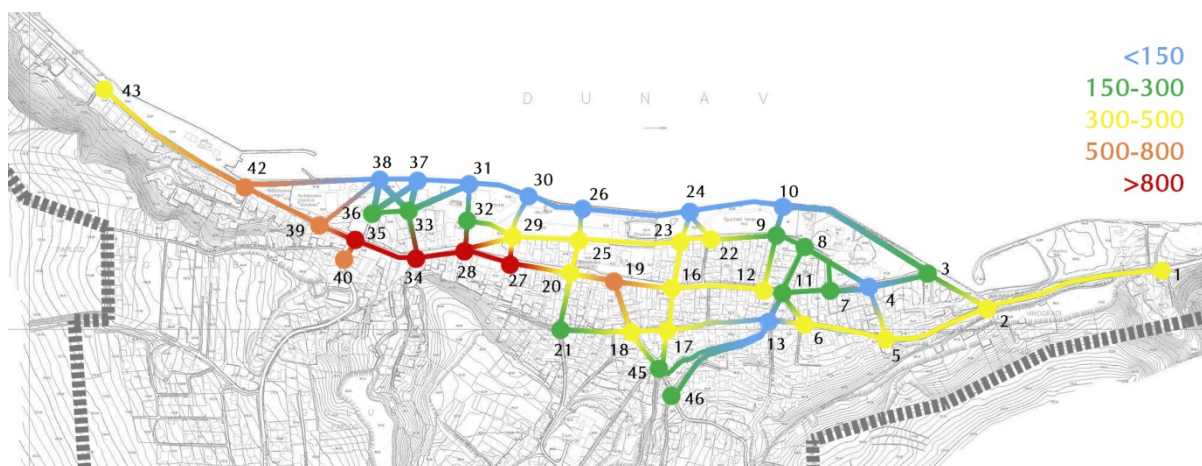


Figure 14: The overall frequency of people in Golubac centre – Thursday, March 2, 2017, between 10 and 11 am

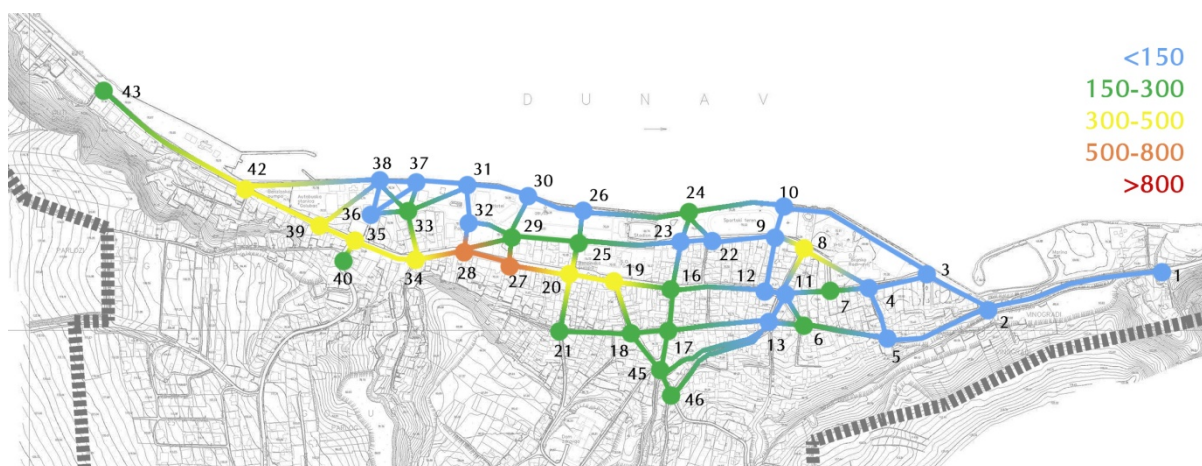


Figure 15: The overall frequency of people in Golubac centre – Thursday, March 2, 2017, between 2 and 3 pm

Analysing the images No 14 and 15, it is evident that some places are more used by people (pedestrians, cyclist, drivers, and passengers). In some places, expected results are achieved. For example, the most frequent street in Golubac is that which concurs with the state road No IB34 along the Danube. This road connects Lower Danube region in Serbia with rest of the country. Similarly, the last occupied place by people is the area along the

Danube quay due to limited access for vehicles and the period of investigation (working hours during a working day and this is a leisure area).

Nevertheless, there are some noticeable surprises, too. Western half of Golubac centre is much more used by people than eastern part even this part has a lot public facilities and it is located between the centre of the town and Golubac fortress, which is by far the most important cultural value and the most visited tourist attraction in the municipality.

3.2 Which types of transport subjects (pedestrians, cyclists, cars, lorries, buses) are more often in these places?

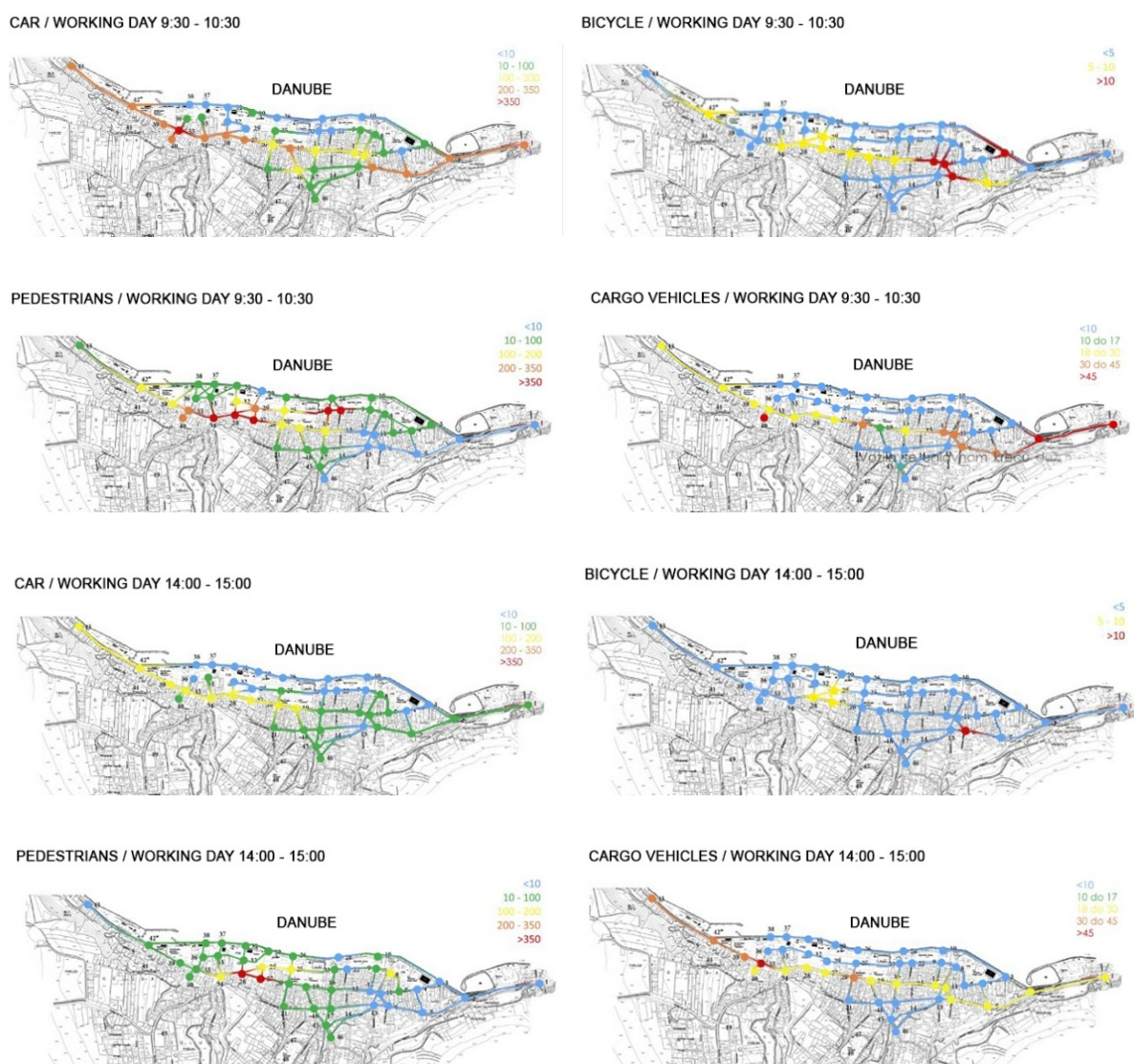


Figure 16: The overall frequency of different transport subjects in Golubac centre in two measured periods

The most noticeable feature is that cyclists are almost absent in Golubac – their number is zero in many remote nodes. The other subjects are more present – car and pedestrians are almost the same by numbers in many cases, although the share of pedestrians prevails a bit in the second period (2-3 pm). The presence of big vehicles occupies a middle position in this comparison.

If this issue is analysed from node to node, the major result is that there was a huge gap between pedestrians and other subjects. Cyclists and all types of vehicles tended to use the aforementioned transport corridor (state road), which is also the widest street in the town. At the contrary, pedestrian movement makes much more complex and dispersed network. Therefore, they generally prevail in peripheral nodes. In the main street and, especially, in its part around the main square with the highest concentration of central facilities, the number of pedestrians and other observed subjects is usually equal.

3.3 Is the opinion of people in Golubac on the same theme concurs with real figures?

Which streets do you usually use for movement?

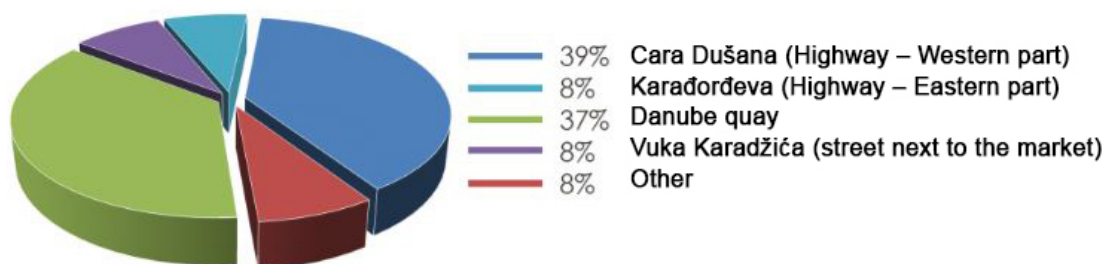


Figure 17: Question 1.1

Which streets and other obstacles restrict your movement in the coastal part of Golubac?

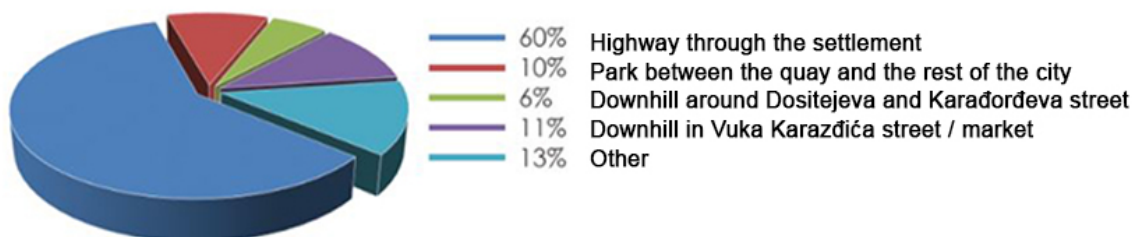


Figure 18: Question 2.1

Which traces do you avoid because of the very steep slopes?

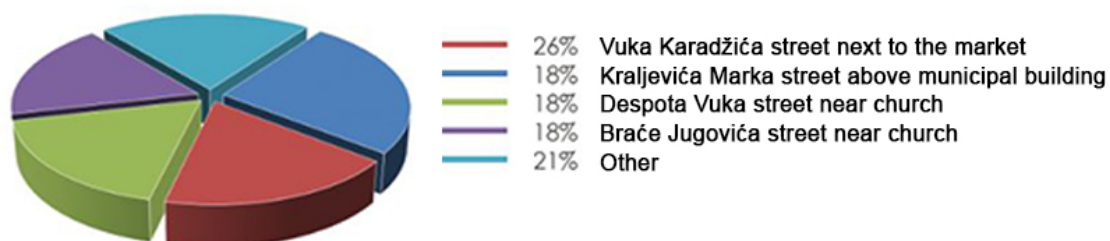


Figure 19: Question 2.2

Which district do you consider the least secure at night?

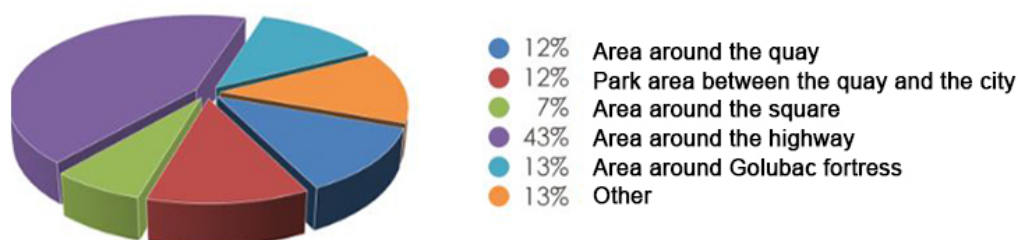


Figure 20: Question 3.2

In which node do you prefer to stay or meet up when weather is nice?

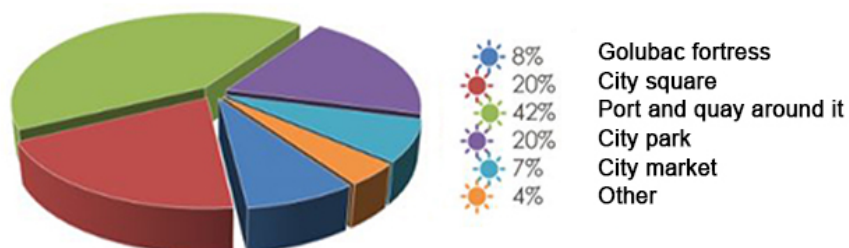


Figure 21: Question 4.1

In which node do you prefer to stay or meet up when weather is bad?

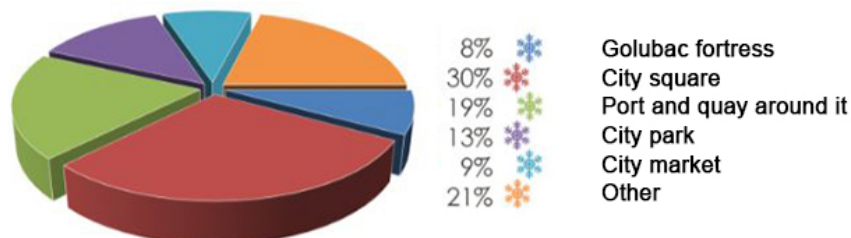


Figure 22: Question 4.2

Generally, the street that people in Golubac most often use for movement (Figure No 17) is Cara Dušana Street, which is, actually, the western part of the main corridor across the town. This finding perfectly concurs with the findings from space syntax. In the other side, the second most often used street is Dunavski kej (the Danube quay), which confronts with the previous findings. However, one of the underlined limitations of the research is the lack of coverage of the daily periods typical for leisure time (late afternoon and evening), which partly explains this result.

If negative opinions regarding the same urban element (streets) are considered (Figures No 18 and 20), the results from the survey follow the adequate findings from space syntax. The same street from the previous paragraph – Cara Dušana Street – is the most problematic for people of Golubac. This can be easily explained by heavy traffic and the presence of lorries and buses, observed by space syntax.

In contrast to the dominance of the main traffic corridor between western and eastern parts of Golubac the role of any street normal to it (south-north direction) is minimal. This is indirectly visible through the question relating to people comfort during their movement along them³ (Figure 19). The results show that all street play similar role for the people of Golubac.

The nodes are similarly important for people in Golubac like streets. The attractiveness was checked during nice and bad weather, with very quite different results (Figures 21 and 22). Golubac fortress, the main square and town park are the most valuable options for people during days with nice weather. Oppositely, Golubac fortress is the last option during the days with bad weather. The main square is then the most popular. However, many respondents did not want to give any concrete answer, which indirectly proves that the main nodes in Golubac, which are all open public spaces, are not attractive during bad weather, which means that open public spaces are probably underused for a half of year (rainy and windy days + wintertime).

³ All mentioned streets in this direction are very steep due to the inclination of terrain.

3.4 Are these places also the main symbols of Golubac (i.e. “local proud”)?

Which district stands out for its recognition in the broader area of Golubac?

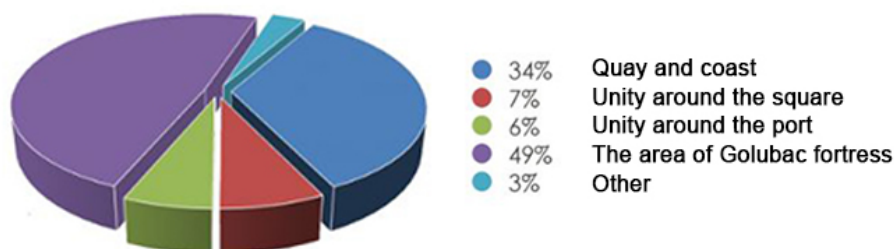
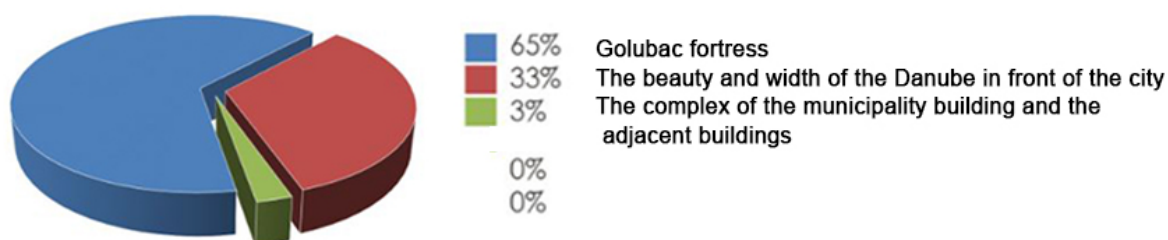


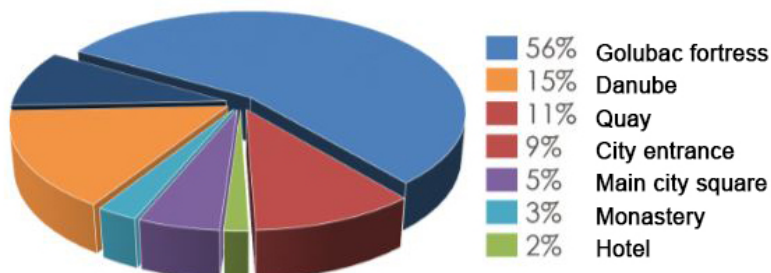
Figure 23: Question 3.1

In your opinion what is the main symbol of Golubac?



Figures 24: Questions 5.1

If you were to create custom postcard from Golubac where would you prefer to take pictures for it?



Figures 25: Questions 5.2

In the opinion of the respondents, the most prominent place in Golubac is the fortress, followed by the Danube and quay (Figure 23). Similar results repeat in the last two questions (Figures 24 and 25). Golubac fortress is the main landmark of Golubac and the most frequently mentioned feature for a prospective post-card of the town. In both questions, the second in row is the Danube; it directly mentioned in the first question; in the second one,

the link is indirect – people opt for the western entrance of the town, which is a nice viewpoint to both the Danube and the fortress.

3.5 Which is significance of those places in Golubac centre which are connected with major natural and cultural heritage – especially in the case the Danube quay, which is also the important viewpoint to the widest part of the Danube, Golubac fortress and the entrance of Đerdap/Iron Gate gorge?

Which path do you use to get to the quay?

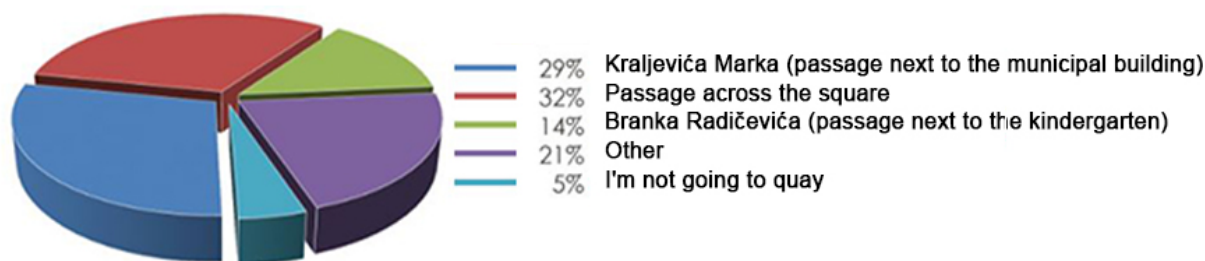


Figure 26: Question 1.2

The importance of the Danube quay as the most direct connection between Golubac centre and the fortress is stressed in several questions. The question 1.2 (Figure No 26) is fully committed to the quay. Just 5% of people do not visit this part of the town. Town quay is also the most popular option to spend time during the days with nice weather. Nevertheless, this space is not so attractive during bad weather.

4 Discussion

Obtained results from investigations during Golubac workshop can be narrowed on the following key issues:

- Even several levels (international, national, and local/municipal) have significantly invested in the development of the Danube riverside in Golubac (including Golubac fortress) last years, it is obvious by the conducted investigations that the most viable and popular place in the town is the Main street with the accompanying main square. Its transitive character and regional importance (a part of state road) ensure its position despite the street is currently in pretty bad state.
- As it is stated, the urban part of the riverside, including the quay and the town park, is generally refurbished and in good shape, but links (small streets and paths) between it and the main street are not attractive and functional. The only link recognised by both investigations is the main square, which is also recently renovated. Interestingly, the major concentration of public facilities around town hall, situated in this 'belt' between two corridors, is not followed with vibrant small streets and places.
- Investigations do not identify any well-designed viewpoint outside the part of the Danube quay in town centre. In contrast, the survey indicates that prospective viewpoints exist. For instance, the picturesque view opens during the entrance to Golubac from west – viewers can see the full picture of the town with the fortress and the Danube in its widest position. There are certainly similar places in the upper part of Golubac, but streets that connect it with lower and central part are not important for people by the survey.
- Supervening to the previous statement, the imbalance between western and eastern Golubac is also noticeable. The Western part is more developed and vibrant even the eastern part is closer to the fortress. This strongly coincides with the locations of central facilities and places. Those ones related to retail are in western part, closer to surrounding villages. In the other hand, the central facilities more closed to general public (school, kindergarten, court) are located in eastern part. Eastern part is also less transitive, because the part of municipality on east is with generally rough terrain and very low population and settlement density. Finally, this indirectly points that the predominant users of space in Golubac are locals – dwellers from the town and its vicinity.
- It these discussions, the limitations of this research are also inevitable. Intensive seasonal fluctuations of activities (particularly tourism) in Golubac question the role of the entire central area of the town during some periods of year. It seems that temporary centres next to the fortress and in weekend-house zones in north-eastern suburbs appear for 2-3 months of summer holiday and function almost separately from the town and for different user (seasonal inhabitants and tourists).

5 Recommendations

Based on the results from the research and related workshop and investigations in situ in Golubac the following recommendations are made:

- The main street has a great potential to initiate the further development of Golubac and its surrounding. It should be revitalised and redesigned thereof. It is still questionable which character of traffic should be. The flow of cars should be additionally analysed, because they are a driving-force for the vitality of the central street, regardless related pollution and temporally clogged sections by parked cars.
- Many small streets between the main street and town quay need upgrading and renovation. However, limited resources (financial, demographic) seek “smart” approaches, such the characterisation or thematisation of each street. In that way, they can position them in town structure in both physical and functional aspect.
- Viewpoints are important in many tourist places and this is a perfect way to wide tourist zones. This can be a guideline for Golubac, which has many attractive viewpoints on the hills around the town.

These recommendations emphasise that urban planning and design and close disciplines must play a role in the future development. The main proposals are:

- The general urban plan of the town should be revised. This is especially recommendable in the case of the networks of the centres, the contact between the centre and periphery of Golubac, the use of hilly terrain in the town vicinity, the characterisation and utilisation of the town entrances;
- The central part of Golubac requires a regulation plan which will include separate studies on the most challenging issues (transport, tourism, retail);
- Micro-redesign projects can be implemented in small places in central Golubac which are underused today. They should carry the intention to find unique function and/or physical appearance of these places, to make them recognisable in town fabric.

Local self-government (municipality) of Golubac certainly does not have resources (financial, technical, professional) to implement all programmes by these revisions in urban planning and design. In some cases, such as interventions in the main street, the part of a state road, national institutions such as “Road of Serbia” must be involved. Similarly, the national organisations competent for national waters should be included in the major project in the Danube riverside. However, it seems that only local level can initiate many of these proposals. This conclusion means that new local strategy that would be sensitive to the development and revitalisation of these flagship projects is very welcomed in the near future.

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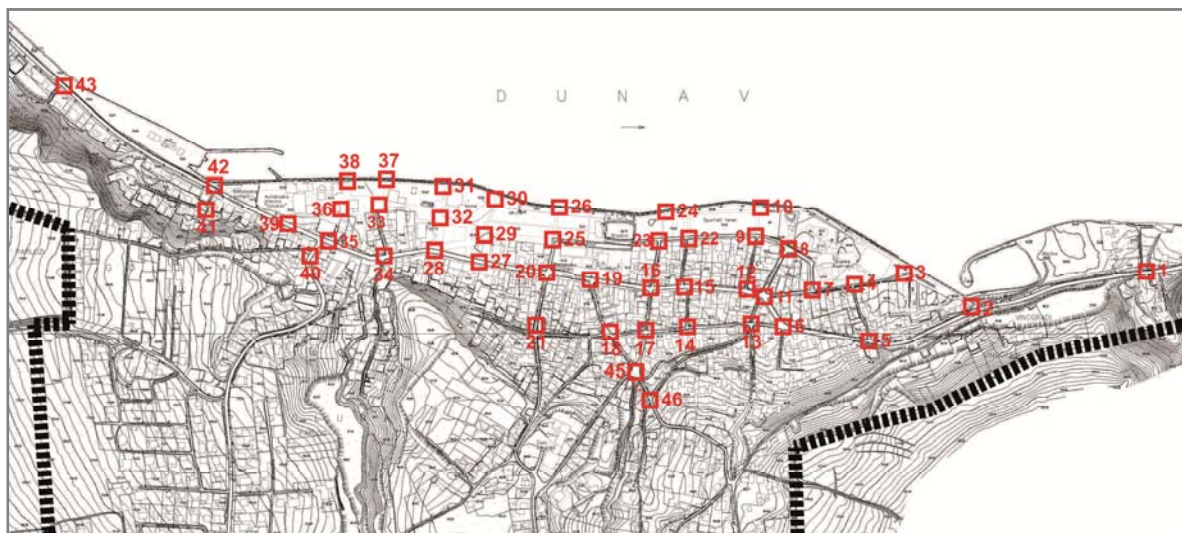
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7 Appendices

7.1 Spatial syntax

Map of central Golubac with marked points for spatial syntax



7.2 Survey - Questionnaire

Questionnaire form – English translation

METHODOLOGY OF URBAN DESIGN 2016-17.	QUESTIONNAIRE
PATHS	
<p>1.1 Which streets do you usually use for movement?</p> <p>a) Cara Dušana (Highway – Western part)</p> <p>b) Karađorđeva (Highway – Eastern part)</p> <p>c) Danube quay</p> <p>d) Vuka Karadžića (street next to the market)</p> <p>e) _____</p>	<p>1.2 Which path do you use to get to the quay?</p> <p>a) Kraljevića Marka (passage next to the municipal building)</p> <p>b) Passage across the square</p> <p>c) Branka Radičevića (passage next to the kindergarten)</p> <p>d) _____</p> <p>f) I'm not going to quay</p>
EDGES	
<p>2.1 Which streets and other obstacles restrict your movement in the coastal part of Golubac?</p> <p>a) Highway through the settlement</p> <p>b) Park between the quay and the rest of the city</p> <p>c) Downhill around Dositejeva and Karađorđeva street</p> <p>d) Downhill in Vuka Karadžića street / market</p> <p>e) _____</p>	<p>2.2 Which traces do you avoid because of the very steep slopes?</p> <p>a) Vuka Karadžića street next to the market</p> <p>b) Kraljevića Marka street above municipal building</p> <p>c) Despota Vuka street near church</p> <p>d) Braće Jugovića street near church</p> <p>e) _____</p>
DISTRICTS	
<p>3.1 Which district stands out for its recognition in the broader area of Golubac?</p> <p>a) Quay and coast</p> <p>b) Unity around the square</p> <p>c) Unity around the port</p> <p>d) The area of Golubac fortress</p> <p>e) _____</p>	<p>3.2 Which district do you consider the least secure at night?</p> <p>a) Area around the quay</p> <p>b) Park area between the quay and the city</p> <p>c) Area around the square</p> <p>d) Area around the highway</p> <p>e) Area around Golubac fortress</p> <p>f) _____</p>
NODES	
<p>4.1 In which node do you prefer to stay or meet up when weather is nice?</p> <p>a) Golubac fortress</p> <p>b) City square</p> <p>c) Port and quay around it</p> <p>d) City park</p> <p>e) City market</p> <p>f) _____</p>	<p>4.2 In which node do you prefer to stay or meet up when weather is bad?</p> <p>a) Golubac fortress</p> <p>b) City square</p> <p>c) Port and quay around it</p> <p>d) City park</p> <p>e) City market</p> <p>f) _____</p>
LANDMARKS	
<p>5.1 In your opinion what is the main symbol of Golubac?</p> <p>a) Golubac fortress</p> <p>b) The beauty and width of the Danube in front of the city</p> <p>c) City square</p> <p>d) The complex of the municipality building and the adjacent buildings</p> <p>e) _____</p>	<p>5.2 If you were to create custom postcard from Golubac where would you prefer to take pictures for it?</p> <p>_____</p>

Sample of fulfilled questionnaire

МЕТОДОЛОГИЈА УРБАНОГ ДИЗАЈНА 2016-17.	АНКЕТНА ПИТАЊА
ПУТАЊЕ	
1.1 Које улице најчешће користите за кретање? <input checked="" type="radio"/> а) Цара Душана (Магистрала - западни део) <input type="radio"/> б) Карађорђева (Магистрала- источни део) <input type="radio"/> в) Дунавски кеј <input type="radio"/> г) Вука Караџића (улица уз пијацу) <input type="radio"/> д) _____ <input type="radio"/> е) _____	1.2 Коју путању користите до кеја? <input type="radio"/> а) Краљевића Марка (пролаз поред општине) <input checked="" type="radio"/> б) Пролаз преко трга <input type="radio"/> в) Бранка Радичевића (пролаз поред вртића) <input type="radio"/> г) _____ <input type="radio"/> д) _____ <input type="radio"/> е) Не идем до кеја
ГРАНИЦЕ / ИВИЦЕ	
2.1 Које улице и друге препреке ограничавају Ваше кретање у приобалном делу Голупца? <input type="radio"/> а) Магистрала кроз насеље <input checked="" type="radio"/> б) Парк између кеја и остатка града <input type="radio"/> в) Стрмина око улица Доситејевој и Карађорђевој <input type="radio"/> г) Стрмина код Ул. Вука Караџића / пијаце <input type="radio"/> д) _____ <input type="radio"/> е) _____	2.2 Које потазе избегавате због великих стрмина? <input type="radio"/> а) Улица Вука Караџића код пијаце <input type="radio"/> б) Улица Краљевића Марка изнад општине <input checked="" type="radio"/> в) Улица десета Вука код цркве <input type="radio"/> г) Улица браће Југовић код цркве <input type="radio"/> д) _____ <input type="radio"/> е) _____
СУСЕДСТВА / КРАЈЕВИ / ПРОСТОРНЕ ЦЕЛИНЕ	
3.1 Које суседство / крај / просторну целину издвајате по препознатљивости на ширем подручју Голупца? <input type="radio"/> а) Кеј и приобаље <input type="radio"/> б) Целину око трга <input type="radio"/> в) Целину око марине <input checked="" type="radio"/> г) Простор Голубачке тврђаве <input type="radio"/> д) _____ <input type="radio"/> е) _____	3.2 Који крај / просторну целину сматрате најмање безбеднијим ноћу? <input type="radio"/> а) Простор око кеја <input checked="" type="radio"/> б) Простор парка између кеја и града <input type="radio"/> в) Простор око трга <input type="radio"/> г) Простор око магистрале <input type="radio"/> д) Простор око Голубачке тврђаве <input type="radio"/> е) _____ <input type="radio"/> ф) _____
ЧВОРИШТА	
4.1 На ком чворишту најрадије боравите или се састајете током лепог дана? <input type="radio"/> а) Голубачка тврђава <input type="radio"/> б) Градски трг <input checked="" type="radio"/> в) Марина и кеј око ње <input type="radio"/> г) Градски парк <input type="radio"/> д) Градска пијаца <input type="radio"/> е) _____ <input type="radio"/> ф) _____	4.2 На ком чворишту најрадије боравите зими / по лошем времену? <input type="radio"/> а) Голубачка тврђава <input checked="" type="radio"/> б) Градски трг <input type="radio"/> в) Марина и кеј око ње <input type="radio"/> г) Градски парк <input type="radio"/> д) Градска пијаца <input type="radio"/> е) _____ <input type="radio"/> ф) _____
РЕПЕРИ / ДОМИНАНТЕ / ОБЕЛЕЖЈА	
5.1 Које је по Вашем мишљењу главно обележје Голупца? <input checked="" type="radio"/> а) Голубачка тврђава <input type="radio"/> б) Лепота и ширина Дунава испред града <input type="radio"/> в) Градски трг <input type="radio"/> г) Комплекс општине и суседних зграда <input type="radio"/> д) _____ <input type="radio"/> е) _____	5.2 Када бисте правили разгледницу Голупца где би је сте најрадије сликали? НА ГРАДСКОМ КЕЈУ

Map of central Golubac with marked spatial elements that are included in the questionnaire
(author: B. Antonić)

