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DANURB

Photo: PÁL, Benedek – student of BME, 2017

D 4.1.1 - RESEARCH REPORT ON REGIONS
DANUBE BEND (DUNAKANYAR) MICROREGION

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1.0 INTRODUCTION

The research undertaken within the Interreg DANUrB project has involved the preparation of reports on several touristic microregions, the first of which was elaborated on the Wachau region by the project team of the TU-Wien with the cooperation of the Danube University of Krems in 2017. The report on the shared Slovak-Hungarian section of the river written together by the Slovak University of Technology and the BME, as well as the report on the Iron Gate prepared by the Faculty of Architecture of the University of Belgrade and the National Institute for Research and Development in Tourism (INCDT) has been completed by the end of 2018. The present report, written by the research team at BME, focuses on the Danube Bend region, an important tourist destination within the Hungarian section of the Danube. This microregion is at once part of the region surrounding Budapest on both sides of the Danube, the report of which had been prepared during Period 3 in June 2018, and to which the present report is related.

The Wachau Report is already available, whereas the other two microregional reports h completed at the end of 2018, therefore by the summer of 2018 only the former could serve as a basis for comparison – and indeed, its very rich content formed the starting point of our research. Moreover, the chapters of the forthcoming DANUrB book [1] on the Danube's natural and cultural landscapes have also been completed and thus we could carry on with the landscape-research. We believe that both for the locals attached to the Danube Bend and the tourists interested in the region the singular landscape of the areas along the Danube is highly important and therefore we felt it necessary to analyse it in the report.

The Danube has shaped not only the physical landscape of the Danube Bend but also the lives and culture of the people living in the region; hence it is its spatial world which our analyses take as their point of departure. It is the primary object of our research, because we believe that it has a strong impact on the riverbank – especially if considering the 9-10 m water-level fluctuations –, as well as on the lives and identities of the local inhabitants. This spatial world is enormously diverse already along the river's horizontal and longitudinal central axes, but we would like to examine also its deeper layers in its full richness.

Figure 1. (picture taken by Péter Oroszvári, BME student)

If we succeed in getting and enabling others to get a comprehensive picture of the region's spatial world, we can place in it all the knowledge and information which we have gathered together with

the researchers of MUT (Hungarian Urban Knowledge Centre). This can enrich the picture of the Danube both for the locals and the visitors, and it can also show them how many possibilities the place of their habitat or the destination they've chosen holds.

Our research might have transnational validity due to the fact that there is a number of similar "bendings" along the Danube, seven of which are discussed in more detail in the first chapter. The approach used in this report thus can be applicable also for the analysis of other parts of the Danube that form a distinct region.

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2.1 GEOLOGY OF THE DANUBE'S RIVER BENDS

THE GEOLOGY OF THE DANUBE

The beginnings of the formation of the Danube date to the Pliocene, during which the present upper section (the German and Austrian part) was formed. After filling with sediment and leaving the Bavarian Basin, the Danube "cut through" the 350-400 million years old block of the Bohemian Massif; in fact, the Danube's valley here is an antecedent valley created by the continuous rise of the Bohemian Massif (the same is true for the Danube Bend and the area of the Iron Gate). In the early Pliocene the river's drainage basin was likely much larger than today, but the Rhine, being in a continuous constant regressive sequence, drew much of the streams of the Western Alps into itself. The Danube, with its course shifting more and more eastwards, began first to fill the Vienna Basin with sediment, and then, 2,5-3 million years ago it reached the gates of the Little Hungarian Plain.

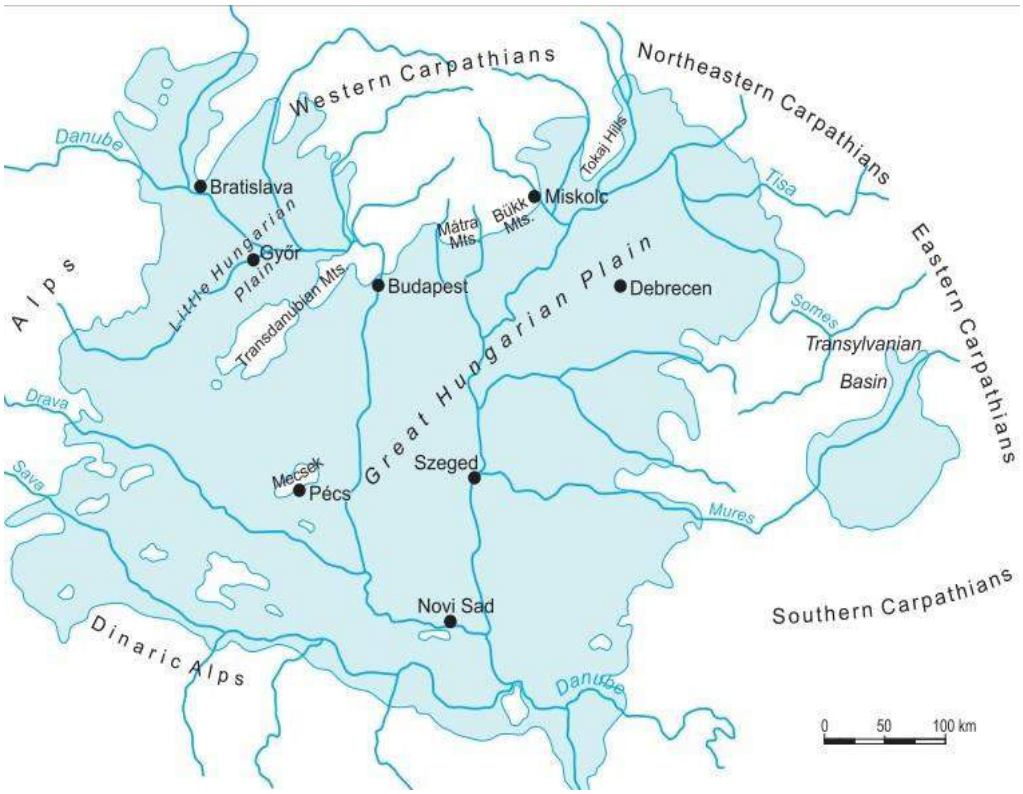
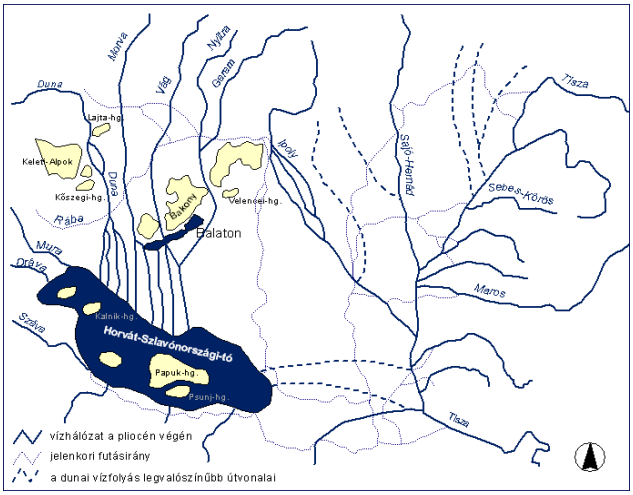


Fig2: The extent of the Pannonian Sea 10 million years ago (source: [1])

During the Tertiary (65-2,5 million years ago) most of the Carpathian Basin was covered by the Pannonian Sea which lost its connection to the world ocean and due to the inflow of rivers it began to fill up (Fig. 1.). Around 2,5-2 million years ago, after arriving at the Little Hungarian Plain, the Danube first flowed southwards into the then-existing Slavonian Lake, lying in present-day Northern Croatia. At this time, its left-bank tributaries (e.g. Morava, Váh, Hron etc.) were considerably longer and just like the Danube, they flowed through most of Transdanubia (Fig. 3.). The depression of the Little Hungarian Plain and the slow rise of the Transdanubian Mountains made the Danube change its course eastwards, and after cutting through the Visegrád Pass (today's Danube Bend) it arrived at the Great Hungarian Plain.



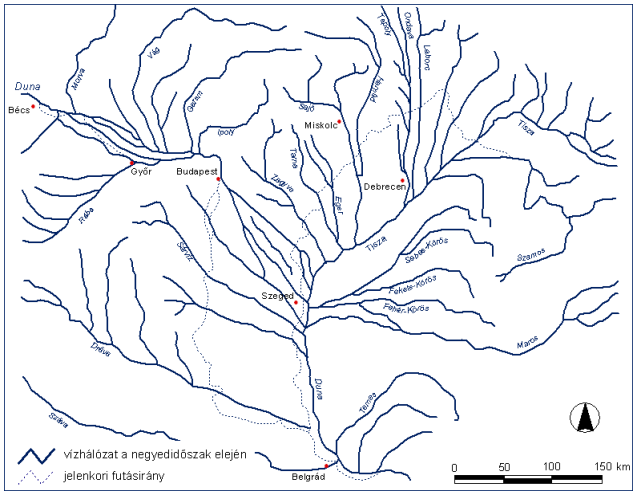


Fig.3.: The water network of the Carpathian Basin 3 million years ago (source: [2])
Fig.4.: The water network of the Carpathian Basin 2 million years ago (source: [2])

At the beginning and even in the middle of the Pleistocene (2,5-0,01 million years ago), after it reached the Danube Bend, the flow of the river followed an almost straight course toward the depressions around the present-day city of Szeged (Fig. 4.). Its course turned southward only after a tectonic movement took place in the area between Dunaföldvár and Baja which around 800 thousand years ago pulled the Danube toward itself. Until that the river created a vast alluvial fan in the Danube–Tisza Interfluve (the sand dune area of the Kiskunság). "Chasing" the intensely retreating Pannonian Sea, at the Iron Gate the Danube found a passage from the Carpathian Basin, to subsequently shape in a relatively short time, geologically speaking, its course running through the Dacian Basin (approximately the present region of Wallachia). Before reaching the world ocean, the last geomorphic obstacle was presented by the Dobrudja Plateau, after the bypassing of which at the end of the Pleistocene the Danube formed its delta at the Black Sea. Even today the river carries on an extensive erosional activity, and whereas at its mountainous parts it is cutting, in the lowlands it is filling, continuously shaping its banks and its surroundings. It carries enormous amounts of sediment (though today this is heavily influenced by anthropogenic activities, such as the building of hydroelectric power plants) through which it takes away larger and larger areas from the sea, advancing ca. 5 metres annually.

DANUBE BENDS

We call "Danube Bend" not only the well-known region in Hungary but also all those curves of the river which show a significant change of its course or were the latter is caused by a geomorphic obstacle. Also, we wished to cover the largest possible section of the Danube. We didn't include in the case areas meanders (since they are not shaped by geomorphic obstacles) but we included two areas where the obstacle is not a conspicuous mountain or mountain range but instead a relatively low-lying loess plateau. Another criteria for inclusion was the visual accent, that is, the recognisability of the river bend on the spot, with the additional condition of the existence of one or more viewing points from which the bend's overall shape is markedly visible for the observer. As a consequence, we designated seven "Danube bends" (Fig. 5.) which can be found from the vicinity of the German-Austrian border to the river delta. As regarding their formation, size and geologic and geomorphic character – as we will see below – they show considerable variety.

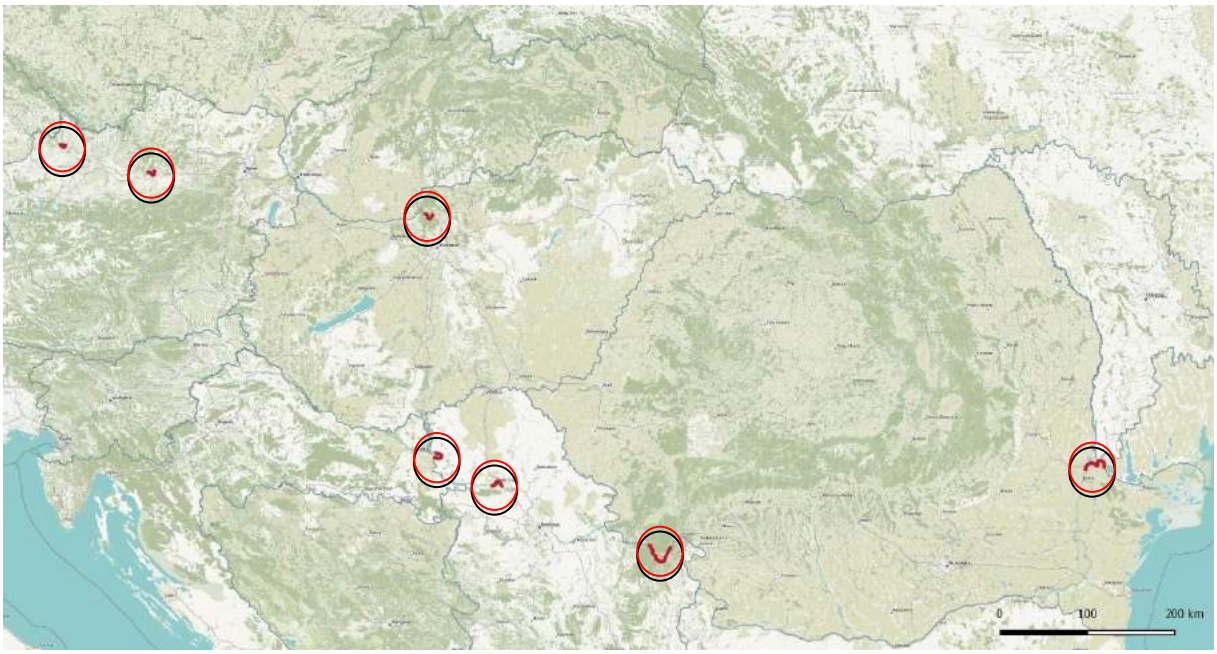


Fig.5.: the case areas („Danube bends") along the Danube
(source: own creation)

THE RIVER'S U-TURN - SCHLÖGENER SCHLINGE (AUT)

At its hairpin turn in Lower-Austria the Danube cuts through the mass of Variscan granite and gneiss of the Bohemian Massif. On the north lies the central plateau of the Mühlviertel. The latter rises 260 metres in average above the Danube and it flanks the Danube valley everywhere with steep slopes. That is why the riverfront here is very sparsely populated and the settlements are concentrated on the plateau. This duality manifests itself also on the landscape. On both sides the steep riverfront follows the river with a strip of forests, whereas on the plateau one can find a patchwork of arable fields, forests, pastures and settlements (Fig. 6-7.).

Fig.6-7.: The Schlögener Schlinge
(source: [3][4])

At Schlögen the water level of the Danube rises about 280 m above the sea level, but this is not a natural state – it is caused by the swelling effect of the hydroelectric power plant located some 20

km down the river at Aschach. The bend at Schlögen was one of the most dangerous parts of the Danube what was – besides power production – one of the reasons for the construction of the power plant. At the curve's convex side the shores are accreting, while on the opposite side they were originally eroding; today, however, this natural process is longer in effect because of the – otherwise intensely used - bicycle route. At the Schlögen bend one meets mostly tourists and hardly any locals. The settlement network is dominated by small hamlets, such as Inzell with 19, Schlögen with 15, or Au with 4 inhabitants [3].

THE DANUBE BEND AT YBBS (AUT)

The geology of the Danube bend at Ybbs a.d. Donau shows high similarity with the characteristics of the Schlögen bend. Also here the Danube cuts through Variscan and Precambrian metamorphic (mostly gneiss) rocks composing the Bohemian Massif. In contrast to the Danube-valleys on the west and east (the Wachau region), the valley floor here widens and by depositing part of its silt the river built a smaller alluvial fan (river pebble), which in effect it has to bypass. This is basically how this Danube bend had formed (Fig. 8-9.). Thus, similarly to the Schlögener Schlinge and the Hungarian Danube Bend, at Ybbs there is also a geomorphic obstacle but in contrast to those two areas here the role of the river's building activity (as well as of river sediment) is more essential.

Fig.8-9.: The Donau Biegung at Ybbs
(source: [15][5])

CLASSICAL CASES – THE DANUBE BEND (HUN) AND THE DERDAPSKA KLISURA/PORTILE DE FIER (SRB/ROM)

In our understanding, the Hungarian Danube Bend (having this as its official name) and the Iron Gate along the border between Serbia and Romania represent classical cases of "Danube bends": in these two areas the river cuts through few hundred (300-500) metres high mountains. Their formation took place in different periods (Table 1.) but under similar circumstances: the retreat of the Pannonian Sea over millions of years caused the continuous growth of the Danube's length, during which the river's mouth shifted more and more eastwards. At the same time, however, the tectonic processes strongly influenced the exact position of the river valley: the depression of the Little Hungarian Plain diverted the Ancient Danube from its original southward course and forced it about 2 million years ago to cut through the present-day Visegrád Mountains (Fig. 10-11.)

Fig.10-11: The Danube Bend
(source: [6][7])

Pursuing the retreating Pannonian Sea, about 600 thousand years ago the Danube created its valley in the area of the Iron Gate, the only place where thanks to the sloping conditions it could exit the Carpathian Basin. Both the Danube Bend and the Iron Gate are antecedent valleys, meaning that the Danube's deepening effect and the rise of the surrounding terrain took place at the same time what is evidenced by the existence of several Danube terraces lying on each other (especially in the Danube Bend). These were the primary processes that caused the formation of the mountain sides of high relief energy and – especially at the Iron Gate – the nearly perpendicular cliffs (Fig. 12-13.).

Fig.12-13.: The Derdapska Klisura/Portile de Fier
(source: [15][8])

As a result, both areas are highly attractive for tourists which is well (although not fully) utilized in the Danube Bend but less in the Iron Gate. Their relatively large territorial extent also contributes to their high potentials. Although in this chapter we discuss both areas in their narrowest definition (Fig. 1.), even so the Iron Gate covers a 44 km long section of the Danube. In their broader demarcation (which takes into account not only natural but also cultural and historical factors) the Hungarian Danube Bend is 58 km and the Iron Gate 134 km long.

In the case of the Danube Bend one of the possible explanations for the formation and shape of the narrowly defined river curve can be given by looking at the formal features of the volcanic mountain elements, much older than the Danube: due to its physical characteristics the Danube followed the lowest-lying part of the terrain that was most likely a side of a protrusion built of relatively hard rocks. This, however, can only partially account for the resulting formation, because 2 million years ago the Danube flowed on a much higher terrain and the Danube Bend was comprised only of gentle hills bisected by a valley created by tectonic movements. It was this valley which the Danube seized for itself and subsequently – in parallel with the rise of the surrounding terrain – begun to deepen it, thus creating the formal features of the present-day mountains, respectively bypassing the highest protrusion composed of rocks exerting the greatest resistance (the today's Hill of Saint Michael) (Fig. 9. and 10.) [9]. In the case of the Iron Gate volcanic formal features are much less important and instead its landscape is characterised by formal features typical of limestone areas.

AGAINST THE LOESS WALL - ERDUT (CRO/SRB) AND GALATI (ROM/MDV/UKR)

In two of the case areas the change of the course of the Danube took place in less spectacular settings: a relatively high-lying loess plateau stood in the river's way. This has, however, only symbolic importance, since the Danube follows everywhere merely the recesses and valleys created by tectonic movements, which are usually flanked by 20-30 m and at some places even 70-80 m high loess cliffs (Table 1.). These of course don't form a monolithic block at every point and besides they often resemble gentle hillsides rather than cliffs (Fig. 14-15.).

Fig.14-15.: The Danube at Erdut (the „Croatian Danube Bend")
(source: [15][10])

It is peculiar that both at Erdut, located in the "Croatian Danube Bend", and Galati, regarded as the starting point of the Danube Delta, the loess plateau is one sided and covers only one bank of the river. On the other bank – on the Serbian, respectively the Romanian side of the border – there are flatlands lying only slightly higher than the river (Fig. 16-17.).


Fig.16-17.: The Danube at Galati
(source: [15][11])

DANUBE'S GIBLARTAR - PETROVARADIN (SRB)

The rock of Petrovaradin – on which the city's famous fortress had been built and which rises some 50-70 m above the Danube – is a north-eastern spur of the Fruška Gora. Its strategic importance has been recognized already during the early Middle Ages: the high-elevation position and the meandering flow of the Danube allowed the garrisons stationed on the top of the rock to control the surrounding areas. The Fruška Gora is an isolated mountain range between the Danube and the Sava rivers, in the northern part of the Syrmia region of Serbia, which along its east-western axis is 80 km long, whereas along its north-southern axis it measures only 15 km. It is mainly composed of crystalline slate [12], the resistant character of which forced the Danube to provisionally change its course, and that was how this "Danube bend" – which encircles the rock of Petrovaradin from three sides – had been created (Fig. 18-19.).

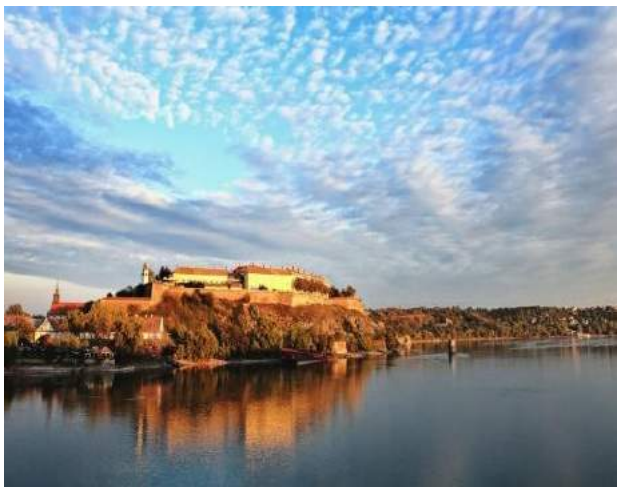



Fig.18-19.: The Danube at Petrovaradin
(source: [15][13])

The Fruška Gora owes it significance in large part to the centuries-long presence of viticulture and wine production, and to the monasteries hidden in the valleys. In order to facilitate the management

and preservation of the mountain's complex values – which we consider to be highly important not only because of the region's cultural elements but also due to its specific climate, flora and fauna, as well as its hydrography – in 1960 a national park was created on an area of 25,5 km^2 [14].

CONCLUSIONS

Regarding their position, geology, geomorphology, and even the characteristic local settlement network, the analysed seven "Danube bends" show considerable differences: for example, one has at its riverfront a city with hundreds of thousands of inhabitants, whereas the surrounding area of another is dominated by small hamlets. There is a "Danube bend" where the river cuts through few hundred meter high cliffs, yet in other cases the landscape is dominated by flatlands. If we would like to identify similarities between the seven areas, or at least between their majority, it might be worth to return to the central question of this chapter concerning the characteristics of physical and cultural landscape. It is the common feature of all seven case areas that from a given viewing point – due to the sudden change of the river's course – the curve "hides the river" from our view and creates an interesting and unique natural milieu. Another similarity is the asymmetrical character of the "Danube bends", meaning that almost in all cases there is a significant difference in relative elevation between the right and left riverbanks what in our view enriches the special character of the landscape.

"Danube Bents"	Country	Location	Size of region (river line) /km/	Elevation (Danube) /m/	Relative altitude /m/		Age /million years/	Original rock material	Settlement network	Most important settlements
					left bank	right bank				
Schlögener Schlinge	Austria	48°25'38.6" N 13°52'24.4"E	7	280-283	300	250	5	granite, gneiss	scattered, low population density	Waldkirchen a. W.
Donau Biegung Ybbs	Austria	48°10'19.6" N 15°06'40.6"E	9	215-219	60	120	4,5	granite, gneiss, river bed sediment	dominantly small towns, moderate population density	Ybbs a. d. Donau
Danube Bend	Hungary	47°45'51.8" N 18°55'53.7"E	19	99-101	380	280	2	volcanic	middle villages, moderate population density	Visegrád, Nagymaros
Erdut	Croatia, Serbia	45°30'24.3" N 19°06'04.1"E	23	78-79	5	100	0,8	loess	one-sided, low population density	Erdut
Petrovaradin	Serbia	45°15'51.4" N 19°52'05.7"E	15	70-72	15	70	0,7	crystalline slag	metropolitan high population density	Novi Sad, Petrovaradin
Derdapska Klisura/ Portile de Fier	Serbia, Romania	44°28'21.9" N 22°09'00.1"E	44	63-67	500	600	0,6	limestone	small villages, low population density	Donji Milanovac
Galati	Romania, Moldova Ukraine	45°24'54.0" N 28°11'27.9"E	34	2-3	70	5	0,3	river bed sediment	metropolitan high population density	Galati, Reni

Table 1.: The main characteristics of the analysed „Danube bends"

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2.2 ASPECTS, CONDITIONS AND CAUSES OF THE EMERGENCE AND DEVELOPMENT OF RIVERFRONT SETTLEMENTS

The interpretation and description of the systemic character of settlement networks – including the networks of riverside settlements – is the research subject of various areas of urbanism: these are, among others, settlement geography, settlement statistics, settlement history, settlement ecology, settlement morphology etc. Only by paying attention to the questions formulated by all these fields of study can we arrive at a more nuanced and comprehensive understanding of settlements.

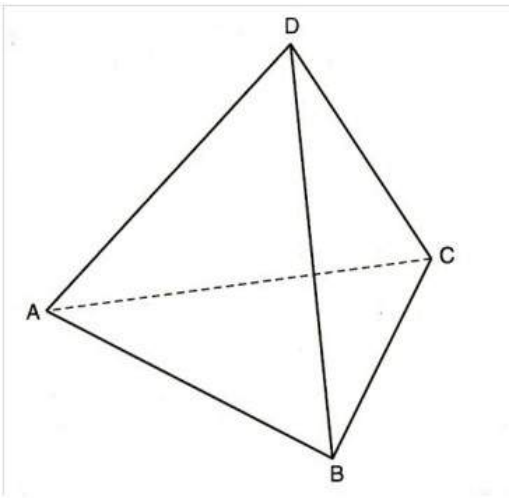
The arrangement, temporal and spatial structuring of the settlement of human groups in the landscape should be analysed through the interpretation of both natural and social conditions. To learn – even if in a limited way – the basic regularities, in this chapter we will rely primarily upon the conceptual framework of urbanism and settlement geography. Through this we would like to try to understand certain semiotic regularities embedded and observable in the given settlements and cultures. In general it can be said that the main factors enabling the emergence of settlements are defensibility, minerals, drinking water, and the proximity of commercial routes which are often waterways.

The question of these factors and regularities was first formulated in settlement geography, after recognising that settlement factors operate in a complex and intertwined manner. By adopting the concepts promoted by Tibor Mendöl (Szűcs 2007, p. 10.) – local and positional energies – we examine, among others, defensibility and the security of supply (of drinking water and of food in a broader sense).

- *Local energy: energy stemming from local natural conditions, locally stimulating the settlement's development. These can be for example favourable geomorphic conditions, the availability of drinking water or the presence of minerals.*

- *Positional energy: refers to the conditions stemming from the geographic location of settlements. The position of settlements within the settlement network result in favourable or unfavourable conditions which determine the settlement's relative positional energies. We can think here of the positional energies arising on the interfaces of different regions or the advantages stemming from favourable positions along traffic routes.*

Instead of the definition by Tibor Mendöl, who claimed that "*a settlement is a spatial unit of human residences and workplaces*" (Szűcs 2007, p. 5.), our understanding of the concept of settlement relies upon the approach of József Tóth (1996), since for our present aims it offers wider possibilities. According to Tóth: "*A settlement is a cooperative system in a specific geographic environment based on the interaction of the elements of this environment with the strongly entangled economic, social, infrastructural and natural spheres*" (Fig. 20.).



The *social* sphere (ABD△)
The *economic* sphere (BCD△)
The *infrastructural* sphere (ACD△),
The natural sphere (ABC△);

Fig.20.: The interaction and cooperative system of the four spheres. (Source: Szűcs 2007, p. 6.)

In the network model of József Tóth, the areas around the intersections of the diagonals allow for the emergence of a theoretical space of possibilities in which (in optimal case) the interaction of these "spheres" secures sufficient resources for the life and balanced development of a given settlement.

In the literature the categorisation of settlements is based on their different characteristics (number of inhabitants, size, structure, spatial use, functions etc.) and the roles they fulfil in a network or hierarchy of settlements. These characteristics and roles depend on the fulfilment of certain criteria. Among the factors of settlement, the natural conditions, such as geographical location, topography and hydrography, are the most essential.

The natural sphere (ABC△)

Favourable natural conditions enable the development of the social, economic and infrastructural spheres. The reverse is also widely accepted: settlements which have become important centres mostly possessed favourable natural conditions. Lowlands, offering sufficient space for agricultural production allow for the formation of more populous and socially more complex societies. Woodlands and mountainous regions, on the other hand, provide building materials and minerals, and are more easily defensible. The water catchment function of valleys allows for a safer supply of drinking water. The mouths of stream valleys, along which it is easier to cross through woodlands, tend to cumulate settlement factors; besides drinking water they also provide access to resources from outside the valleys.

Larger rivers usually allowed for easier transportation, but they could also be obstacles for travellers. Therefore the natural conditions stimulated settlement rather on those parts of rivers where the crossing was easier but which were also defensible. This need for protection and control often implicated the choice of a hill (Bratislava), a sharper curve of the river (Petrovaradin), or an area or archipelago at the confluence of two or even three rivers (Passau, Komárom, Belgrade).

Besides a more easily defensible citadel providing protection there was a need for space also for the growth of a settlement. A good example is the royal residence of Visegrád, built in a mountainous terrain at the middle of the Danube Bend, where in the narrow valleys, due to the lack of available space, only villages could evolve. Although they were able to develop beyond self-sufficiency and by the fulfilment of special economic functions, they showed a division of labour reflecting a higher form of social organisation, their network was inflexible and could not develop further.

Topography will affect development also in later historical periods because during the industrial revolution lowlands were much more suitable for territorial growth than like an easy-to-install flat area (e.g. Novi Sad, Pest, Linz). For the new economic activities flood-free areas offered much greater advantages. After the industrial revolution economic activities, as well as already established economic traditions became important settlement factors in themselves.

Near crossing points another advantage besides defensibility was the presence of a safe harbour, or even better, a natural bay in a sidearm (such as the Little Danube in Esztergom or the recesses at the Óbuda Island in ancient Aquincum). In settlements, which developed despite the lack of these natural advantages, the latter had usually been artificially created. At topographically homogenous river-sections, when no bridges were available, neither the quick rivers of the mountains, nor the sprawling marshy waters of the flatlands offered suitable crossing points. These conditions, however, enhanced the defensibility of settlements (like the multiple arms of the sprawling Danube in Vienna). But along the border of areas with different natural conditions, at the sections where the speed of the rivers changes, the shifting natural and climatic conditions allow for crossing nearly always at the same place (fords, good harbours). Therefore we can find crossing points more likely at the gate of mountainous sections (e.g. the Danube Bend), or their intersections (e.g. Drobeta -Turnu Severin).

The infrastructural sphere (ACD△)

Along the border of areas with different natural conditions, at points where goods are exchanged we can observe the combination of commercial potentials. These boundaries, the so called market town lines (e.g. at the intersections of lowlands and mountainous areas) function as significant settlement factors.

Rivers and transportation

Good positional energies, such as the development of social and economic factors based on basic infrastructure, require additional infrastructural needs. Among these, transportation has the greatest impact. Transportation infrastructure combined with good location increases the number of available resources, and thus creates conditions for a larger and more effective economy.

Transportation as a basic infrastructure tends to continuously develop new forms of specialisation. New technologies of information transfer and communication can influence the constant role-seeking and competition of settlements. Interestingly, places of *digital* information transfer (and therefore also traffic nods) which are in theory independent of geographical conditions in reality

usually emerge and become significant in those areas which originally have already possessed favourable geographical conditions, this way further increasing the significance of places with good initial positional energies.

The settlements of the Danube Bend formed in a similar way at the intersection of important commercial routes following the course of the river under the hills and those running orthogonally to the Daube along the axes of the valleys. Below, in the aerial photographs of the analysed settlements of the Danube Bend, we will mark with white colour the more important routes, with red the slopes of the terrain in the given section, and with blue the course of the Ipoly river (constituting the national border).

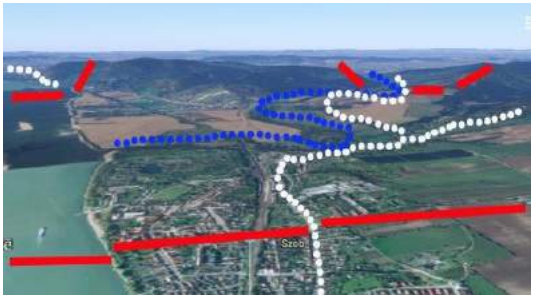


Fig.21. [1] Szob

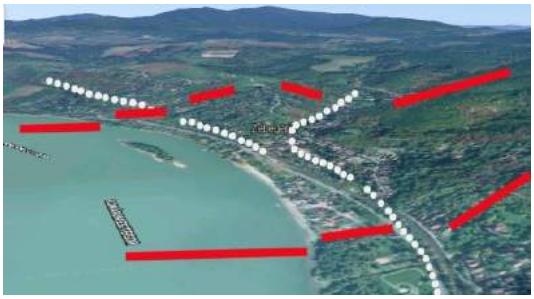


Fig.22. [1] Zebegény

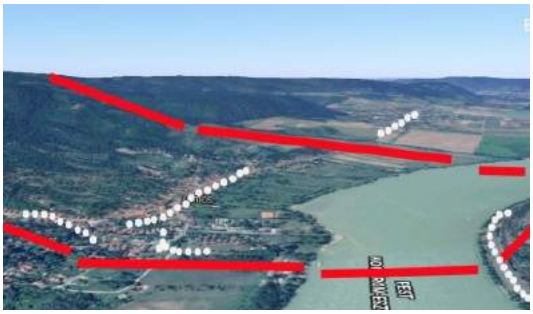


Fig.23. [1] Dömös

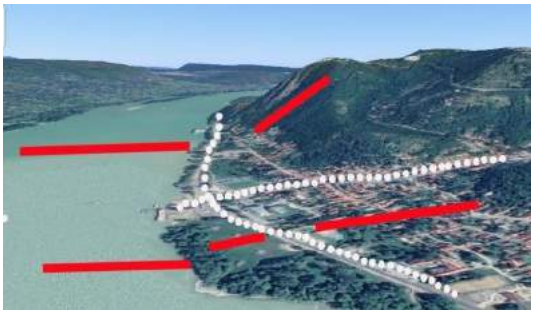


Fig.24. [1] Visegrád

Fig.25. [1] Nagymaros

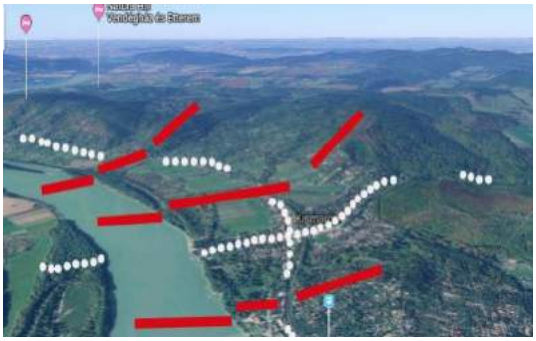


Fig.26. [1] Kismaros

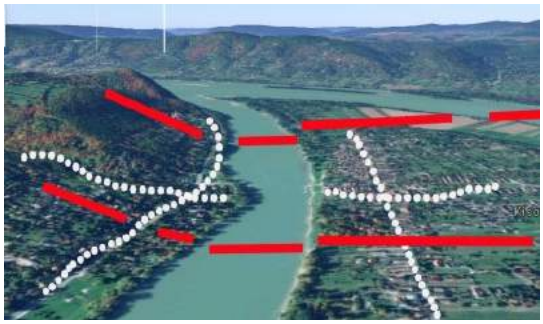


Fig.27. [1] Kisoroszi

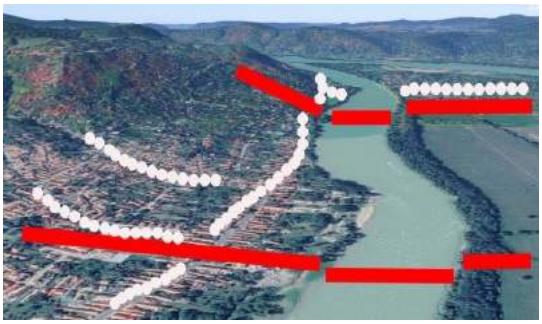


Fig.28. [1] Dunabogdány

Fig.29. [1] Dunabogdány, Kisoroszi, Kismaros

Routes converged at the river's suitable crossing points and fords and "bridge" settlements formed around these meeting points. Both the narrowing of the river and its sprawl through smaller branches flowing between islands could offer suitable crossing points. The abandoned crossing points left also their mark in the spatial structure of the settlements. The roads and streets running toward each other on the opposite banks indicate the former presence of crossing points which in the past ceased to function due to convenience or constraint (Fig. 29.)

Fig.30. [1] The Danube at Helemba

Fig.31. [2] The Ipoly at Helemba

On the aerial photograph of Helemba the track of the roads running opposite the river indicates that in the past there could have been crossing points at these parts of the river.

Similarly, at the highway and the bicycle route across the Ipoly's, near its confluence into the Danube, there is no connection between Szob (Hungary) and Helemba (Slovakia). The road ends at Helemba (Fig. 30.), and a smaller bridge is missing across the Ipoly toward Szob, which has, besides economic and touristic aspects, also political and social implications.

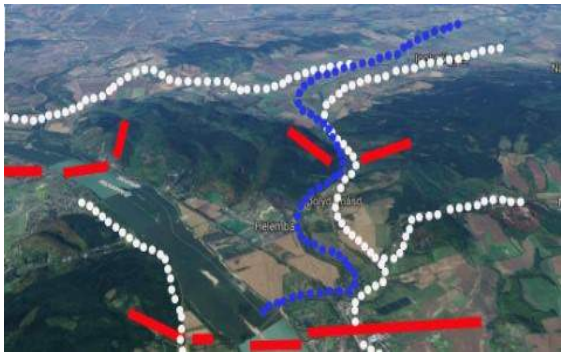


Fig.32. [1] The confluence of the Danube and the Ipoly

The track of the roads marked with white colour (Fig. 32.) implies that the fact that it is not possible to cross the border across the Danube, but only further away across the Ipoly (marked with blue), is not a natural necessity but is a result of social and political decisions. The insufficiency of the road network makes the smaller natural obstacle a mentally powerful, identity-forming boundary.

Due to the possible difficulties of their modification, the railroad tracks rationally follow the course of the Danube. Since the border control ceased to operate, the participants of “soft” (pedestrian, cyclist) traffic – willing to undertake inconveniences and potential dangers – are forced to illegal use the railroad bridges (Fig. 33.).

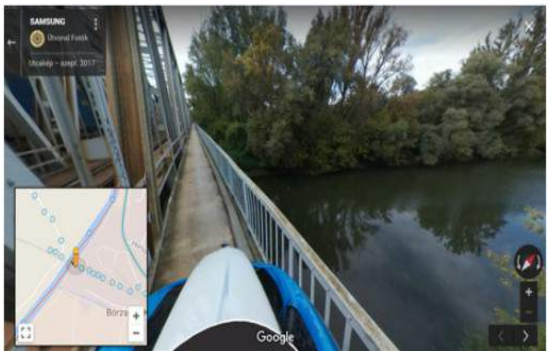


Fig.33. [3] Bridge across the Ipoly

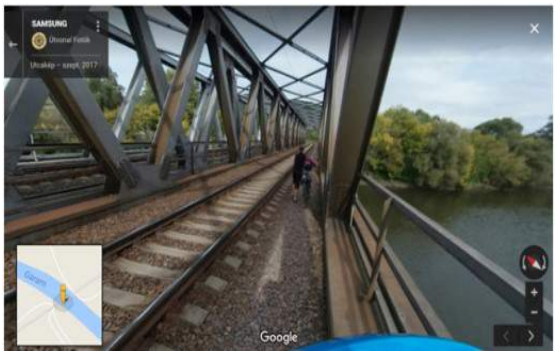


Fig.34. [3] Bridge across the Garam

Cyclists have to make a detour also at the Garam river, or more precisely they would have to make one, but the pictures available on the internet (Fig. 34.) reveal that those looking for the bicycle road find themselves between the railroad tracks where they try to get to the other side.

Earlier, the size of the settlements was determined by the width of the valleys. After the industrial revolution the new settlement parts with holiday homes seasonally used for recreation started to crawl up to the hillsides not only because of the lack of space but also because the elevation offered a pleasant view. This spatial expansion was enabled by motorisation and the construction of drinking water pipes. Ironically, it is the excess of water which prevents further expansion, since although holiday homes are provided with drinking water, in many cases the disposal of wastewater can only be solved through infiltration and desiccation. Infiltration often takes place in-between layers of clay which after saturation can cause landslips and thus can make whole hillsides unsuitable for construction.

The economic sphere (BCD△)

The proximity of raw materials is also a significant settlement factor but the good possibilities of transportation on rivers can conveniently send these materials to the crossings of commercial routes and to places of exchange and processing (for example the stones from the quarries Budafok to Pest, timber from Transylvania to Szolnok, or the coal mined in Dorog to Budapest). Raw materials and products which were transportable on land with greater difficulties, such as timber, building stone and burnt bricks, could be on rivers easily sent to their place of destination.

Technological and proprietary changes can also influence the importance of individual settlement factors. A well-known case are the former mining settlements and centres of coal transhipment, such as Dorog and Esztergom, struggling with unemployment due to technological changes.

The impact of economic changes on the landscape is well-illustrated by the example of the Szobi Szörp syrup factory, which was built in Szob on the bank of the Danube to process the fruits harvested in the nearby Ipoly valley. The construction was financed by the local agricultural cooperatives, and the operation of the factory was characterized by strong cooperation of the farmers, the buyers and the producers even during periods of crises. After the change of the regime, the privatisation put an end to this collaboration, the factory and the farmlands were sold to different owners and instead of co-working, bargaining seeking the maximisation of profit began to rule. The new owner, insensitive to the needs of the local producers, purchased the fruits for the syrup production from distant areas and from abroad where they were cheaper. This way the local fruit producers lost their chance to get their little profit, thus they were not able to get sufficient resources for the maintenance of their orchards which formed an integral part of the landscape. The aged orchards were in many cases replaced with homogenous fields of cereal crops but the orchards on the hillsides that were unsuitable for large-scale production were often left neglected and overgrown by weeds. As a result, today they “colour” the Ipoly valley to the feet of the Börzsöny Mountains.

The social sphere (ABD△)

The existence of industrial cities on the river which do not have raw materials in their vicinity and lack the appropriate natural conditions could be explained by social factors and political decisions. Here, besides the questionable economic efficiency of Dunaújváros we can think of the case of the heavy industry in Linz, called the “white elephant”. The furnaces of Linz and the ore deposits of Erzberg are located far from each other, yet the property relations bind them together. The production process evolved here organically and resulted in technological innovations and special knowledges (DL steelmaking). Good railway and waterway connections helped the emergence of a profitable and competitive heavy industry, in spite of expensive labour force.
The transformation of political and economic roles affect the interpretation of the potentials of agglomerations and cooperation. Religious centres and peaceful villages can attract people whose leisure time have increased. The often higher incomes, cultural preferences and more free time of those living in larger centres creates recreational needs. These represent an additional development

factor which is influenced not only by the natural conditions of the settlements but also by their location.

Settlement factors affected by the river int he Danube Bend

The question arises how could two such cultural and political centres like Esztergom and Budapest evolve in the mountainous wooded areas of the Pilis and the Börzsöny which are seemingly unsuitable for the development of larger cities?

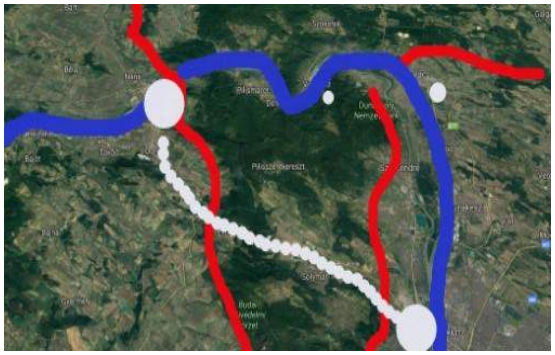


Fig.35. [1] Esztergom and Budapest in the Danube Bend

The mountainous area of the Danube Bend can be seen as a place with favourable settlement conditions or as a gate, located at the intersection of the market town line following its border with the lowlands, and the river as a transportation route. This is further reinforced by the central position of the two (former and present) capital cities within the Carpathian Basin. Thus the two gates of the Danube Bend, Esztergom and Budapest emerged at the crossings of the commercial routes of the Carpathian Basin, at the meeting point of two distinct geographical areas. At the border of the larger region lies the bigger centre, Budapest, on the elevated point of which was built the walled complex that secured its city status: the castle of Buda. The fortified settlement evolved on the edge of the mountain, at the meeting point of a wide valley and the drainage stream of the Ördögárok where on the other side of the river thanks to an alluvial fan a narrowing offered the possibility of safe crossing.

Similar conditions and cultural patterns can be observed in the case of Esztergom, the other gate of the Danube Bend that is also demarcated by the river and the mountains and was built at the border of two regions. While its fortress was built on a well-defensible hill, the settlement of the Water Town is located on a narrow area enclosed between the hill and the river. Due to the presence of the court in both centres of power the burghers' town accommodating merchants and artisans was encircled by a smaller defensive wall opposite the castle, on a flat terrain enabling expansion: opposite Buda this was Pest, whereas in Esztergom it was the Royal District. The inhabitants of the burghers' district could reach the wider markets through the intersection of the commercial routes running along and across the Danube within the town. During the Ottoman occupation river-crossing was facilitated through a pontoon bridge which on the opposite side was protected by a fortified settlement.

The communication between the fortifications of the territorial defensive system described above was secured by a valley road already used by the Romans, the Viennese Road and the Pilisvörösvári Road leading through the Pilis Mountains. Visegrád, the fort that was most effectively defensible but was less suitable for settlement expansion, offered the best place to house the royal treasury (including the crown jewels) and a protected royal summer residence. In Visegrád the citadel was used to accommodate the treasury, whereas the palatial complex serving the everyday comfort and representation of the ruler developed at the foot of the hill, down by the river (in Fig. 16. the borders of the areas with different conditions are marked with red colour, the routes connecting regional centres are marked with white, and the Danube, serving both as a defensive line and a traffic route is marked with blue).

The Middle Ages was a period in Hungary which was rooted in European culture, evolving simultaneously with its trends. Esztergom, previously strongly embedded in the cooperative system of settlements that developed in the Middle Ages, after the change of the borders (after the First World War) has found itself in a peripheral position and this change very likely hindered its development. The permeability of the borders might, however, enable the partial recovery of its former regional role. The increase of the potentials stemming from geographic conditions might again affect the division of labour between the settlements of the region.

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https://miau.gau.hu/avir/intranet/debrecen_hallgatoi/tananyagok/jegyzet/24-Telepulesfoldrajz.pdf

Image credits:

[1] Image made by the author by using an aerial photograph from Google Earth.

[2] Image from Google Earth.

[3] Image from Google Maps.

2.3 SPATIAL WORLDS IN RIVER BENDS

The previous two chapters discussed the causes and the historical background of the formation of the Danube bends. The river constantly shapes its environment but in geological terms the present spatial situation can be regarded as stable. Or, in fact, not entirely, because even within a single year the significant fluctuations of the Danube's water level result very different situations. Seismic movements, the river's erosive activity and the protective measures against the latter created at certain parts very diverse formations along the river, which enriched the landscape of the Danube with outstanding spatial settings. These are marked by their size and proportions which are even more remarkable in those parts of the river where it changes its course frequently within a short span. Therefore this spatial world closes not only crosswise – when viewing one bank from the other or both banks from the Danube – but also lengthwise. This way, when travelling on the river, in the Danube's bends we can encounter very rich spatial ensembles of its landscape.

Fig.36 (Photograph taken by Márton Nagy, BME student)

In scholarly literature we can find a wide variety of definitions of the landscape, each reflecting the distinct approaches of different disciplines. Among these, the approach of geography is probably the most exact, which categorizes geographical landscapes into various types on the basis of morphology and natural conditions, and classifies all Hungarian regions within a precise cadastre (the so called sub-regional landscape cadastre [1]). The differentiation of individual regions by landscape architects is based on the definition of Mihály Mőcsényi [2] according to which every landscape can be analysed as the interaction of the original natural state and the intervention of human communities and societies, in their mutual relationship. According to biologists [3] since the appearance of humans on Earth we cannot talk about original natural states or natural landscapes, whereas other ecologists claim that after the withdrawal of human activities landscapes can recover their natural state. In view of the various concepts of landscape our research team, the members of which are mostly architects, decided to apply a new approach to the landscape surrounding us: the spatial determination of landscape.

The life and identities of people are strongly shaped by the spatial world into which they are born and in which they spend their childhood. Looking at the scale of their home, it is not without importance whether a child grows up alone in a 15 m2 room with a standard ceiling height or in a smaller one with five other people. Similarly, there is an even greater difference between the outer spatial worlds of a suburb with family houses, a historical inner city, or a housing estate in a bigger city, emerging between the buildings and with its size, proportions, lights, colours and smells

imprinting itself forever in the mind. It leaves its marks to such an extent that when visiting a given place in adulthood we can feel the slightest changes that took place since we left: a new house was built or a large tree was cut out which modified the familiar spatial setting. Even more curiously, in previously unknown places we sometimes have the feeling that we have already been there (*déjà vu*) and our childhood memories unexpectedly come forth. Why do these new places remind us of past ones? Because of their lights, colours, or smells? Probably also because of these but possibly the most important is – and this is the actual subject of our research – the spatial memory which we carry in us from childhood and which when coming to the surface fills us with feelings.

At least an important element of spatial memory is the scale of the landscape. We can imagine how different could be the spatial experience and landscape preferences of someone born in the lowlands from those who were born in the mountains (we can think here of the words of Sándor Petőfi in his poem "The Great Hungarian Plain": …*I may admire you but I could not love you…* [4]) what likely determines also spatial consciousness in adulthood. All those things that were said in the introduction are also true for the scale of the landscape: the revisiting of the landscapes of our childhood always triggers strong emotional reactions, and also at this scale – and maybe even more intensively – a *déjà vu* feeling can emerge. We claim that the spatial worlds of the landscape and the memories evoked by it in certain situations are a decisive element of this feeling which has components and parameters that characterize the landscape to which we are attached to such a degree that we are reminded of it even in very distant places of the world. The examination of this question is in the main focus of the present considerations and it also constitutes the theoretical backbone of the report on the Danube Bend.

Although from the point of view of environmental psychology there are differences between the interior and exterior spaces of buildings, as well as between exterior urban spaces and landscape-sized spaces (differing primarily in their scale), but in their impact on human experience they certainly have similarities. What is even more important, independently from their extension and scale, the landscapes and built spaces in which we spend the formative years of our life determine our attitudes and identity.

First we find it necessary to clarify our use of the terms of architectural space, urban space and – for our present purposes – landscape space. We find this important because already the concept of space is approached differently by various disciplines: thus we can speak about social, historical, physical, psychological etc. spaces. Architectural spaces are in our understanding in every case definable through objective parameters to which human thoughts, feelings and moods are always associated. Based on the extension, proportions, limitations, colours, material, lighting and sonic qualities, in short through all their measurable and objective parameters architectural spaces can be described quite precisely. But even if all these parameters show a coherent picture, we can approach architectural spaces also on the basis of how long, for what purpose and how often do people or their collectives use them. We can characterize the physical determination of space with various adjectives such as: wide, narrow, high, depressed, elegant, generous or undersized etc. but these could be always complemented or even entirely revised by the qualities derived from human use, such as pleasant, awkward, calm, boring, depressive, thrilling etc. But what objective qualities define the character of a given space, or – in our present case – of a certain landscape?

Let's start at the beginning. Under architectural space, or for our actual purpose, landscape space we mean the three dimensional section of the surrounding world which is separated from other landscape spaces by natural or built walls and which we perceive as a coherent landscape unit. Landscape walls offer primarily visual separations but they can also be transparent elements such as the view of the dark sky which encloses the otherwise open space of the landscape. Viewing at eye

level, in most of the cases the landscape space is defined by elements that are closed, differ in number and quality and are in various distances from each other (see Fig. 37).

Fig.37 Danube's landscape determined by layers of green surfaces (Figure of auteur)

It is an important aspect of its perception that we always look at it at eye level, mostly walking (or sitting, standing, on foot, in a car, train or bus etc.) on the ground, whereas the same landscape space loses its third dimension if we view it from above in a plane when from a certain distance only the "ground plane" can be seen (as Miklós Radnóti writes: "*For one who flies above, this land is merely a map*" [5]). Due to gravitation, humans perceive the landscape mostly standing or moving on its "ground plane". When the observer's movement changes also in terms of elevation than a further dimension of the space opens up, with changing elevations and depths. The challenging of gravitation provides us with still another spatial experience, thereby enriching the overall view. It is even more so if our movement is not limited by gravitation and we rise into the air by a motor glider or we dive with a scuba tank under the water, where we can devote a longer time to observe the distinct spatial features of the landscape.

Human dimension is a determining feature of landscape space which beyond physical parameters comprises also emotional aspects. Generally we move and feel more familiarly in spaces which are easily walkable, whose details we know or those which we have already walked through. The more time we have spent "behind their scenes", the more people did we learn in them, and the more did we learn about those people's lives, stories, traditions and cultures, the more clear does their human dimension become and the inhabited landscape space fixes in our memory. In contrast, those landscape spaces in which human dimension is not meaningful anymore (e.g. mountain peaks, or the view from a plane) are generally much less familiar but at the same time they almost always provide a unique experience. By viewing them from different viewpoints and distances and learning them both from the inside and the outside we get a complete image of the landscape space in ourselves and this way it becomes part of our identity.

The more diverse spatial separations does a landscape have – which the consciousness, in the manner of a baroque theatre scene, projects as vertical planes – the more thrilling and intriguing it becomes.

Fig.38 Space defined through planes in the Baroque theater in Gödőllő (photograph by Zsolt Máté)

The number and qualities of these space-defining planes (whether they are natural or artificial, light or dark, grey or colourful, hard or soft etc.) are physical characteristics of the surrounding landscape space which usually reveal the human presence within them and also the extent to which human activities have shaped them. (The difference between undisturbed natural landscapes and urban landscapes filled by human constructions is discussed in the chapter on landscape of the DANUrB Book [6])

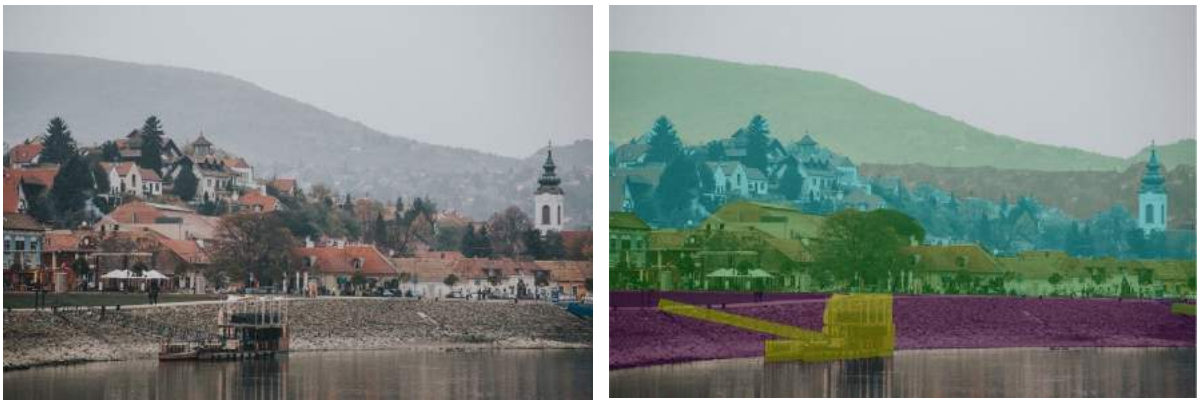

Fig.39 An urban landscape at the Danube defined by planes composed of different „materials", showing different extent of human intervention.

Vision (and especially spatial vision) has a major role in immediate spatial perception but we should not forget that simultaneously with vision also other senses participate in and enrich our spatial experience. Spatial experience is made complete and is fixed in our spatial memory by the acoustical sensation through hearing, the associative sensation through smell, and the direct feeling of surfaces through touch. This is well-evidenced by a successful exhibition titled "*Invisible Exhibition*" [7] which seeks to show the invisible yet perceptible reality of the world and its spatiality. Beyond vision, our senses also have a distinguished role in the perception of weather conditions – such as temperature, humidity, air movement – thereby enriching the spatial experience of the landscape.

If we look at a landscape space from a single point of view we are limited in the perception of its full spatiality and thus our spatial experience will remain static. Spatiality is constructed through multiple viewpoints, so it can be conveyed more precisely by multiple photographs, but in its entirety, with all its details it reveals itself only during movement. When someone is moving, the quality of perception depends on the movement's speed and duration (whether it is carried out on foot, on a bicycle, in a car etc.). Our memory will preserve the spatial structure which we perceive and learn during our

movement. Three dimensional landscape space is thus extended into a fourth, temporal dimension which is, however related not only to movement but also to cyclic changes such as the succession of days and months. As a result, the appearance of the same landscape can utterly differ at sunset and noon and the difference is even stronger when comparing winter with summer. These are cyclically changing, yet predictable temporal variations but there are also swift changes of weather accompanied by climatic phenomena such as fog, curtains of rain or suddenly clouded sky which can cause significant differences within one single day.

Fig.40 Temporary spatial walls created by changes of weather (photograph by Hajnalka Szepes, student of BME)

These multiple variables, perceptible in various ways, make a given landscape and its spatial world different from any other landscape and it is thanks to them that landscape spaces are part of the identity of those people who are attached to that landscape.

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[2] Mőcsényi M. 1968. Conceptional Problems of Landscape and the Green Areas - Településtudományi Közlemények, 21. sz. pp. 66-76.

[3] Dénes Bartha: Landscape- and Vegetation Conditions - Tájökológiai Lapok 3 (1): 1–12. (2005)

[4] Citation from poem of Sándor Petőfi : *The Great Hungarian Plain* (*Az Alföld)*

[5] Citation from poem of Miklós Radnóti: *I can't know (Nem tudhatom)*

[6] *Danube Landscapes* – Chapter of DANURB Book STU - 2018.

[7] *Invisible Exhibition* - https://www.lathatatlan.hu/en/

3.1 DEFINITION OF THE DANUBE BEND

The Danube Bend - officially

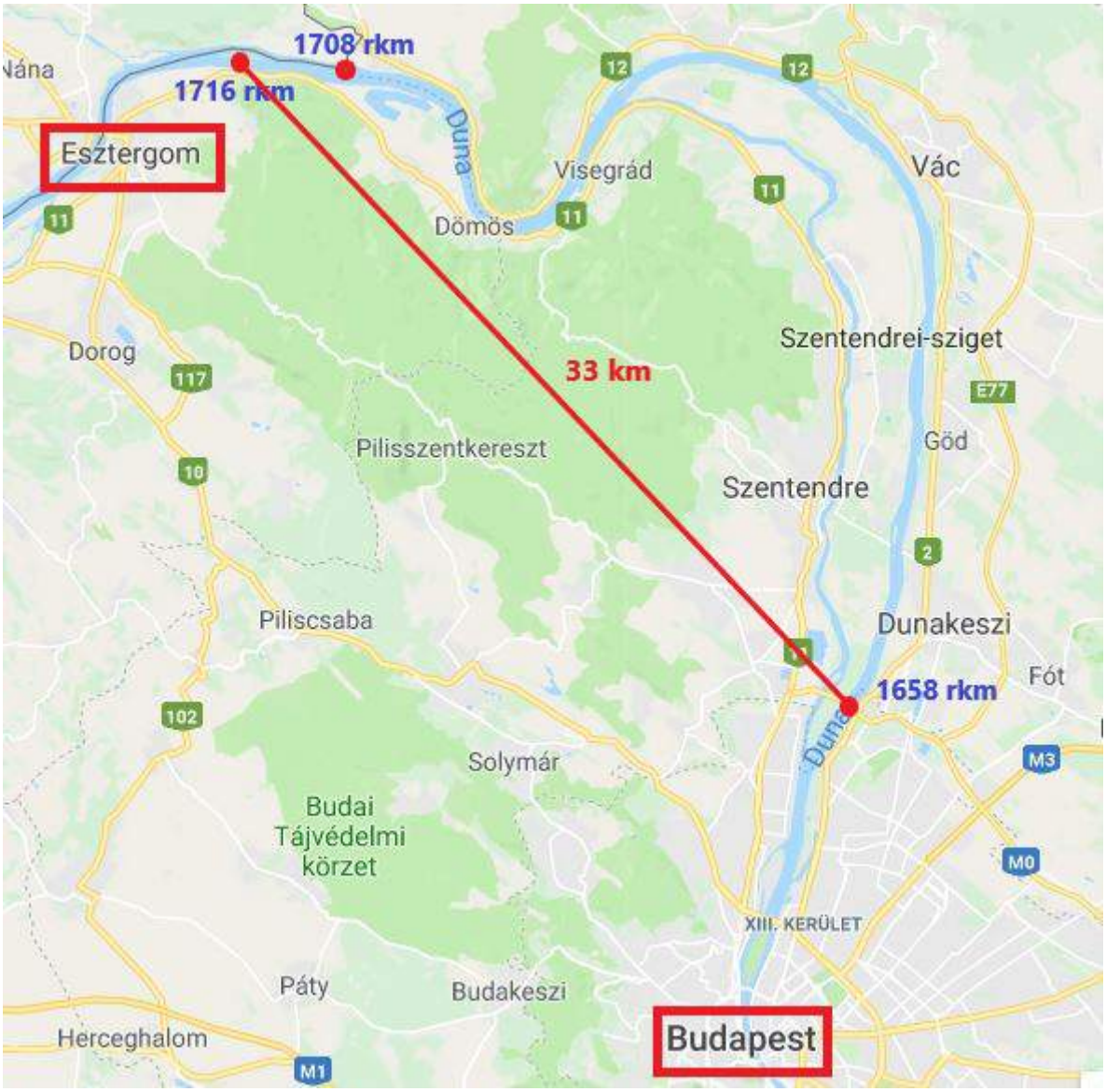


Fig.41. The Danube Bend between the administrative areas of Esztergom and Budapest

The Danube Bend (Dunakanyar in Hungarian) officially designates the section of the Danube in the agglomeration of Budapest between the Hungarian capital and the town of Esztergom. Its length is 58 km (stretching between the river kilometres 1716 to 1658 of the Danube), and at its upper part, on a length of 8 km it forms the border between Hungary and Slovakia. The curving of this section of the river is well illustrated by the fact that the distance between the administrative borders of Budapest and Esztergom is 33 km as the crow flies.

The river divides the Pilis Mountains, on its left bank having the Börzsöny, on the right the Visegrádi Mountains. For a length of about 30 km it encircles the Szentendre Island which – primarily due to the lack of flood protection – has an exceptionally rich flora. This is even more so in the case of the

much smaller, 1,6 km long Helemba Island. Within its Danube Bend section two larger rivers, the Garam and the Ipoly flow into the Danube, whereas the latter is a frontier river.

It can safely be said that in terms of natural, historical and cultural assets the Danube Bend is the richest region in Hungary. Because of this it is in a bid to be included in the UNESCO World Heritage list as a cultural landscape together with the Castle of Esztergom and the Citadel of Visegrád.

The Danube Bend was featured in the *research report on heritage by regions* (D 4.1.1) examining the Esztergom-Ráckeve macroregion and prepared by BME in June 2018 within the DANUrB Interreg project. 10-12 pages of this document outline the history, geography and values of the Danube Bend as a microregion, and all the (ca. 25) heritage datasheets on the unvalorised tangible and intangible heritage of this area are also included in it (Fig. 42.)

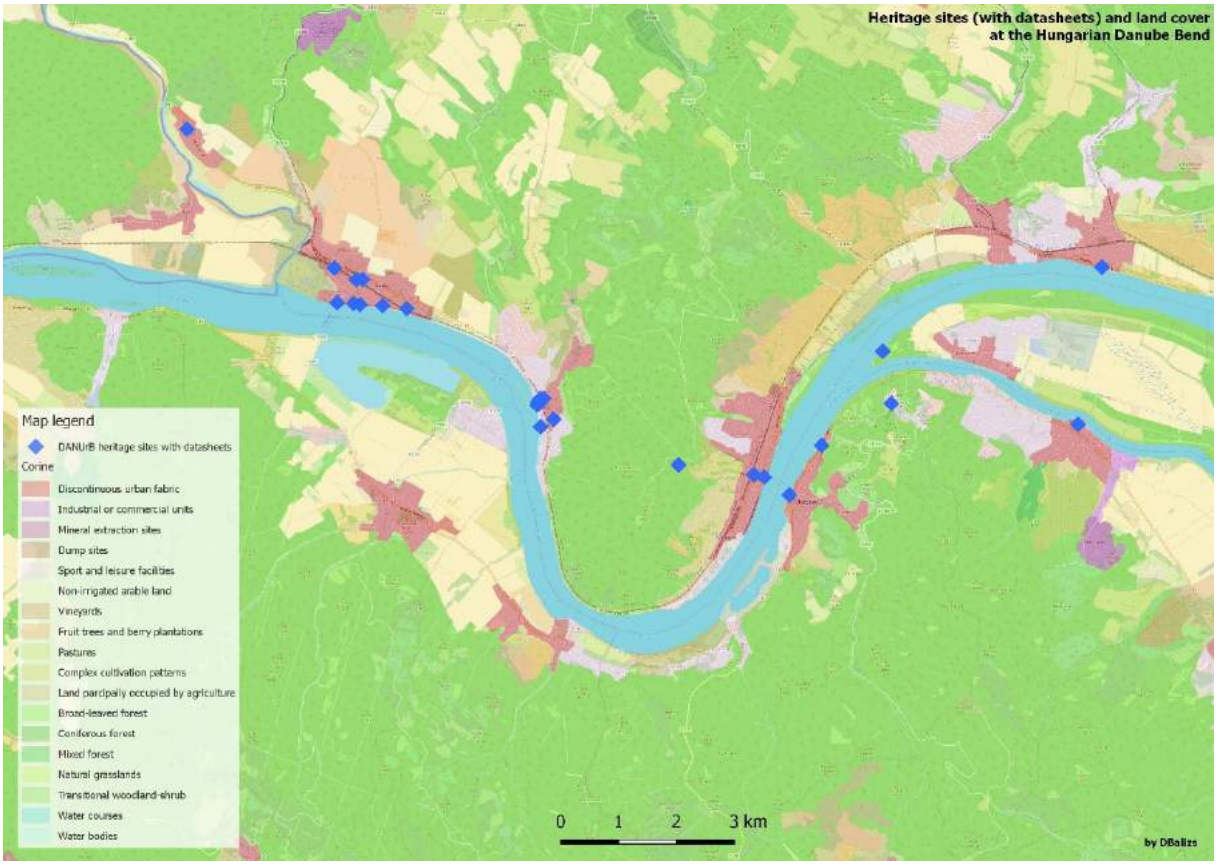


Fig.42. Map from the „Research report on heritage by regions – Esztergom_Ráckeve".

Therefore, in this report we do not want to discuss these heritage items in detail, and instead we will examine here a particular tangible (and at the same time intangible) heritage of the Danube Bend, that is, its river bend, as an identity-shaping spatial world of the Danube's natural and cultural landscape.

The object of our research: the "bend"

In chapter 2.1 we examined the bends found on the entire length of the Danube in order to introduce a conceptual category, although the exact nature of the demarcations – specifically the number of units and the geological and geomorphological arguments supporting this – might be open to debate. It is not our aim here to develop a universally valid method, yet we think it is

important to draw the attention of the professional, as well as the non-professional public to the fact that there are more bends on the Danube: the significant changes of the river's course and the resulting peculiar natural milieus – which we assume have a great impact on the identity of local inhabitants – indisputably create a distinctive landscape type. From the seven identified cases in our research we have focused on the Hungarian Danube Bend (Fig. 43.).

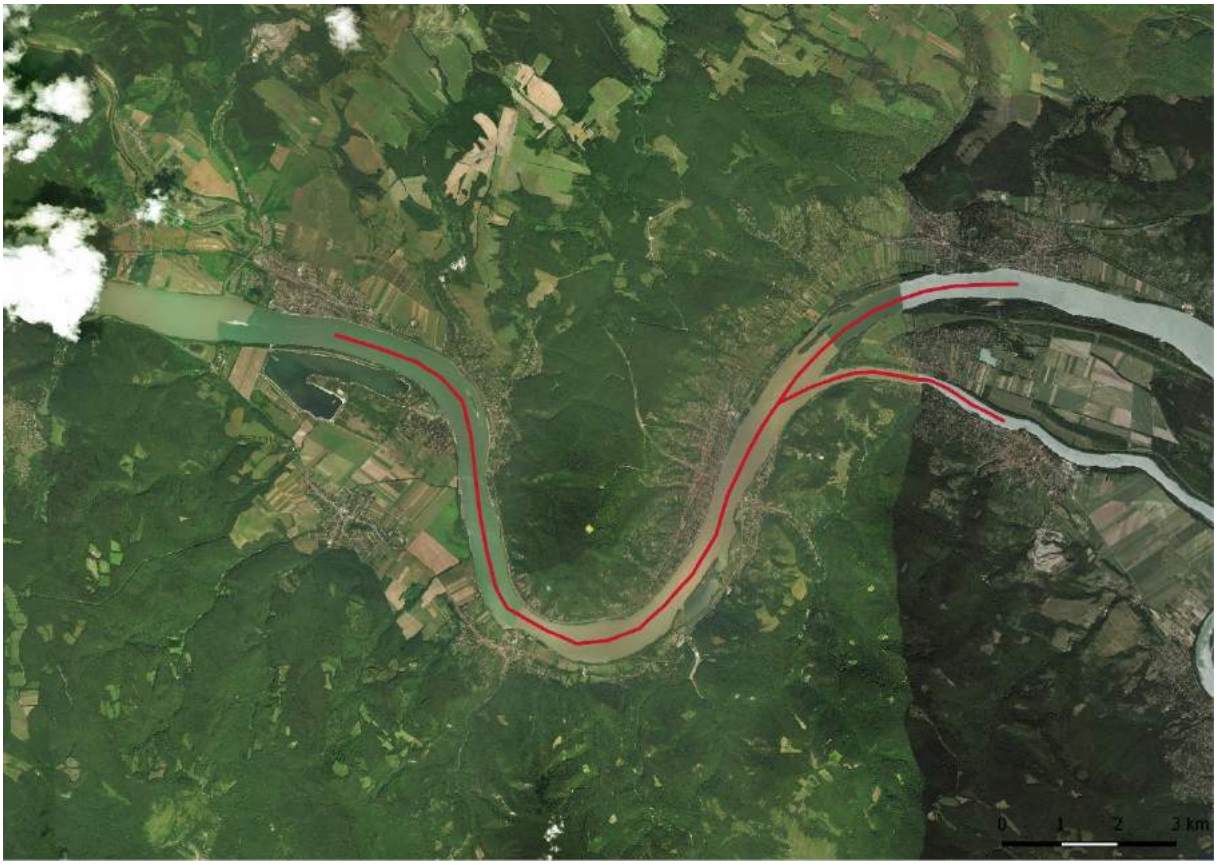


Fig.43. The Danube Bend according to the Hungarian sub-regional landscape cadastre (image created by the author from a Google Earth aerial photograph).

We have already discussed the geological background of the formation of the Danube Bend, the aim of this chapter is to define the area of the Danube Bend and to complement this with our own interpretation. The extension of the area is defined differently from geographic, touristic, administrative and historical perspective. The geographical literature is not consentient either, so the span Esztergom-Budapest and Szob-Verőce are both mentioned, and whereas the former designates the Danube Bend, the latter its most "spectacular part" [1]. Moreover this part – due to the river's terrain-shaping role in the past – is also referred to as the Visegrád Pass. According to the Hungarian sub-regional landscape cadastre the Danube Bend lies between Szob and the northern peak of the Szentedre Island [2], what can be regarded as its narrowest definition (marked with a red line on Fig. 3.). Those applying different approaches agree that the Danube Bend covers only the strip running along the river, that is, the river valley, and does not include protrusions or settlements which do not lie on the riverbank. All this can be said also about the area's administrative division, yet it is necessary to add that it includes in the Danube Bend the entire administrative area of the settlements located at the Danube. The historical interpretation departs essentially from the section

of the Danube between Esztergom and Budapest, the basis of which is the traditional ("the cradle of the Medieval Kingdom of Hungary") on the one hand and local self-identification on the other.

The approach of tourism experts, as well as the local and regional programs of economic cooperation, see a much broader, 1600-1800 km^2 large Danube Bend: thus the Priority Resort District covers 66, whereas the Danube Bend Regional Development Council represents 72 settlements [3][4][5]. Of course in these two cases reflect a goal of the optimization of economic cooperation on a territorial level, the joint action of settlements which in many respects depend on each other. Therefore, there are also places on the list which lie westward from Esztergom, as well as others located in the Pilis Mountain and Nógrád County. As a consequence, the term Danube Bend signifies rather a well-sounding brand than a substantive geographical category.

From these various approaches it is the geographical one which we prefer, yet we do not rely only on the arguments of physical geography (geology, geomorphology, biogeography, cadastral division). In our understanding the bend's area stretches to the point where the course of the river returns to its previous direction. For us, the river valley between these two points (and not only the water body but also the riverbanks) constitutes a model area the spatial worlds of which we find worthy of analysis (and to a certain degree also of reconsideration). Therefore, in our study we define the Hungarian Danube Bend as the part of the river valley between Szob and Verőce (respectively Dunabogdány opposite the latter).

References:

[1]https://www.researchgate.net/publication/268806791_Ket_vulkani_hegyseg_kozott_a_Dunakanyar_kialakulasa

[2] http://www.mtafki.hu/konyvtar/kistaj/terkep.jpg

[3] http://www.terport.hu/webfm_send/99

[4] http://www.terport.hu/node/895

[5] http://www.dunakanyar.hu/regioinformacio

3.2 THE SPATIAL WORLD OF THE DANUBE BEND

Our report focuses on this shorter section, the Hungarian Danube Bend. Above all, it concentrates on the geological formations, the landscape along the Danube and its identity-shaping spatial world, the morphological transformations of the local settlements, and finally, on the area's touristic potential.

Fig.44 The spatial world of the Danube Bend's landscape (photograph by Kamilla Mudri, student, BME)

First, let's see what can be said about the spatial world of the Danube Bend in the light of what has been discussed in chapter 2.3. In comparison with other Danube landscapes, the Danube Bend is specific for being a unique spatial world which on its both sides is flanked by mountains, whereas lengthwise it is enclosed by the view of the meandering river. Looking both from the riverbank and the water, the Danube's water surface forms a changing "ground plane". Besides the constant water level fluctuations, continuous change is also ensured by the changing reflections of the water surface: depending on the elevation of the observer's position, it can show the riverbank landscape, or the sky which is also constantly changing. The "vertical" spatial walls are provided by the scenery of the riverbanks, the terrain which is extremely diverse on both sides, and the uniquely rich natural and cultural landscape.

Fig.45 The enclosed spatial world of the Danube Bend (photograph by Pál Dohanics, student of BME)

It is a world which can be easily demarcated, within which the contact with neighbours and more distant settlements is ensured by the Danube, and where the formation and persistence of strong communities, of their customs and traditions were enabled by almost incubator-like conditions. In this area caught between the Danube and the mountains, exposed to the whims of the river, and lacking arable land, it was never easy to secure livelihood. It was always necessary to work hard for everything, what hardened local people and held their communities together. This was furthermore strengthened by their shared experiences and memories. The neat grounds of the riverbanks, the settlements' protected banks, the roads and railways along the river, the scenery of the cultivated forests etc. are all marks of human struggle with nature visible in the landscape. These are the historical, cultural and physical elements which together with the natural backdrop constitute the space-forming plane of the Danube Bend's landscape space, and make the Danube Bend a safe, likeable and unique place, as well as an important part of the area's spatial identity. And the creator and sustainer of all this is the majestically flowing Danube. This landscape environment is so powerful that those who were born here, when coming back, certainly always have the feeling of returning home, and on those who are here the first time it makes a lasting impression.

Fig.46 (photograph by Martin Wildanger, student of BME)

In the following chapters we will discuss further elements of the Danube Bend identity: the changes of the relationship between the local settlements and the river, the morphological transformations of the settlement structures, the specific conditions of the riverside settlements, the unusually rich supply of cultural programs in the region, and finally, the area's special touristic potential lying in its transport conditions.

3.3 MORPHOLOGICAL CHARACTERISTICS AND PATTERNS OF SPACE USE IN THE SETTLEMENTS OF THE DANUBE BEND

INTRODUCTION

Settlement geography applies the concept of morphology to describe the time-varying planar (map) formations of settlements, in this respect as a three-dimensional definition (with two spatial and one temporal dimension). In our study – with regard to the analysis of the Danube Bend - we would like to highlight the importance of spatiality, and more specifically its third dimension, which also provides a more nuanced interpretation of morphology.

The map of a settlement is an important tool for learning and finding one's way in a town, but it rarely marks altitude conditions (by contour lines or elevation points), and if it does, only a few are able to read them. This is a special type of spatial vision that can be learned and developed. For those who have the task of creatively shaping the environment (architects, landscape designers, urban planners) the ability of seeing spatially and the safe orientation in space – even if it be by maps – is an indispensable tool.

But what about those who lack this ability? Even if they cannot read or identify the spatial conditions of a landscape or a settlement, the spatial patterns (morphology) of their birthplace or the place where they spent a great part of their lives, certainly fix in their memory. Especially if that environment is so special, diverse, and spatially rich as that of the landscapes and settlements of the Danube Bend: with the Danube flowing in different directions and changing its water level (and thus also its width), the exceptionally diverse relief conditions and the settlements related to the river in manifold ways. These circumstances can burn into the consciousness to such a degree that we are often puzzled seeing the river flowing in different direction – like the Vltava in Prague or the Danube at Novi Sad – than we are used to in e.g. Budapest.

THE DANUBE BEND – GENERAL CHARACTERISTICS

"*Under the term culture we don't mean only a peculiar culture of manners and objects, or music, literature and art, but also a way of thinking and a mentality defining the events and frameworks of our daily life, something in which geography, landscape, climate, society, ethnicity and the history are all present. Geographic, landscape, topographic and climatic conditions can be regarded as more or less permanent factors. The system of plots and the road network can remain unchanged for centuries, thus settlement structure can be seen as relatively stable and as such it is the direct carrier of environmental cultures. Buildings and structures, however, constitute a relatively variable layer of culture, and can change several times due to physical or moral ageing or the changing ways of life and social and/or individual needs."* (Meggyesi, 1987).[1]

The above quotation is undeniably also about identity, about material and spiritual-cultural heritage. Today, when identity has become an increasingly central issue, it is more relevant than ever to

[1] Magyarország hagyományos lakókörnyezeti kultúráinak tipológiája. Településtudományi közlemények 35/1987

understand its layers and components. This is especially true for riverside settlements where it is assumed that the relationship with the river forms an important part of local identity. At the same time, this is a dynamically changing relationship since over the centuries not only the location and qualities of the riverbanks but also the expectations of the locals regarding riverfront life might have changed.

When examining the settlements of the Danube Bend, the above, almost axiom-like statement can be further nuanced in many respects. Due to the 150 years long Ottoman presence and the ongoing wars also this area has been depopulated, hence our knowledge of the characteristics of the former settlements is poor. After the Ottoman period mainly Germans, Slovaks and Serbs settled in the area. The new villages were connected to the ruins of the medieval royal monasteries, with their borders following the structures of medieval land use. The Pilis Landscape Protection Area, which forms part of the Danube-Ipoly National Park in the Pilis and is a UNESCO biosphere reserve, was created more or less on the area of the medieval royal forest.[2] The structure of local settlements – as suggested in the above quotation – has been virtually untouched, and also the physical fabric, that is, the relationship of the buildings to each other and their plots has been in the last 200-250 years – with many minor changes – preserved.

In these various settlements with diverse topographic features, urban structures have reacted organically to environmental diversity, yet the land use modes of different settlements form an almost regular pattern, since they were built and shaped by communities with similar composition and lifestyle. At the same time, the changing landscape features show different facets and variations of this same land use "pattern", thereby creating a diversity of sceneries and characters. The same side border, longitudinal mode of land development is considerably different in Visegrád climbing up the hillside, than in the more flat, almost straight street of Dömös or Dunabogdány, where the geometric relationship between the plots and the street results in an excitingly different street imagery. Their discovery and understanding can be an intriguing intellectual travel for both tourists and experts more familiar with the subject. They also draw attention to the fact how are personal experience and the knowledge of spatial relationship that goes beyond the basic data of maps essential for understanding the settlements' spatial complexity, morphological changes and modes of spatial use.

The Danube Bend is unique not only in terms of its landscape and environmental conditions. For centuries, the Pilis Mountains surrounding it have been ascribed a sacral role and importance. With its hiking trails, pilgrimage routes and spiritual places it offers recreation of both the body and the soul. "*The Pilis is a historic landscape of European significance, which is a unique example of the typical land use of a royal estate and forest complex developed in the Middle Ages. The territory of the Pilis is also one of the most recognizable medieval monastery landscapes: the traces of the landscape-shaping activities of the Pauline and Cistercian monks who once inhabited the area are still readable and the ruins of their monasteries have art historical significance*" [3] (Figure 47-49).

[2]Dömös, Településarculati Kézikönyv/TAK (Local design manual), 2017
[3] Ibid

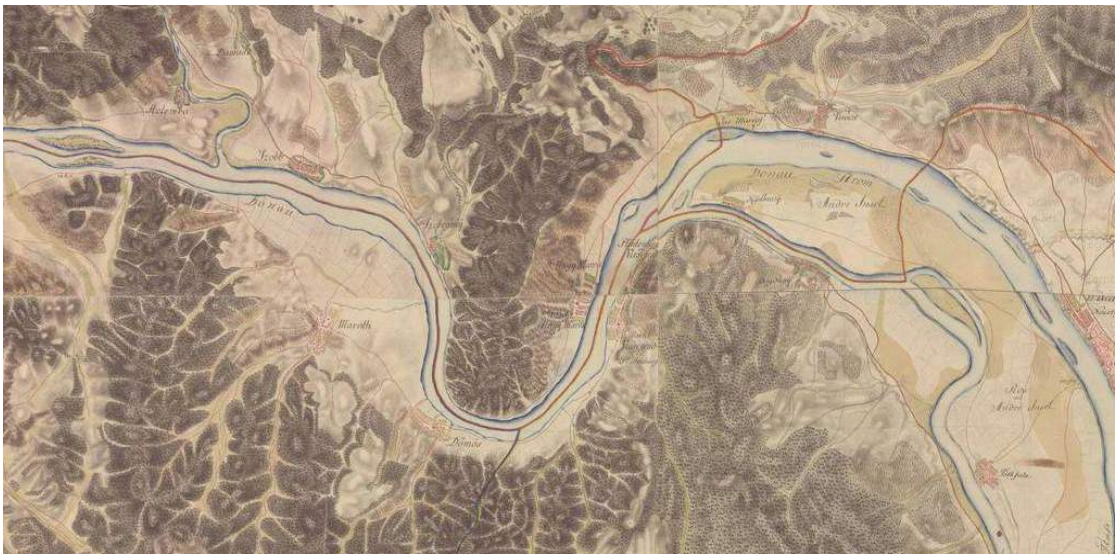


Fig.47. Map from the First military survey of Hungary (the so called Josephine map) 1780-1784; (Source: https://mapire.eu/hu/)

Fig.48. Map from the Second military survey of Hungary -1819–1869 (Source: https://mapire.eu/hu/)

Fig.49. Map made by FÖMI (Source: Pestterv Kft)

It is not an urbanized region – the examined Danube Bend settlements preserve their essentially village-like character despite their proximity to Budapest (even the farthest town, Szob, is 75 km from the capital) and their location within the catchment area of the region's two largest cities, Vác and Esztergom[4]. From the side of the river the settlements organically fit into the landscape, often it is only the church towers which stand out from the single-story building fabric and reveal the presence of an inhabited area (Fig. 50-51.).

Fig.50-51. Typical settlement landscapes as seen from the Danube (Visegrád, Nagymaros (Source: Tamás Fenes, Tamás Thaler).

Looking at the size of these settlements, we are necessarily reminded by the observations of Jenő Major[5] according to which one of the main characteristics of Hungary's historical settlement structure was that in some of the settlement groups the settlements close to each other – while preserving their spatial separation – functioned as if they formed parts/districts of a larger, spatially integrated town. Showing very similar environmental patterns but different functional characteristics, they often assisted each other without merging. Jenő Major pointed to the threefold unity of the castle fulfilling a defensive function, and the merchant and artisan settlements (Major, 1967). Although the settlements of the Danube Bend are not among the case studies examined by him, the well-known relationship of the strategic stronghold of Visegrád and the commercially developed Nagymaros evokes this functional division. Thus it can be assumed that the settlements of the Danube Bend could have also been in such a complementary and cooperative relationshipwith each other. The elaboration of the present study did not involve a detailed settlement research, therefore it is not possible here to justify what was said above, yet we found it important to point to Major's historical interpretation as it can be instructive when evaluating the present and future relationships of settlements. Their position, size and mutual structural relations today also show that they are in a horizontal relationship with each other.

The strengthening of cultural relationships between settlements is the main goal of the DANUrB project and the Danube Bend as a network and system of both separated and historically connected (and mutually interdependent) settlements is an excellent model area in this regard. It would be important for these settlements to become part of an extensive cooperation based on spatial and/or temporal division of roles and at the same time to preserve their specific character and identity.

[4] The population of Vác: 32 741 inhabitants, population of Esztergom: 27 979 inhabitants (source: Magyarország közigazgatási helynévkönyve, 2017. január 1.

[5] Dr Jenő Major (1922-1988): settlement historian. From 1944 he worked first as intern and then as assistant professor to professor Tibor Mendöl. In the autumn of 1949 he became a member of the research group for settlement planning set up by the Hungarian Academy of Sciences at the Department of Urban Planning of the Budapest University of Technology. In 1980 he moved to the Department of Architectural History. His research focused on the analysis of the relationship between geographical environment and the history of settlements.

MORPHOLOGICAL CHARACTERISTICS OF THE DANUBE BEND SETTLEMENTS AND THE PROCESSES SHAPING THEIR FORMATION

Settlement structure

The approximately 40 km long area between Vác and Esztergom represents a specific field of force, where along the Danube Bend – quite sparsely, in a distance of approx. 4-10 km from each other - small settlements line up on both sides of the Danube; from these there are 5 on the left bank (Szob, Zebegény, Nagymaros, Kismaros, Verőce), 4 on the right bank (Pilismarót, Dömös, Visegrád, Dunabogdány), and one settlement is on the Szentendre Island between the splitting arms of the Danube. Their extension is not very large; their size and structure changed only slightly over the last ca. 250 years, and their land use patterns have retained their original characteristics. Two couples of these settlements - Visegrád and Dunabogdány, and Verőce and Kismaros, repsectively - have over time merged into single administrative units. (Table 2).

		Area/km²	Number of residents	Population density/km²	Housing stock units
1.	Szob	17,97	2587	143,96	1097
2.	Zebegény	9,63	1228	127.52	586
3.	Pilismarót	44,58	2023	45,38	766
4.	Dömös	23,99	1106	46.10	520
5.	Nagymaros	34,37	4750	138,2	2018
6.	Visegrád	33,27	1840	55,30	758
7.	Dunabogdány	25,5	3089	121,14	1229
8.	Kisoroszi	10,74	996	92,73	441
9.	Kismaros	11,96	2301	169.81	
10.	Verőce	20,33	3823	138.86	1385

Table 2. Population data of the analysed settlements (2016. KSH)

On both sides of the Danube the settlements are lined up along highways of regional significance. In the region's construction history, it is probably Road 11 which the best example of continuity, since on most of its part within the Danube Bend its route is more or less identical with the former borders of the Roman Empire, many elements of which [6] can be found in the settlements examined here (Fig. 52.).[7] On the northern side Road 12 follows to the end all the curves of the river, whereas on the southern side Road 11 occasionally diverts from it (Fig. 53.).

[6] http://www.ripapannonica.hu/english/index.html; https://www.danubetourism.eu/ The application process of the 417 km long Limes to the UNESCO World Heritage List have already started. The proposal was submitted jointly by Hungary, Austria, Germany and Slovakia and the Limes would be one of the largest continuous heritage sites in the world.

[7] See Danurb, datasheets.

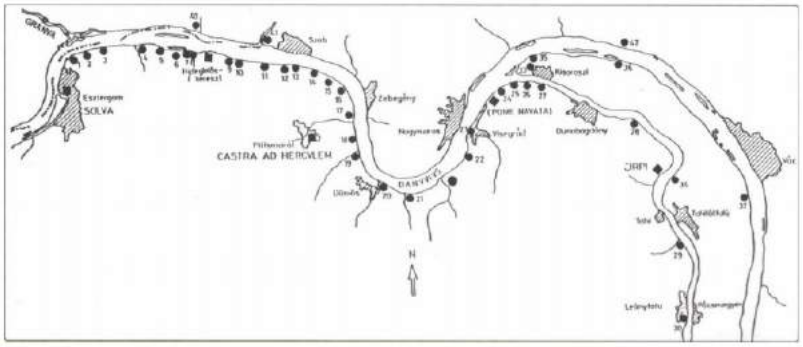


Fig.52. Map of the Limes running along the Danube Bend (Source: Meggyes Miklósné (ed.) Szent István Városa Esztergom története- 2006)[8]

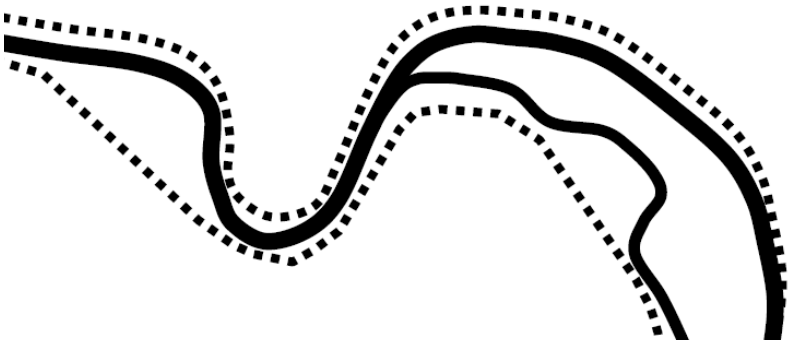


Fig.53. The Danube river and the riverside highways (Source: the author)

A shared characteristic of all analysed settlements is that they are spatially organised along this main axis, as roadside villages. Regarding the specific structural features of the individual settlements, there are many subtle differences; these are determined by the way the settlements are related to the surrounding terrain, as the side roads were built into different valley lines.

The Vác-Štúrovo-Nána section of the Budapest-Bratislava railway line was opened in 1851. Thuis made the access of the settlements on the northern part of the Danube Bend much easier in comparison with those on the southern part, where public transport is unsatisfactory to this day. The tracing of the main roads enables the traveller to see the river and the opposite bank throughout the journey.

[8] https://library.hungaricana.hu/hu/view/EsztergomKonyvek_068/?pg=3&layout=s

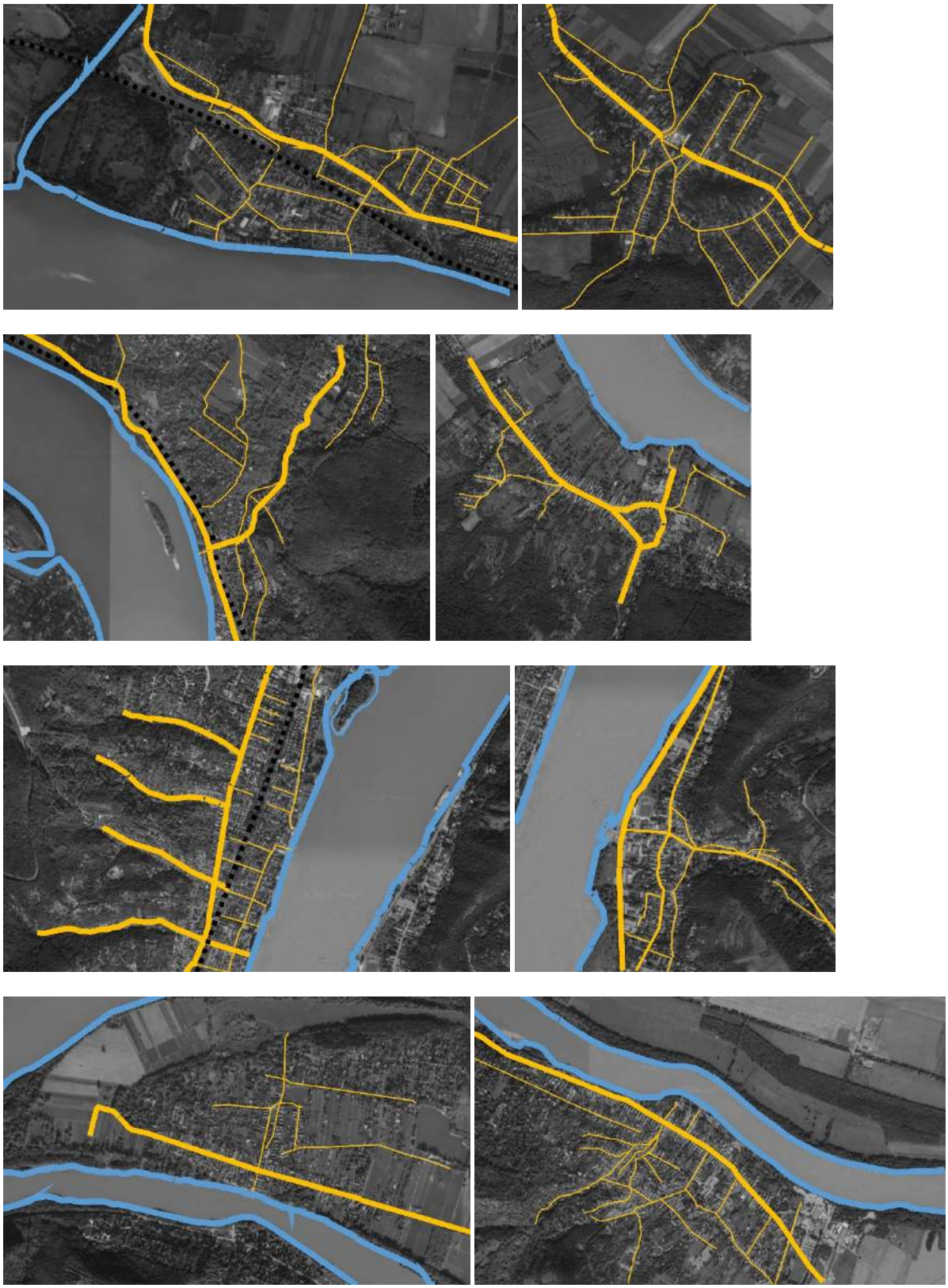


Fig.54. The main structural (transportation) lines of the analysed settlements Szob/Pilismarót/Zebegény/ Dömös/Nagymaros/Visegrád/Kisoroszi/Dunabogdány/Kimsaro/Verőce (Source: the author)

THE CHARACTER OF THE BUILT FABRIC

In most of the examined settlements the built fabric does not have direct contact with river.

Because in Hungary it was typical to build on flat terrain, building on steep slopes was not part of the traditional culture of construction; thus in the local settlements the historical building fabric can be found on the riverside flat areas. At the same time, building near the vast river which constanstly changes its water level has always been risky, therefore the first rows of houses were built further from the river. In almost all local settlements the first row of houses faced the river with the gardens. The settlements expanded in a linear fashion in parallel with the river and their branching parts later usually stretched out into the valleys, but not by climbing up on the hillsides but spreading along the roads of brook valleys.

Part of the Hungarian settlements suffered strongly during the Ottoman occupation starting after the fall of Buda in 1541. This is true also for the more important settlements of the Danube Bend such as Visegrád and Esztergom (captured in 1543). In the settlements reorganised and rebuilt after the expulsion of the Ottoman army historical continuity can be detected primarily in the location and structure of the settlements, whereas the physical fabric is from later periods. One of the main characteristics of the built fabric in the Danube Bend is the continuous/semi-continuous building line with plots developed on their edges what is usually the result of 18th-19th century development. This is not a unique feature, as it is very common among mid-sized settlements in Hungary. The comb or row type building line is typical for the roadside villages. In the new plot regulations starting in the 18th century the "comb" form – drawn by engineers and strictly regulated by the authorities – became the standard pattern of plot division, whereas the building of houses mostly followed the Hungarian house type developed by the end of the middle ages where the house is divided into three functional parts. Hence despite the fact that the new inhabitants came from foreign countries – in the case of the Danube Bend typically from the German lands – the image of the settlers' villages did not differ considerably from that of older traditional Hungarian villages (Fig. 55.).

Dunabogdány

Kisoroszi

Nagymaros

Dömös

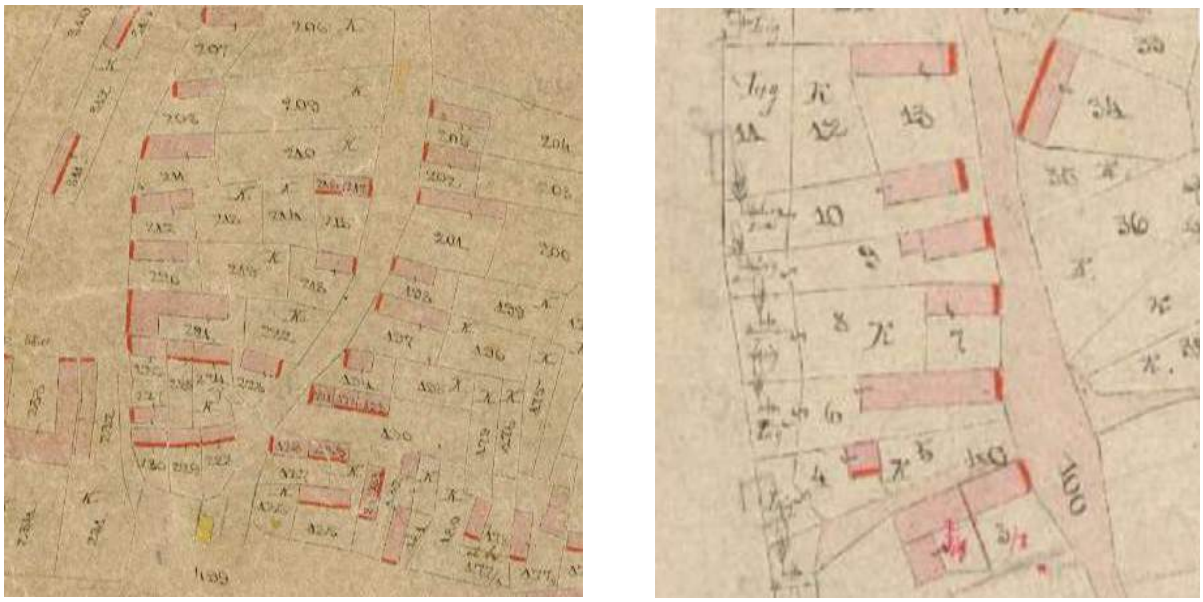


Fig.55. The comb type land development as a typical pattern – aerial views (source: google.maps) and details of cadastral maps (source: *https://mapire.eu).*

Today, the comb type of plot development is an important townscape feature typical of the Danube Bend, which is, however, given a specific flavour in the individual settlements where due to the differences in the geometry and terrain conditions of the roads we can find a great variety of streetscapes (Fig. 56.).

Fig.56. – Examples showing the variety of streetscapes with comb type plot development (source: the author).

Over time the craftsmen, merchants, intellectuals and those big farmers whose economic activities took place at homesteads outside the settlements, started to require a new house type. The building of the comb type, standing on the border of the plot with its roof ridge perpendicular to the street was given an L shape, often through the extension of the existing house, leaving only a narrow passage separating the building from the neighbour's house (semi-continuous building line). This

passage was often roofed so the street line became entirely continuous.[9] In an around the settlement centres we can thus see the transformation of the comb type plot development during the 19th and 20th centuries.

In later times riverside living underwent a fundamental re-evaluation. With the development of bourgeois leisure activities such as tourism and vacationing riverbanks acquired distinctive importance. In the case of the newly built villas it was less important to have closer contact to the river and instead a visual relationship, the possibility of viewing the river from the home was preferred as a highly valued aesthetic and environmental quality. The climbing of the settlements to the surrounding hillsides has begun (Fig. 57.).

Fig.57. – Villas and holiday homes in the Danube Bend as defining elements of the landscape (Source: the author)

A peculiar situation arose; although the historical cores of the settlements were compact, their architectural character was rural; at the same time the villas built sparsely on large plots reflected the tastes and ambitions of the affluent urban bourgeoisie temporarily or permanently relocating from cities, but they did not create a continuous fabric within the settlements, nor an urbanized built environment.

URBAN SPATIAL USE – CENTRES AND THE USE OF THE RIVERBANKS

Both in the past and the present, the relationship to the riverbanks has been strongly determined by the historical settlement structure and the mode of plot development. The settlement had usually access to the river only through one or two structural points, typically at crossing places. The centres – traditionally marked by catholic churches surrounded by a few urban-like buildings – were naturally located further from the river. The role of the churches as visual landmarks is still important, mostly it is their towers which reveal the presence of a settlement when approaching from the river. However, there are no main squares in the traditional sense, only smaller widenings of spaces at the intersections of the more important local roads, their centrality highlighted by the concentration of services.

Their present character preserves past conditions in many respects, since it is precisely their transit function it is difficult to transform them into regular squares through contemporary techniques. They

[9] https://www.tankonyvtar.hu/en/tartalom/tamop412A/2011-0055_lakoepuletek_tervezese/ch03s02.html

are thus centres, but this is based principally on the height of the surrounding buildings, their architectural character and the concentration of retail, catering and hospitality services. Yet in many cases they are not appropriate venues for events or bigger community programs.

After all, fitting into the landscape is one of the important characteristics of the local settlements; even if looking closer, from a distance where the outlines of the built fabric are much clearer, the landscape still maintains a strong presence (Fig. 58.).

Fig.58. Until today, the landscape and the relief have been dominant visual elements of all settlement int he region (source: the author).

The natural riverfront is constantly changing, most of the settlements are not protected from flood, but this natural condition gives a charm to the riverbank. It is also the reason why there are only few places where the settlements expanded to the shores. In most places the short distance between the river and the buildings closest to the water is not less than 50 metres, but there are many strips wider than 100 metres which are used for agriculture or with more or less success for recreation (Fig. 59.)

Szob *Nagymaros* *Visegrád*

Zebegény *Dömös*

… .

Dunabogdány

Kisoroszi

Kismaros, Verőce

Fig.59. The distance of built areas — from the riverbank — - with the marking of the settlemet center and the more actively used riverbank areas ○

CHARACTERISTICS OF THE INDIVIDUAL SETTLEMENTS

In the following we will present the individual settlements (Fig. 60.) in more detail, with a brief outline of their history, structural/urbanistic characteristics and the previous historical conditions based on the maps of the First and Second Military Surveys[10].

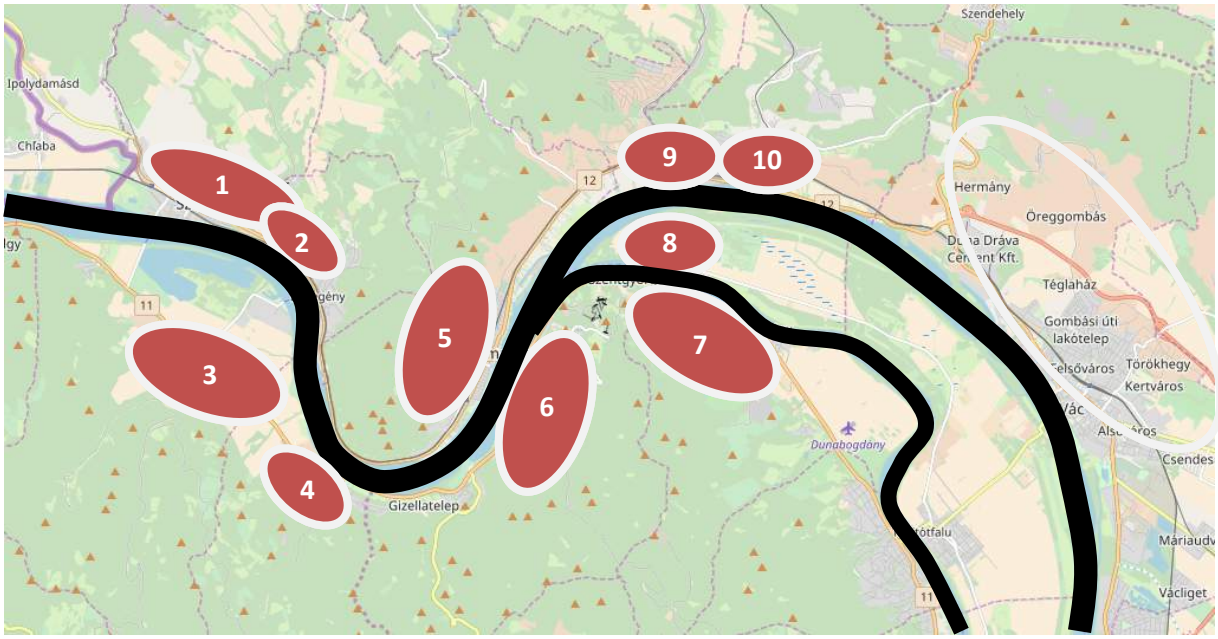


Fig.60. The settlements presented in this chapter and their spatial relationships (1.Szob; 2.Zebegény; 3.Pilismarót; 4.Dömös; 5.Nagymaros; 6.Visegrád; 7. Dunabogdány; 8. Kisoroszi; 9. Kismaros; 10. Verőce)

[10] See Fig. 1 and 2.

1. SZOB

Szob is the westernmost settlement of the here examined section of the Danube Bend. The township which for a long time has functioned as a district seat (for most of the 19th and 20th centuries, and once again since 2013) achieved town status in 2000. Its role as a local centre is based on its favourable geographical location. Lying at the confluence of the Danube and the Ipoly, it is the natural centre of the lower part of the Ipoly valley, with a port on the Danube, and thanks to the railway line Budapest-Bratislava-Vienna it is easily accessible. The Ipoly valley is traditionally a place of the production of berry fruits (such as raspberry, currant etc.) for the processing of which in 1967 a syrup factory was established in the town. The factory, which for decades had provided jobs for the inhabitants of the town and the surrounding settlements, closed in 2008, but after a change in ownership it was reopened in 2012. Regarding the trajectory of its development, economic profile and structural conditions, Szob represents an exception among the settlements examined here. The settlement, which since the early 2000s has underwent a gradual impoverishment, cannot exploit its otherwise high touristic potential (the narrow gauge railway through the Börzsöny, originally planned to receive 65 000 visitors annually, has accomplished only a small fraction of the initially expected turnover), and –despite the re-opening of the syrup factory – so far it was not able to stabilize neither its demographic, nor its financial situation.

Area: 17,97 km² Number of residents: 2587 Density: 143,96/km²

Fig.61.a-b Szob on the maps of the First and Second Military Surveys – as the settlement grew along a main axis running parallel with the river, by the end of the 19th century its church found itself almost in the geometric centre of the village.

The name of the settlement appears for the first time in a chronicle written in 1280 (“Terra Sob”). During the Ottoman times it lost a great part of its population, but in the 18th century it was resettled by Slovaks from Nitra County.

According to the map of the First Military Survey the settlement was located between the Danube and today’s main road nr. 12, with ca. 30-30 houses on the two sides of the road running along the river. While this first map does not show any structural relationship with the river, on the map of the Second Military Survey there are already two “passages” toward the riverbank; furthermore, along one of these the previous course of the development changes (Fig. 61. a-b).

The pattern of land development follows the arrangement of a longhouse on the plot border with gardens stretching to the river. The church was built on the northern side, withdrawn from the main road and slightly asymmetrically to the settlement's overall structure. Later, in the course of the development/expansion during the 19th century it became almost the geometric centre of the settlement.

The map of the Second Military Survey already shows the railway which to a certain extent modified the original settlement structure; the main street began to expand toward the railway station. However, the character of the built area did not change considerably, except the short street mentioned above which reached the river. By now the area between the railway and the Danube has been filled in by built fabric, expanding even beyond the railway. The settlement structure is still defined by the roads running parallel with the river (Fig. 62. a-b.).

The settlement's relationship to the river has been shaped by this inherited structure; the access of the road network to the Danube is due to the ferry line. The organizers of local events prefer the riverbank, thus it is a popular venue of the open-air musical programs of the Town Days of Szob. The programs, however, are typically of local importance, the touristic appeal, the "brand" of the settlement is not significant.

Fig.62. a-b. Topographical map of Szob made at FÖMI (the Institute of Land Surveying) in the1960s; contemporary aerial view of the settlement (source: google.maps).

2. ZEBEGÉNY

Zebegény, a village located 4 km from Szob and 27 km from Vác, has one of the most beautiful sceneries in the Danube Bend, as it has preserved its natural environment to the largest extent in the region. Whereas in the 19th century it had only few hundred inhabitants, from the beginning of the 20th century it became well-known as a popular holiday resort, where on the surrounding hills – since the riverbank area of Zebegény is quite narrow – the more affluent residents of Budapest built numerous holiday houses. In the mid-war period an artists' colony was established here which also had a positive impact on the settlement. The landscape around the village is characterized by a diverse relief, a wooded landscape with brooks (such as the Medres brook) and the volcanic surface formations of the Börzsöny Mountains.

Area: 9.63 km² Number of residents: 1228 Density: 127.52/km²

Fig.63 a-b. Zebegény on the maps of the First and Second Military Surveys – the settlement developed primarily along the contour lines in parallel with the Danube, with a road leading to the river on its northern end.

The oldest information about the village are from the middle of the 13th century and are related to the Benedictine monastery in the Malom Valley („Monasterium de Zebeguen" = monastery of Zebegény). During the Ottoman occupation the population of the village almost entirely disappeared. Therefore, in the 18th century Hungarians, Germans and Slovaks were settled here. Because of the terrain conditions, on the riverbank in Zebegény there was only a narrow space available for building houses. Hence the main road led through the riverbank; the built fabric formed in parallel with the contour lines, along two streets where peculiarly the houses were built only on one of the sides (Fig. 63. a-b). In later times the settlement expanded toward the northern thalweg, nicely bending around the Kerek Hill. The widening at the intersection of these two lines of spatial development – one parallel with the river, the other at the thalweg – became the centre of the settlement.

During a heavy rainstorm in 1989 the village was almost totally destroyed by the water accrued in the Bükkös ditch. At the beginning of the 20th century more and more residents of the capital discovered the settlement as a holiday resort. In this period many holiday homes and villas were built. The establishment of an artists' colony in the village by painter István Szőnyi in 1924 further improved the local quality of the holiday seasons. The István Szőnyi Free School of Art[11] founded in 1968 have enjoyed great popularity already during the state socialist period. It is an artists' camp where under simple living conditions the mainly amateur art lovers can try their hands at various arts.

The form of the settlement evidences that the village expanded toward the thalweg. The scale of the centre corresponds to the size of the village. The iconic parish church from 1909 designed by Károly Kós functions as a landmark, and has an outstanding value both locally and regionally. As a place popular among artists, the settlement has a high touristic appeal, it is a fashionable trip destination, and because of its pleasant atmosphere, people come here even just for lunch, or for a walk. It is, however, less known and visited by foreigners than Szentendre on the opposite side of the Danube

[11] http://szonyitabor.hu/

Bend, which before becoming a popular tourist destination was also a place liked by artists. Yet this situation has a positive impact on the settlement's landscape; there are only a few shops serving tourists around the main square, so it could preserve its simple and loveable authenticity.

Fig.64. a-b. Zebegény on a map made at FÖMI in the 1960s and on a contemporary aerial view (google maps)

The riverbank is somewhat isolated due to the main road and the railway, but it is spontaneously used by tourists during their walks which usually involve the viewing of the opposite side of the Danube from the shores. Yet today the village does not exploit the possibilities offered by the riverbank for the small number of local programs (Fig. 64. a-b).

3. PILISMARÓT

The name of this village is misleading, since it is not located in the Pilis but at the northern foot of the Visegrád Mountains, 13 km from Esztergom and 10 km from Visegrád. The avoidance of settling on the riverbank can be explained by the latter being a floodplain, the holiday resort part of the village, however, have been later built beside the water; it gained popularity in the 1970s-1980s. The settlement is liked by tourists not only for its good location and pleasant scenery but also for its public beach. It is connected with Szob on the opposite side of the river through a ferry line, and during the summer season a smaller passenger boat shuttles to Zebegény. Much of the surrounding area belongs to the Danube-Ipoly National Park, thus there are routes leading to beautiful hiking spots from the village. Probably the best known of these is the Hoffmann hut, a popular destination of backpacker tourism, which can be reached through a route branching from the road to Pilisszentlélek. [12]

[12] forrás: http://www.pilismarot.hu/hu/onkormanyzat; Település Arculati Kézikönyv (Local design manual) (http://www.pilismarot.hu/download/2017_Dokumentumok/Onkormanyzat/TElepulesArculatiKezikonyv/TAK2017.c)

Area: 44,58 km² Number of residents: 2023 Density: 45,38/km²

Fig.65. a-b. Pilismarót on the maps of the First and Second Military Surveys – according to some scholars the radial road network is the evidence of the historical importance and regional embeddedness of the village.

Although the old part of the historical village of Maróth (today Pilismarót) is not and never had been a riverside settlement, it is still worthy to examine it in the present study as it is part of the chain of settlements lined up along the Danube Bend. On the site of the present village once stood a Roman settlement named Ad Herculem. The name of Marót is mentioned the first timein 1138. During the Tatar Invasion – together with the neighbouring settlements – Marót became deserted. In 1260 the queen donated the village to the Benedictine monastery in Visegrád, and from this time on, even if its owners occasionally changed, until the 18th century it remained in the possession of various religious orders. During the Ottoman occupation Marót was also regarded as vacant, having only a few inhabitants and around fifteen houses. In the 18th century the Pauline order settled here Hungarians and Slovaks from the northern parts of Hungary. The settlement structure of Pilismarót is peculiarly different from that of the other neighbouring villages (Fig. 65. a-b).

Fig.66. a-b. The hill of Ad Heraclum (Source: The Danube Limes project archaeological research between 2008-2011) and the archaeological map of Pilismarót (source: www. sulinet.hu)[13]

[13]http://www.sulinet.hu/oroksegtar/data/telepulesek_ertekei/Pilismarot/pages/images/001_tartalom_bevezetes_clip_image002_0001.jpg

The course of the brook of Pilismarót and the intersection of the radially incoming roads designates the centre at the north-eastern foot of the hill on which the Roman settlement once stood (Fig. 66. a-b). The pattern of land development here also followed the typical Hungarian type of building the house on the plot border (Fig. 67. a-b).

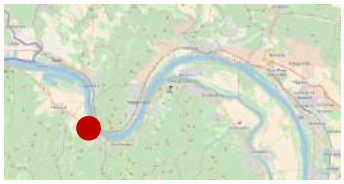
Fig.67. a-b. Pilismarót on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps)

After the establishment of beaches and public parks, holiday home areas and sports grounds were developed on the riverbank. The holiday homes were built on narrow plots as one-storey cottages with high pitched roofs and in various colours. In 1851 Gusztáv Heckenast, a publisher from Pest bought here houses and lots, commissioned a house from the architect Frigyes Feszl which became an important place of intellectual and social life. Just as Dömös, at the end of the 19th century the village became a popular hiking destination for the touristic associations of Budapest. They travelled by train to Zebegény and came over to the riverbank of Pilismarót with the ferry. In the 1930s, during the recovery of the tourism industry, the local public beach was called the silver coast or lido of the Danube and a holiday resort area was developed here. The beach attracted many visitors. An inn called the Hoffman Hut had opened in 1890 at the outskirts of the village in the Visegrád Mountains.

Pilismarót offers a modest number of cultural programs, its church singing contest does not aspire to attract a larger public, and its choice of venues does not profit from the advantages of its location.

4. DÖMÖS

Dömös is a village located on the border of the counties of Pest and Komárom-Esztergom, 16 km from the town of Esztergom and 6 km from Visegrád. It is one of the most popular hiking destinations of the Danube Bend, primarily due to the proximity of the Rám-szakadék ravine which can be reached from the village centre by a relatively easy hike. Dömös is connected with the northern bank of the Danube with a seasonally operating ferry line.



Area: 23,99 km² Number of residents: 1106 Density: 46.10/km²

Fig.68. a-b. Dömös on the maps of the First and Second Military Surveys; it stretched far from the riverbank, expanding along the main street formed on a contour line.

The earliest local stone-built structures are from the Roman period; there are two Roman watchtowers, one at the mouth of the Köves and Malom brooks, and the other one in the Tófenék Lane. The ferry station of Dömös was built on the remnants of the watchtower at the Malom brook.

The surrounding wooded mountains encircled by the Danube had been in the possession of the ruling Árpád dynasty since the Hungarian tribes took over this territory; there were several royal hunting lodges and palaces in the area. Among these, the royal palace in Dömös was one of the most important, as in the 11th century it was a favourite place of residence of the Hungarian kings. In the 1100s a provostship and a chapter were founded beside the palace. The provostship of Dömös lied in the Danube Bend between the two royal seats of Óbuda and Esztergom what determined its later role. During the 12th-16th centuries the palace was rebuilt several times for the purposes of the provostship. The monastery was presumably burnt down by the Tatars but it was soon rebuilt, just to be destroyed again in later times after which it became vacant. The village itself, however, was inhabited also during the Ottoman occupation. The final destruction of the provostship came after the fall of Visegrád and Esztergom (1543), and its ruins were the taken apart by the villagers. The Today, the remnants of the 11th century Romanesque church, the adjacent royal palace and the buildings of the provostship can be found on the grounds of the holiday resort area.

Fig.69. a-b Dömös on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps).

The historic settlement (today called Ófalu, meaning old village) lied around the block enclosed by the Kossuth Lajos, Duna and Szent István streets, in the vicinity of the Malom brook (Fig. 69. a-b). The village is separated from the riverbank by a floodplain, despite this it is regarded as a riverside

settlement. The main street running parallel with the Danube in a considerable distance (about 400) m from the water formed the main axis of its spatial structure; also here the the first row of houses faced the river with their gardens. It widens at its eastern end and gives the impression of a single-street village. The church has been built only in the 18th century. The spatial expansion of the village took place toward the valley, perpendicularly to the main street.

5. NAGYMAROS

Nagymaros is the most populous settlement on the here examined section of the the Danube Bend. In 1996 it was granted town status. While the 494 m high Saint Michael Hill rising above the town is located on the southern edge of the Börzsöny Mountains, geologically it is a protrusion of the Visegrád Mountains lying south from the Danube. This is the narrowest part of the Danube Bend where the height difference between the water surface and the surrounding mountain peaks can reach up to 400m. Nagymaros is an excellent touristic destination in itself, however the most popular local attraction is the opposite bank and the Castle Hill at Visegrád with which it is connected by a ferry line operating throughout the year. This is especially remarkable in light of the fact that between Esztergom and Budapest there is no bridge on the main stream of the Danube.

Area: 34,37 km² Number of residents: 4750 Density: 138,2/km²

Fig.70. a-b. Nagymaros on the maps of the First and Second Military Surveys.

Maros, built on a narrow spit opposite Visegrád, was a favourite temporary residence of the Hungarian rulers and magnates; the flat terrain was especially suitable for knightly tournaments. After the original inhabitants were killed by the Tatars Maros was repopulated with German settlers. In the 14th century the king designated it as the twin town of Visegrád. Fishing in the Danube has always played an important role in the town's economy, but it also attracted merchants, not least because of the proximity of Visegrád. It deserved the town privilege among others by its

intermediary economic role.[14] After a plague in the early 18th century depopulated the town, it was again settled by Germans from the region around Mainz. Between 1946-1948 most of the German inhabitants were deported and Hungarians from Czechoslovakia came in their place.

The town was chosen as one of the endpoints of the Gabčíkovo-Nagymaros hydroelectric dam system but after the fall of the Socialist regime the project was halted by the Hungarian government.

Fig.71. a-b. Nagymaros on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps).

Among the settlements of the Danube Bend, the spatial structure of Nagymaros is very unique. Its nearly parallel longitudinal streets are known to be existed already in the Ottoman times, and the historical centre can also be identified as the present widening around the church.[15] The latter opens toward the river as a public space. The spatial structure of the riverfront area with its streets running perpendicularly to the Danube shows a regular orthogonal arrangement to which another area with an organic structure connects along the gullies stretching from the hill. The streets in the valley are narrower and are flanked with houses standing on the plot borders, built with pediments, with terraces and porches extending to the street what is considered as characteristic for Nagymaros, a special local "pattern".

The spatial structure did not change considerably in the last centuries, although the main road nr. 12 (which follows the course of a medieval road) and the railway divides the urban fabric into distinct stripes. At some places the residential plots lie quite near (ca. 35 m) to the river, hence it is not surprising that the town was many times devastated by floods. The most damaging of these was the great flood of 1838 which destroyed most of the houses close to the riverbank (Fig. 71. a-b).

6. VISEGRÁD

The settlement with a history of more than thousand years is located 30 km from Budapest as the crow flies and 42 km by road, on a narrow area between the protrusions of the eponymous mountains and the Danube, as well as in the Apátkúti Valley and the adjacent hillsides. In the Middle Ages its favourable location made it one of the most important places of the kingdom, and for centuries it had been one of the seats of the Hungarian kings and a significant economic centre. Its importance declined after the Ottoman invasion. Although it was repopulated in the first half of the 18th century, it never regained its previous glory: the centre of the country definitively shifted to

14 Nagymaros, Település Arculati Kézikönyv (Local design manual), 2017, http://www.nagymaros.hu/component/content/?showall=1&set_textsize=medium&start=20

15 Ibid.

Buda. After all, due to the local the terrain conditions Visegrád is much more suitable for being a tourist attraction than to accommodate a larger population. The citadel on the 328 m high Castle Hill with its historical relics, as well as the great variety of cultural programs make it a complex tourist attraction, and the town enchants also with its unique atmosphere and architecture. Visegrád offers a colourful palette of programs and numerous accommodation facilities to satisfy the 300 thousand visitors coming here every year.

Area: 33,27km² Number of residents: 1840 Density: 55,30/km²

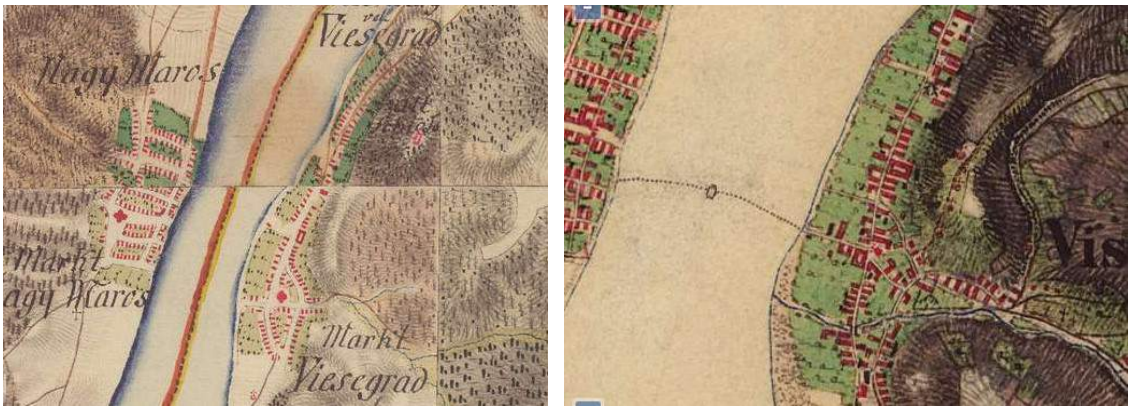


Fig.72. a-b. Visegrád on the maps of the First and Second Military Surveys.

Because of its excellent strategic position, it was part of the chain of Roman fortifications along the Limes, the remnants of which (the watchtowers found at Szentgyörgypuszta, the stone quarry and the ferry port opposite Kisoroszi, and the late Roman fortress at Gizella major) are protected national monuments. The medieval commercial road, on which Visegrád had the right to control and collect tolls, followed the route of the Roman military road and today – as the main road nr. 11 – it still plays an important role in the transport network of the region. The Roman military camp on the Sibrik Hill located south-east from the present-day town centre was one of the most important strongholds of the Danube Bend section of the Limes, later becoming the seat of Visegrád County with the castle of the County Lieutenant. Because of its defensible position for centuries it had been the core and centre of the settlement, a place of continuity from the Romans through the Slavs to the Hungarians. It lost its importance only after the citadel was built in the 1250s, following which the centre shifted to the area around the foot of the Calvary Hill. The memory of this medieval settlement inhabited by a Slavic population is still preserved in the town's name (meaning "high castle" in the Slavic languages) and a few other local toponyms. Today the Sibrik Hill is a highly protected archaeological site and the wall footings of the Roman castrum are protected national monuments.[16]

The town gained international significance during the reign of the Anjou kings in the 14th century. They started to build a palace in the main street, close to the riverbank. In a few years it became a royal seat and the favourite residence of the ruler.

[16] Visegrád Településarculati Kézikönyv 2017
https://www.e-xpertness.com/visegrad/visegrad_TAK.pdf

Fig 73. a-b. Visegrád on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps).

The same regional position which in peacetime enabled the spectacular flourishing of the town in a more turbulent historical situation caused its dramatic fall. It is not surprising that in the changing political and military atmosphere of the 16th and 17th centuries the settlement suffered from the loss of its importance, as well as from physical decay to such an extent that subsequently it had to be rebuilt (although on the existing structures). The decline of its political importance and the weakening of its role within the settlement network has left its mark on the modest village-like/small town-like spatial morphology of the reconstructed settlement. Thus in this historically important town the spatial imprint of continuity is very complex. Whereas the outlines of the landscape, the spatial conditions and the main lines defining the settlement structure survived, architectural and urbanistic evidences of the glorious past can be found only sporadically, merely as single objects. The settlement which at least in medieval terms once had an urban character gave place to another the population, image and atmosphere of which has been rather rural.

At the turn of the 19th century as visibly new elements in the landscape villas and sanatoriums were built in a dispersed manner below the Salamon Tower.

7. DUNABOGDÁNY

The village lies along the Szentendre Danube, 35 km from Budapest and 5 km from Visegrád. The settlement hiding beyond the busy main road nr. 11 has a specific, German (so called Swabian) atmosphere, and a small port, restaurants and a beach on its riverbank.

Area: 25,5 km² Number of residents: 3089 Density: 121,14/km²

Fig.74.a-b. Dunabogdány on the maps of the First and Second Military Surveys.

At its borders with the adjacent village of Tahi, in the Váradok lane once stood a military camp called Castrum Cirpi which formed part of the eastern limes of Pannonia. There was also a town attached to the camp which in contemporary sources is described as a staging post. The village of Várad, built around the site of Cirpi was destroyed by the Turks in 1566. On the site of present-day Dunabogdány there were in fact three medieval villages, respectively settlement parts. The first mention of Bogdány is from the year 1285. In the 14th-15th centuries it was an important settlement belonging to the crown. In accordance with the aims of the Habsburg court to germanise and re-catholicize Hungary, in 1723 the local landlord, Count Péter Zichy settled German Catholics (presumably from Bavaria and Franconia) beside the Hungarian Protestants inhabitants. A few decades later, after the arrival of a second wave of German settlers, Germans exceeded 80% of the total population. In 1947 the village also witnessed the forced deportation of Germans and at the same time, as part of the Czechoslovak-Hungarian population exchange, around 20 Hungarian families from Slovakia moved into the houses of the expelled Swabians.

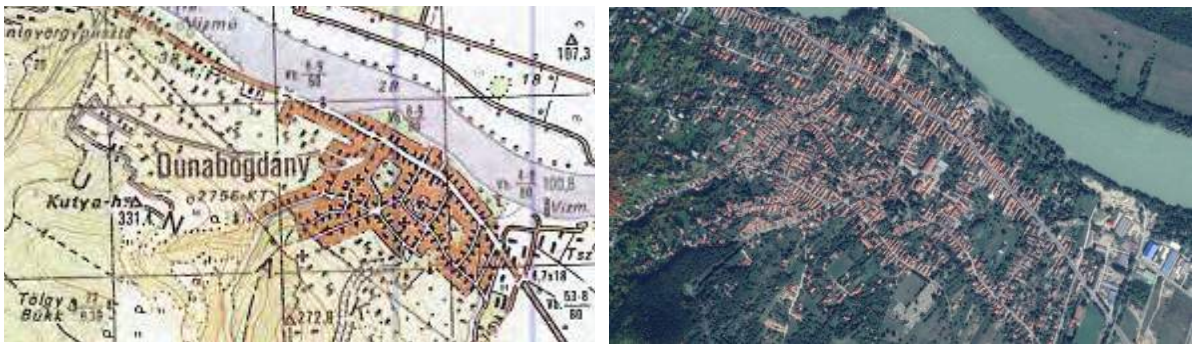


Fig.75. a-b. Dunabogdány on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps).

8. KISOROSZI

The village with a special geographic location lies on the northern tip of the Szentednre Island, from three sides flanked by the Danube and is connected with Visegrád-Szentgyörgypuszta through a ferry line. For centuries its life has been strongly shaped by the proximity of the Danube, and today it is a favourite destination for water sports enthusiasts. At the very peak of the island there is a beach offering a beautiful view of Visegrád and Nagymaros.

Area: 10,74 km² Number of residents: 996 Density: 92,73/km²

Fig.76.a-b. Kisoroszi on the maps of the First and Second Military Surveys.

Kisoroszi is located on the Szentendre Island lying between the main stream of the Danube and its branch called the Szentendre Danube. The area was inhabited already in Antiquity, the Romans erected here several watchtowers. The first known written reference to the village is from 1394, at that time it was called orosz. The hajduks of King Matthias settled here in the 15th century and after the fall of Buda in 1541 it became part of the Ottoman Empire. After the expulsion of the Ottomans it came into the possession of the Royal Treasury, and later to various aristocratic families.

A Duna főága és a Szentendrei-Duna által közrefogott Szentendrei-szigeten terül el. Kisoroszi területe már az ókorban lakott volt, a rómaiak több őrtornyot is emeltek itt. A legelső ismert írott emlék az 1394. évből van, ekkoriban Orosz néven említették a települést. A XV. században Mátyás király hajdúinak letelepedési helye volt. Buda 1541-es török kézre jutását követően török fennhatóság alá került. A törökök kiűzését követően az Udvari Kamara vette át a terület irányítását, majd különböző főúri család birtoka lett.

Fig.77.a-b. Kisoroszi on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps).

It has only few streets; its spatial structure is defined simply by a main axis parallel with the Danube and perpendicular to the ferry comp (Fig. 31. a-b). Its riverbank is used intensely, as the island peak offers one of the most authentic experiences of a natural riverside scenery in the region.

9. KISMAROS

Kismaros is a settlement merged with Verőce on the left bank of the Danube, 12 km from Vác. Since it is crossed by the Budapest-Szob (-Bratislava-Vienna) railway line, it is easily accessible. It has an excellent touristic potential, from which the hiking and climbing tourism to the Börzsöny Mountains and the narrow gauge railway between Kismaros and Királyrét are especially significant. The latter is more than 130 years old: originally it served the timber production and stone quarrying in the Börzsöny, in 1976 it was changed into a pioneer railway and after a short hiatus it was refurbished and reopened in the 2000s. At present it is the third busiest narrow gauge railway line in Hungary.

Area: 11,96 km² Number of residents: 2301 (2015) Density:169.81/km²

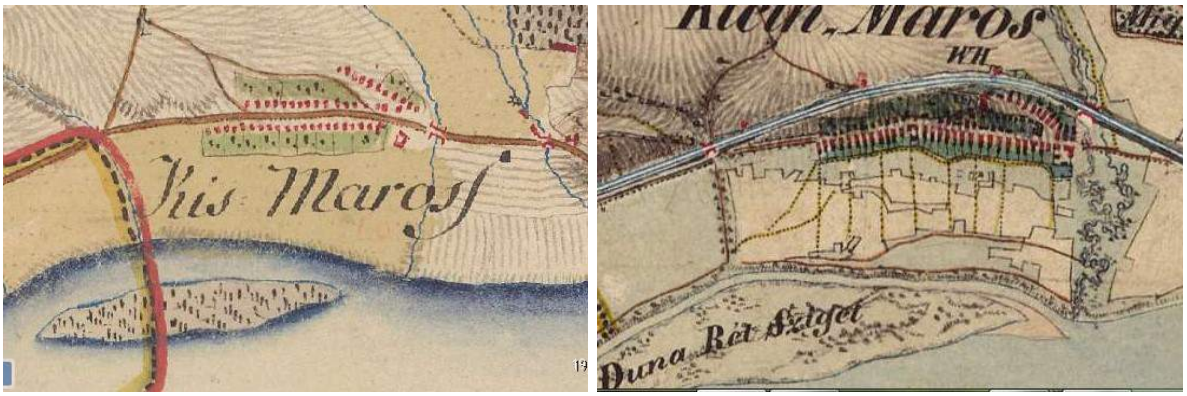


Fig.78. a-b. Kismaros on the maps of the First and Second Military Surveys.

Between 1697-1705 Kismaros was settled with Germans from the region of the Black Forest in Württemberg. In 1770 it came into the possession of the royal estate of Visegrád where it belonged until the early 20th century. In 1859 the village was destroyed by a great fire, and in 1875 the

Danube caused extensive damages. Whereas at the end of the 19th century from its 447 inhabitants were 373 Germans, 72 Hungarians and 2 Slovaks by 1910 this ratio has considerably changed (569 Hungarians from the total number of 615).

In 1974 it was connected to Verőce under the name Verőcemaros but in 1990 it became again a separate village.

Fig.79. a-b. Kismaros on the map made at FÖMI in the 1960s and on a contemporary aerial view (google maps).

10. VERŐCE

Verőce is a village located on the left bank of the Danube, 10 km from Vác. It is a railway node where the Vác-Balassagyamat line branches off from the Budapest-Szob main line. Since the Danube Bend is very narrow here, the densely inhabited settlement have primarily expanded vertically, on the hillsides of the Börzsöny. Due to local attractions, such as the hiking trails in the Börzsöny, the remnants of Roman watchtowers or the Migazzi mansion, it is a popular destination.

Area: 20,33 km² Number of residents: 3823 Density: 138.86/km²

Fig.80. a-b. Verőce on the maps of the First and Second Military Surveys.

The presence of the Romans is evidenced by the ruins of a bridgehead on the riverbank of Verőce. At the edge of the settlement there are still visible the ruins of a Roman watchtower from the time of Emperor Valentinian. The name of the village is first mentioned in a document written between 1444-1460. It was an ancient property of the Bishops of Vác. Its population was decimated during the

Ottoman occupation, therefore in the 18th century it was resettled with Hungarians and Slavs from Northern Hungary, as well as Germans.

During the state socialist period, in 1974 it was merged with Kismaros under the name of Verőcemaros but after the change of the regime the two settlements split apart.

Historical maps clearly show its function as a hub; its spatial structure was shaped by the intersection of various roads coming from the mountains (Fig. 81. a-b).

Fig.81. a-b. Verőcemaros on the map made at FÖMI in the 1960s and on an aerial view (google maps).

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http://www.pilismarot.hu/download/2017_Dokumentumok/Onkormanyzat/TElepulesArculatiKezikonyv/TAK2017.

3.4 SWOT ANALYSIS OF SELECTED DANUBE BEND SETTLEMENTS IN RELATIONSHIP TO THE RIVER				
NAME OF THE SETTLEMENT	**Strenghts**	**Weaknesses**	**Opportunities**	**Threats**
Dömös	The settlement offers a view on the opposite side; there is a port and a guesthouse ("Malom Vendégház") operated by creative entrepreneurs;	Underutilised Danube bank, insufficient public transport, but the creation of a stop is not in the competence of the local municipality;	Large area on the riverbank; good location of the port terminal and its catering facility; empty space behind the port terminal and the holiday camp suitable for leisure activities and programs; the brook represents a potential for development; dilapidated restaurant building owned by the municipality; a bridle path in connection with the riding hall on the unbuilt section of the riverbank; development of a "hiking centre" on the riverbank which currently serves as a starting point of hiking trails as crossing the area of the town, furthermore the densification of the existing boat lines is desirable; important touristic destinations of the reion, such as Esztergom, Visegrád and the Rám-szakadék ravine are located on the same side of the Danube;	Flood hazard, the more important boat lines do not have a stop here because the village is too close to Visegrád;
Dunabogdány	Historical settlement structure, valuable architectural heritage, German (Swabian) traditions, leisure opportunities on the riverbank which is intensely used; civic activism; social cohesion, hiking trails; archaeological heritage, a local community with a strong collective identity;	Population decreases, vacant and abandoned houses, intense transit traffic in the narrow mainstret, lack of sufficient funds for the recultivation of the damaged landscape of the defunct stone quarries;	The beach; tax revenue from businesses operating at the port; hiking trails of national importance cross the surrounding areas; expected inclusion of the local elements of the Roman limes in the UNESCO World Heritage List, subsequent need for the adequate presentation of the heritage objects; regional role as a centre of services; there is a large area next to the riverbank (Arany János Street) available for development;	Many buildings on the main street and in the centre are vacant and run-down, lack of maintenance at the exissting, widely popular public beach lying between mainroad nr. 11 and the Danube and suffering from the excessive transit traffic; lack of a coherent architectural settlement image; dreadful appearance of the mine's area;
Kismaros	Valuable heritage of architecture and settlement structure, good public transport, the village is situated directly by the Danube, final stop of the narrow gauge forest railway, Börzsönyliget holiday camp;	The holiday resort areas are isolated from the rest of the village, a lack of direct connection with the Danube;	Further development of the narrow gauge railway, seeking a connection with the Danube, stronger cooperation with Verőce involving task-sharing and the coordination of tourist programs, strengthening the connection with the holiday resort areas;	excessive vehicle and railway traffic;
Kisoroszi	Special location at the peak of the Szentendre Island, historical settlement structure, valuable architectural heritage, sandy rivershore offering a genuine and natural waterside experience, camping;	Under-utilised Danube bank, the settlement's increased isolation;	Strengthening the settlement's role as a bridge between the two banks of the Danube, large areas available for development, seeking a connection with the opposite side of the river;	Flood hazard, lack of transit traffic;

Nagymaros	Good public transport accessibility, functional and visual connection with Visegrád, orderly riverbank and organic contact with the Danube, German traditions, well-established tradition of religious (youth) tourism; creation of the promenade: landscaping, street furniture; on „Active tourism centre" on a length of 1.5 km; hiking trails leading to the Börzsöny; Beach (Danube) with cabins, shower and storage room, good quality of water;	The areas beyond the railway are separated from the Danube; The riverbank is under-utilised, respectively used only occasionnaly during the summer season, the streets are too narrow for parking, there are no camps for children; low gastronomic appeal (only one restaurant); lack of coordination with the neighbouring settlements;	Further promotion of local traditions, refurbishment of the hillsidea and the improvement of its connection with the Danube bank, potential to become a functional sub-centre of the region (favourable location, relatively large population), functional extension of the riverbank promenade in connection with the centre; the Eurovelo 6 passes the settlement; allegedly the Mahart speadboat line is supposed to have a stop here in the future;	The town suffers for the excessive transit traffic;
Pilismarót	History, traditions, harmonic relationship with the landscape, good view on the opposite bank, well-developed holiday resort area; tourist hub, information tables for tourists, canteen; market stalls installed for local farmers;	The settlement is far from the Danube, poor infrastructure and public transport, the holiday resort area is isolated from the village, tourists visiting Visegrád park their car here but spend their money over there, only the holiday resort area has a connection with the river; neglected stations of the cross at the calvary; small number of catering facilities, the boat cemetery is quite far;	Utilisation of the bay of the "boat cemetery" for leisure purposes, the strengthening of the connection with the holiday resort area would provide an excellent public promotion of the surrounding settlements, sufficient information is available; the coordinated development with Dömös would be advisable, connection of the two settlements by a riverside promenade and bicycle lane; leisure area on the riverbank along the promenade; pilgrimage tourism;	Adequate channel depth but the port needs reinforcement, superfluous concrete blocks along the long road leading from the centre to the Danube, desorderly riverbank areas (starting at the Bajcsy-Zsilinkszky Street in the centre, ending in the Dunapart Street);
Szob	History, traditions, strong public transport connections (including to the opposite bank), border location, intense contact with the riverbank, playground, outdoor gym, rose arbor - wedding tourism;	The area along the main road is increasingly isolated from the settlement structure, lack of a genuine centre, insufficient settlement infrastructure, high rate of depopulation;	Potentials hidden in the confluence of the Ipoly and the Danube, improving the quality of riverbank use;	Excessive vehicular and railway transit traffic (including industrial transportation);
Verőce	Good public transport, the settlement is situated directly by the Danube, good view on the beautiful scenery of the opposite bank, a popular holiday resort since the 19th century, accessible on boat; growing population; traditions of aristocratic and bourgeois vacationing (e.g. Villa Sturm designed by Miklós Ybl), high embankment (also by Ybl);	weak structural connection with the Danube caused partly caused by the proximity of the main road to the river, isolation of the areas above the railway, lack of a genuine centre;	Stronger cooperation with Kismaros, task-sharing, coordination of tourist programs, enhancing riverbank use;	Flood protection of the area below the main road, excessive vehicular and railway transit traffic;
Visegrád	Historical traditions, royal palace and citadel, historical villa colony; cooperation with Nagymaros, harmonic development of the residential area, strong local identity, German traditions, well-established tourism relations; constant tourist programs (e.g. knightly tournaments);	Poor public transport connections, the port terminal stands squeezed between the main road and the river, and in turn the main road is squeezed between the river and the Castle Hill, isolating the residential areas from the Danube the banks of which are under-utilised; the surroundings of the ferry station are messy, packed with various strutcures;	Utilisation of the Danube bank, developing the areas between the settlement and the main road, improving the connection with the citadel;	Excessive and too narrowly focused tourist traffic, large hotel buildings of inappropriate scale, hospitality and leisure functions concentrated on a too narrow space;

Zebegény	valuable historical, architectural and cultural heritage, direct connection with the river, good public transport connections, image of an artists' village, art colony with respected history, free school of art; church designed by Károly Kós; small main square, settlement structure well-suited for community life, Zebegény Island, Sunflower "Hungarian houses", programme for keeping young people in the village: Fecskeház (Swallow Nest Project);	The settlement is squeezed between the mountains and the river, the railway and the main road isolate the Danube bank from the village, narrow streets, roads reparable only with difficulty, problematic flood protection, water sewage plant, there is no venue for community events; loess walls, leaky subsoil, many cellars;	Development of areas under the railway, improving the connection with the Danube, creating opportunities for public and collective use of the riverbanks, development of the public beach, Mahart boat line to Esztergom and Visegrád between May and September; does have a stop on the Budapest-Szob railway line (travel time 50 min.);	Excessive vehicular and railway transit traffic, the development of the riverfront areas is dominated by private interests;

3.5 THE TOURISM POTENTIAL OF THE DANUBE BEND

The Danube Bend has an outstanding tourism potential; its proximity to the capital, wonderful landscape and the historical and religious significance of its unique settlements like Visegrád, Esztergom and Vác have made it a popular venue for family programs and a sought-after destination of organised school trips. In addition, the entire length of its riverbank preserves remnants of the Roman Limes and is currently in a bid to be included in the UNESCO World Heritage List.

It would be desirable if the smaller settlements of the region could also participate and benefit from the possibilities outlined above. However, there are only few settlements which have a genuine, vital "brand" and an appeal resulting from a recognizable character (Table 1.).

	Name of settlement	Brand	Attributes
1.	Szob	syrup, narrow gauge railway	
2.	Zebegény	1. fine arts 2. István Szőnyi, Károly Kós	art camp, Sunflower Houses
3.	Pilismarót	recreation by the Danube	holiday resort area on the riverbank
4.	Dömös	hiking	Rám-szakadék ravine, ruins of the provostship
5.	Nagymaros	religious youth camp, view of Visegrád	
6.	Visegrád	1. Middle Ages, 2. Imre Makovecz	King Matthias, knightly tournaments, Salamon tower, castle
7.	Dunabogdány	Swabian traditions	
8.	Kisoroszi	public beach, island peak	indian camp
9.	Kismaros	narrow gauge railway	
10.	Verőce	?	

Table 3. Brand chart (source: the author)

Tourism data also show significant differences; among the examined settlements Visegrád has the hightest tax revenue (25.7%), and that of Zebegény is also much larger (8.2%) than those of the other ones (Table 2.).

KSH települési adatok 2016									
	Duna-bogdány	Visegrád	Kisoroszi	Dömös	Pilis-marót	Szob	Zebe-gény	Nagyma ros	Verőce
tourist tax revenue of the local municipality: 1000 Ft - 2011	228	52046	51	931	1482	74	1798	465	465
share of tourist tax revenue in total tax revenue (%)	0,4%	25,7%	0,2%	8,2%	2,7%	0,3%	4,4%	0,3%	0,6%
commercial accommodation capacities - 2013	7,1	776,4	0	227,2	88,6	0	19,8	27	0
commercial accommodation:	397,9	105184,5	0	1642	216,7	0	382,3	56,5	0

overnight stays/1000 inhabitants - 2013									
commercial and other types of accommodation : overnight stays/1000 inhabitants - 2013	651	107742,6	729,2	1733,2	312	0	3029	175,8	91,3
overnight stays in general in commercial and other types of accommodation: days - 2013	2,4	2,1	1,9	1,5	1,8	0	3,8	1,3	2,4

Table 4. Main data related to tourism (based on the material prepared by MUT)

The above data are only partially surprising; **Visegrád** it is well-known for developing its tourism brand in a well-organised and deliberate manner. It does not treat the circumstance that a significant part of the country's medieval heritage can be found within its area only as an issue of architectural preservation but it also seeks to integrate other attributes of that historical period into a unified tourism brand. Although the knightly tournaments taking place in the castle provoked some negative criticism as being a cheap tourist lure, the commitment and enthusiasm of those running this endeavour is beyond dispute. At the same time, even if the participants wear only a costume, frequently meeting people dressed in knightly clothes on the street has its charm.

There is an international cruise terminal in Visegrád, and although the locals often complain that the consumption habits of the tourists have lately considerably changed, the statistical figures nonetheless reflect the positive effects of organised tourism.

It has to be added, however, that the target area of tourism is entirely isolated from the rest of the town. The vast majority of foreigners visiting the town move exclusively between the cruise terminal and the Renaissance palace. Only few of them enter the town itself, what we think is a loss for the tourists, given that that Visegrád is a charming place – on the other hand, however, it is a gain for the local inhabitants, who are thus able to preserve their privacy and the intimate character of the town.

All of these circumstances have an impact on the use of the riverbank. The part of the Danube bank which serves as the arrival point for the tourists and hence is most intensely used is squeezed between the river and the Route 11 passing through the town; not surprisingly, most of the service facilities are therefore located on the other side of the road. Another important node is the area around the ferry terminal opposite Nagymaros, which, though a bit messy, has a direct connection to the town centre, namely to the latter's main street along its east-west axis (Rév Street). Also, the section of the Danube bank used by the locals is connected to the sports field, which though lies relatively far from the town, is a popular meeting place of the local youth. Albeit the remaining parts of the riverbank are at various points neatly landscaped and furthermore they contain appealing architectural elements such as the pretty little Mary Chapel, because of their position within the overall urban structure (a route passing by, greater distance from in-built areas) they are not part of the town's life, and are rarely visited by tourists.

Zebegény is generally associated with the arts. This is primarily based on the relationship of the painter István Szőnyi to the village, but also because of the artist colony which in the last 50 years has been popular among participants of different age groups, typically amateurs pursuing various arts. The settlement's touristic significance is undisputable, yet it is essentially a destination of inland tourism. In this light it is surprising that in this village of ca. 1000 inhabitants there are only 3029 overnight stays spent in the local accommodation establishments, compared to the 107742.6 stays counted in Visegrád, though the latter is significantly higher than in any other of the examined settlements (see Table 2.).

The church designed by Károly Kós is a landmark-like structure standing in the little main square where there are only a few shops to serve the tourists; likely it is only a committed sub-group of tourists who visit the village specifically because of the church. The spatial structure of the village is strongly determined by the fact that not only the main route but also the railroad tracks running parallel with the river cut the settlement from the riverbank, and although there is a connection under the railroad embankment, these two areas are not organically interconnected.

The significance, or "brand" of **Kisoroszi** is quite special: its direct connection to the river shores evokes wilderness, what is only intensified by the sandy peak of the island, a paradise of campers since many decades. The more informed also know that it was here that Ervin Baktay[1] organized his "Indian camp". The riverbank offers all what people connect to the feeling of freedom associated with shores and coasts; its grassy beach presents a picturesque view both from the island and the river. Despite the charm of the place it has a rather local-scale touristic significance.

Although the arrival of German settlers had a substantial impact on most of the examined settlements, it is probably **Dunabogdány** which is most strongly associated with their presence. This obviously has to do with their building culture and the streetscape resulting from the latter, that is more or less typical for all the other settlements as well, but it is in this village, notably along the main road where it is most conspicuous and due to its tracing also the most beautiful. Despite this Dunabogdány does not have a high tourist appeal. On the other hand, its riverbank is one of the most intensely used, primarily thanks to a few really good restaurants which are in a short walking distance from the piers, thus can be easily reached if someone arrives with a boat or a motorboat. A relatively great length of its shores is in use, and since it is possible to see from it on the main road and it is easy to stop at several places it attracts also transit travellers.

According to the statistical figures **Dömös** is one of the most attractive tourist destinations what is most likely due to it being a very popular hiking spot, as it is here were the hiking trails to the Rám-szakadék, a ravin in the Visegrád Mountains with vertical cliffs, start. The fine building of the port terminal has a delightful view on the cliffs on the opposite side, yet there are only few who stop here. It offers some hope for the future that in the recent past it has been refurbished and its catering services has been modified.

Szob is a settlement about which most of the people probably doesn't even know that it is located by the Danube. At the same time during the decades of state socialism thousands of Hungarian families had on their pantry shelves the legendary Szobi syrups, thanks to the Ipoly Valley's excellent conditions for growing berry fruits.

[1] (1890-1963) painter, art historian, oriental scholar, astrologer, writer and translator.

Nagymaros has been strongly impacted by its geographical proximity to Vác and Visegrád. Concerning its own touristic image, it is generally associated with the Spiritual Youth Day of Nagymaros, a rally of Hungarian Catholic youth taking place in the town twice a year since 1973.

In the light of what has been written above the situation of **Kismaros** and **Verőce** is different. The development of their own brand is strongly determined by the fact that their built area is spatially interconnected. Another important circumstance is that both their name and their administrative status (as they have been merged in the past and later separated) has changed more than one times. It is difficult for them to define themselves individually, though it is not strictly necessary.

One of the special features in Verőce is the 5 m high stone wall of the embankment designed by Miklós Ybl, aimed at protecting the town from flood. Its wall built from cobblestones with stairs leading to the riverbank and the pebbles on the shore give the place a unique atmosphere.

Below the cultural programs of the Danube Bend settlements from 2018 are listed, first graphically in a chart (arranged temporarily and spatially, according to their location on the map), and then recorded in a table.

CULTURAL AND TOURISTIC PROGRAMS IN THE DANUBE BEND (IN THE YEAR 2018)

1	2. Feb.	3. March	4. April	5. May	6. June	7. July	8. Aug.	9. Sept.	10. Oct.	11. Nov.	12. Dec.
SZOB											
ZEBEGÉNY											
NAGYMAROS											
KISMAROS											
VERŐCE											
KISOROSZI											
PILISMARÓT											
DÖMÖS											
VISEGRÁD											
DUNABOGDÁNY											

program of regional/international importance

1. January

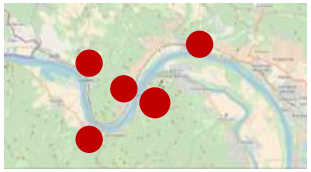
2. February

3. March

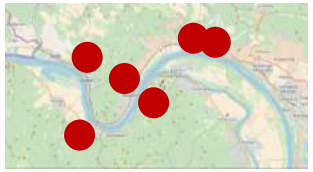
4. April

5. May

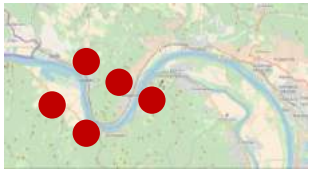
6. June



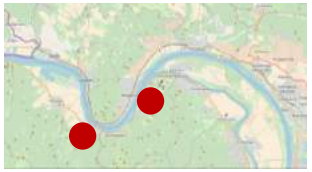
7. July



8. August

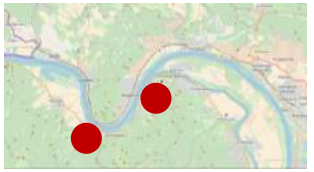


9. September



10. October

11. November



12. December

TITLE OF THE PROGRAM	DATE	VENUE	CONCEPT		
			local	**regional (riverfront venue)**	**national /INTERNATIONAL**
SZOB					
XVIII. Town Days of Szob	June 22-24	Széchenyi Promenade	Friendly football match in Szob A XVIII. Town Days of Szob: Opened by Dr. Bence Rétvári parliamentary secretary Presenting the municipal awards Pigeon racing Chess tournament Five-a-side football tournament - football field with artificial turf Opening of the exhibition of the Patchwork Quilting Club of Szob – Attila József Civic Centre in Szob interactive exhibition and playhouse for both children and adults, with nearly 70 plays – Banube bank. You can also save lives! – Come, and learn amateur resuscitation in 10 minutes tanuld meg 10 perc alatt a laikus	Opening of the exhibition of Kossuth Prize winning painter János Aknay – The Börzsöny Museum Cheerleaders' march – Church Square, Dunakanyar Brass Band Musical group B52 – Danube bank, mobile stage One Block street party - Danube bank, mobile stage Stuck on the tree – Rescue presentation of the Ipoly Valley Special Rescue Team - Danube bank Cooking contest – Danube Bank Peat-R Dance Team - Danube bank, mobile stage Haifa Bellydance dance performance - Danube bank, mobile stage Wildenrosen Dance Ensemble - Danube bank, mobile stage	

			újraélesztést! – Danube bank Wreath-laying at the memorial plaque of the Polish refugees – the former building of the restaurant Határ Announcement of the results of the small field football tournament and the cooking contest Saint Ladislaus Church kermis, mass of thanksgiving Planting of town trees - Szent Imre Street Dunakanyar Brass Band Sunday matinée - Luczenbacher Promenade Folk dance performance of the Danubius Dance Group – Attila József Civic Centre in Szob Conclusion of the XVIII. Town Days of Szob – Church of Saint Ladislaus	Old and Renaissance music played by Edit and Tímea Tóth – Park of the Mayor's Office Ocho Macho – Danube bank, mobile stage After the concert street party with Csiki Szob Cup 2018 - canoe and kayak race – Danube bank Charitable concert for saving the Pazsiczky organ, performers: Gergely Bogányi and the current and past students and teachers of the Zoltán Kodály Elementary Art School	
Programs of the Börzsöny narrow gauge railway in 2018					THE RECENTLY RENOVATED NARROW GAUGE RAILWAY BETWEEN SZOB AND MÁRIANOSZTRA.

ZEBEGÉNY					
3. Gyüttment Festival	August 23 - 26.				An annual gathering of those who seek to start a new life in the countryside and who prefer an ecological and rural lifestyle. Presentation of NGOs, associations and communities but also of individual stories, choices and their results .
Thematic tour in the foorsteps of István Szőnyi	June 23.	István Szőnyi Memorial Museum			Thematic tour in the foorsteps of István Szőnyi
Art camp in Zebegény – painting and drawing	July 16-28	garden of the István Szőnyi Memorial Museum			ART CAMP IN ZEBEGÉNY – PAINTING AND DRAWING
Panoramic run 2018	September 22.				PANORAMIC RUN 2018
Trip to the Danube Bend on a nostalgy train	In 2018 three times, in May, July and September				TRIP TO THE DANUBE BEND ON A NOSTALGY TRAIN
NAGYMAROS					
Trip to the Danube Bend on a nostalgy train	In 2018 three times, in May, July and September				TRIP TO THE DANUBE BEND ON A NOSTALGY TRAIN
Spiritual Youth Day in Nagymaros 2018	in May, October 6.				SPIRITUAL YOUTH DAY IN NAGYMAROS 2018
17th Mistral Festival	July 13 - 14.				17TH MISTRAL FESTIVAL
Saint Stephen's Day vine fest	August 18. -19.			Saint Stephen's Day vine fest	
Spicy Festival of Nagymaros	August 25.				SPICY FESTIVAL OF NAGYMAROS
farmers' and artisans' market	every Saturday				
KISMAROS					
Trip to the Danube Bend on a nostalgy train					

VERŐCE					
Folk dancing with the Mészáros Band	June 15		Folk dancing with the Mészáros Band		
Swabian Day	July 16.			Die Blumen dance group Dunakanyar brass band Kisbabóca dance group Marus dance group Őszikék dance group Soroksári Favágok dance group Soroksári mens' choir Szendehelyi German choir Wilden Rosen dance group	
Danube-party	July 6-7.	beach	fruit exchange – collecting broken glasses on the shores. Bouncy castle, water slide Water games, contests – water bomb battle, balloon crushing, Building of a sandcastle, handicraft activities, glitter tattooing Fable carpet – Nanny Zsófi tells fairy tales Melon eating contest	Beach party with Dj. Mono	
Danube-party	August 4		fruit exchange, game: collecting broken glasses in a bucket, handicraft activities for children	The beautiful miss reed - Hungarian folktale – tale contest for children presetned by the Hungarian Folktale Theatre Powerboating for children Handicraft activities for children	

				Water football and water slide Dragon boating water contests, water bomb battle, games The Paul Street Boys / musical written by László Dés László, Péter Geszti and Krisztián Grecsó Beach party with DJ Supi	
KISOROSZI					
Hiking trip organised by the Duna-Ipoly National Park Sand Dunes at Kisoroszi – an empire of mantises.	September 01	meeting at the parking lot of the Rácz Inn in Kisoroszi			Sand Dunes at Kisoroszi – an empire of mantises.
PILISMARÓT					
A festival of the song – Church singing contest	April 21	Catholic church			
DÖMÖS					
Families' day- Dömös Green Fair	September 15			Nature's facts contest, ringing of birds, handicraft activities, pocket pet show, and Longicorn Market offering products with the trademarks of the village and the national park.	
VISEGRÁD					
Visegrád Peak Assault 2018	October 14			Visegrád Peak Assault 2018	
Night of Museums 2018	June 23				NIGHT OF MUSEUMS 2018
2018 International Palace Games of Visegrád	July 13 - 15				2018 INTERNATIONAL PALACE GAMES OF VISEGRÁD

Knightly tournament and exhibition tour in Visegrád, the town of the living Middle Ages	August 20				KNIGHTLY TOURNAMENT AND EXHIBITION TOUR IN VISEGRÁD, THE TOWN OF THE LIVING MIDDLE AGES
2018 Advent handicraft market	December 22			Advent handicraft market	
2018 Visegrád Concerts. Musical Summer Nights, program series on classical music	July 7 – September 21			07.07. Concert of the Kecskés band in the royal palace 07.21. Concerts of Szimbola; Parola; Traveller`s Company concerts at the Rendezvénytér venue 07.22. Concerts of Ferenczi György és a Rackajam and Babra at the Rendezvénytér venue 07.28. Concert of the Prison Band at the Rendezvénytér venue 08.04. Concert of M.É.Z. at the Rendezvénytér venue 08.19. Concert of Heuréka Swing Big Band at the Rendezvénytér venue 08.24. Concert of Jazzation vocal band in the royal palace 09.01. Concert of Csaba Méhes and the Brass in the Five at the Rendezvénytér 09.22.`Musical Summer Nights`, part of the Ars Sacra Festival	
Farmers' market throughout the year	every Sunday between 8.00 and 13.00	Rendezvénytér venue			

DUNABOGDÁNY					
Swimming across the Danube, Triatlon.	July 21-22	Danube bank, beach - „Bogdány is moving”			SWIMMING ACROSS THE DANUBE, TRIATLON -
THALIA is on holiday in Bogdány	June 23-24	Civic Centre, Rendezvény-tér	THALIA is on holiday in Bogdány		
Pörkölt cooking contest-	June 30	Civic Centre, Rendezvény-tér		Pörkölt cooking contest -	
Anne’s day festivities	July 26 -			Anne’s day festivities	
Saint Donat’s Fair Weekend	August 3-6 -			Saint Donat’s Fair Weekend	
Corn festival	August 16	Chapel of Saint Roch		Corn festival	
Exhibition of garden crops	August 19-20	Civic Centre		Exhibition of garden crops	
Municipal festivity and Families’ day - Millenial monument	August 20	Courtyard of the Civic Centre		Municipal festivity and Families’ day - Millenial monument	
Public commemoration of the deportations	August 26	Katolikus Templom - tér		- Public commemoration of the deportations -	
Nemzetiségi Sördélután -	September 1	Civic Centre		Nemzetiségi Sördélután -	
Great market -	September 8 October 6 – November 10	Courtyard of the Mayor’s Office		Great market -	
Charitable evening event -	September 8	Civic Centre, Rendezvénytér		Charitable evening event -	
Old calvary fair	September 14			Old calvary fair	
Half maraton – „Bogdány is moving”	September 15			Half maraton - Bogdány Mozdul	
Seniors Day	October 7	Civic Centre		Seniors Day	
Harvest afternoon	October 15	Civic Centre, Rendezvénytér		Harvest afternoon	

Hiking trip on the Day of Saint Emeric	November 3			Hiking trip on the Day of Saint Emeric	
Saint Martin's Day	November 11 -			Saint Martin's Day	
Catherine's Ball	November 24	Civic Centre		Catherine's Ball	
Advent market	December 1	Courtyard of the Civic Centre		Advent market	
Christmas fair	December 22 (rain check 23) - -	Szent János Square		Christmas fair	
Mystery play	December 24	Catholic church			
Beigli (type of roulade) running race – „Bogdány is moving"	December 30				

3.6 TRANSPORTATION IN THE DANUBE BEND

The accessibility of the attractions and programs of the Danube Bend is strongly determined by the region's transportation-geographic conditions and transportation infrastructure. The former are shaped by natural characteristics: the settlements of the Danube Bend arrayed in the relatively long and narrow valley can be easily lined up along a longer road, however there is no alternative road to alleviate the congestion in the valley. This could be achieved rather by other means of transportation: all discussed settlements of the Danube Bend (with Esztergom and Štúrovo twelve in total) are obviously accessible on highways, however, by river boats 8, on train 7, by bicycle 5, by the ferry operating all year round 3, and by monorail only 2 settlements are accessible. One of the main characteristics of the area is the lack of contact between the two riverbanks: after Esztergom, the first bridge over the Danube is in Budapest, although there are two additional bridges connecting the Szentendre Island with the two banks. This unfavourable situation is further complicated by the fact that it is only Nagymaros and Visegrád, and Szentgyörgypuszta (Visegrád) and Kisoroszi, respectively, between which there is a permanent ferry line. The latter strengthens again only the accessibility of the Szentendre Island, as it does not bridge the main stream of the Danube. Two other ferry lines – between Szob and the southern bank and Dömös and the northern bank, respectively – operate seasonally, but this does not improve considerably the connection of the two banks.

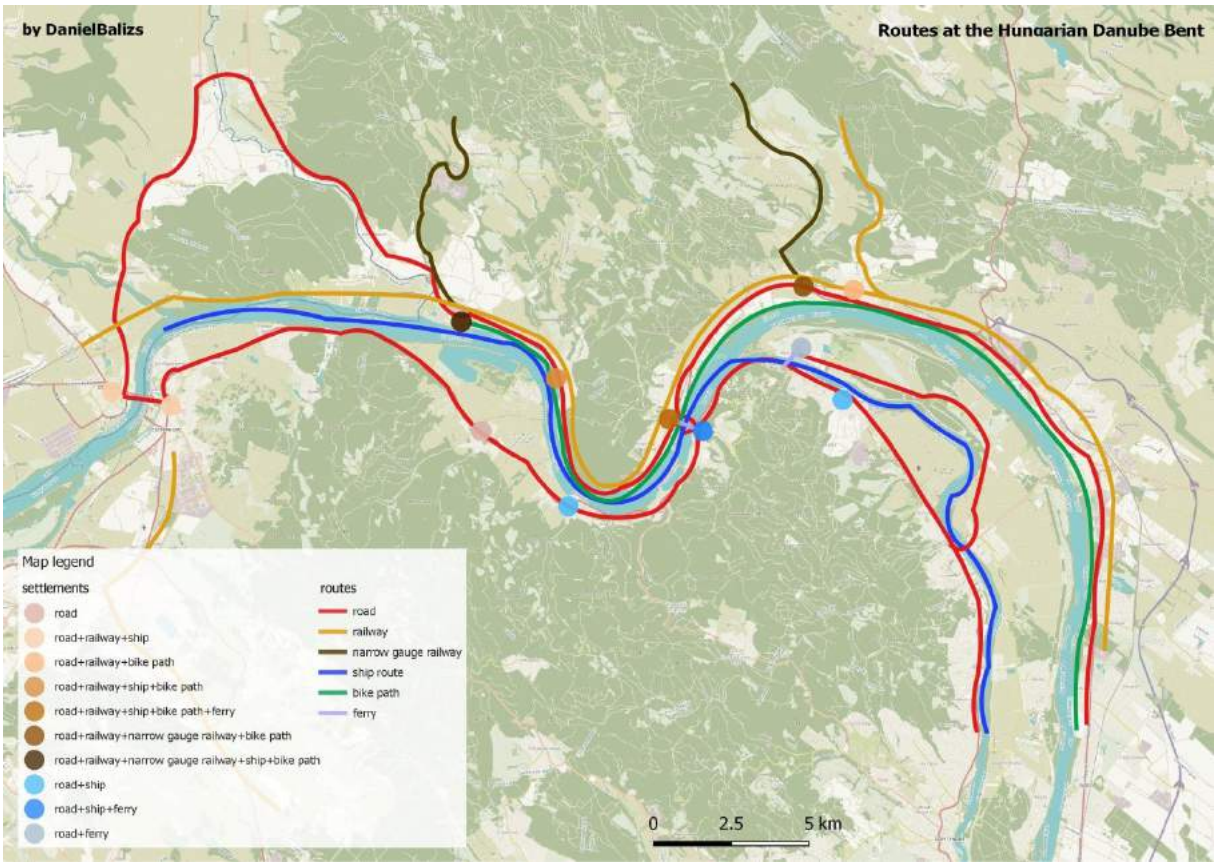


Fig.83.: Transportation options and the accessibility of settlements in the Danube Bend (edited by Dániel Balizs)

Another important transportation-geographic condition is the relatively good accessibility of Esztergom and Budapest along the individual – either all the way down on the right or the left – banks of the Danube. This is especially true for the northern bank where the Budapest-Szob-Bratislava railway line is running. Besides road and railroads we can access the settlements of the Danube Bend also by boat lines, furthermore the area is crossed by the EuroVelo6 international bicycle route what further strengthens accessibility on the northern (right) bank. The latter's physical condition, however, is at many parts unsatisfactory: several of its sections lack bicycle lanes, the road surface is of variable quality and the informing of the users is often inadequate. In comparison with the northern bank, the accessibility of the southern bank is less developed what weakens the chances for an intensive contact and cooperation between the individual settlements, hindering the process through which the Danube Bend could assert itself as a region with a coherent and complex brand.

The narrow gauge railways represent a special element of the transportation supply in the Danube Bend. The Királyréti Forest Railway starting at Kismaros and the Szob-Nagybörzsöny Forest Railway both operate in the Börzsöny Mountains lying north from the Danube Bend but geographically and touristically strongly related to it, thus they enrich the transportation and touristic offer of the region. In the future it would be advisable to integrate these railways into the touristic palette of the Danube Bend. The increasing use of the railroad (and the roads) between Esztergom and Budapest (south from the Pilis) would be also desirable, as it is practically the only alternative of the transportation on the right bank. Together these two routes could form a Pilis-Danube Bend "circular tour" which might help to intensify touristic exploitation of the peripheral areas of the Danube Bend and diversify the tourist offer of the region. This could be realised also through the widening of the road between Szentendre and Lepence (Visegrád) currently having only a narrow section.

The existing connections and infrastructure enable travel through the Danube Bend between Esztergom and Budapest on both sides of the river (on the north by using the Ipoly bridge at Letkés and the Danube bridges at Šturovo), moreover by using the Nagymaros-Visegrád ferry line shorter circular trips between Esztergom and Visegrád, respectively Budapest and Visegrád can be organised as well. Every settlement can be reached by train from Budapest, but only on the left bank. Slower but certainly more pleasant travelling is possible on cruisers (or hydrofoil) enabling viewing the region's scenery from a different perspective, that is, from the river. The distance between Budapest and Szob can also be overcome by a bicycle tour taking 1-2 days. It would be advisable in the future to integrate boat and bicycle tourism by increasing the capacities of the local port terminals, as well as by establishing bicycle bike rental stations in their vicinity. Another forward-looking option might be the coordination between bicycle tourism and railway travel by promoting one-day bike trips starting and ending at local railway stations. The increased tourism traffic during the summer season, especially July makes necessary the extension of the ferry lines and of main roads nr. 11 and 12. However, the development of infrastructure and transportation capacities cannot be imagined without the more intense cooperation of the settlements of the Danube Bend and without the concerted coordination of their touristic offers.

4.0 CONCLUSION OF THE REPORT, SUMMARY OF RESEARCH RESULTS

Fig.84 (photograph by Dávid Fehér, student of BME)

As already mentioned in the introduction, writing the regional report on the Danube Bend prompted us to analyse the spaces of landscape which we think can enrich the content of the existing reports and it suggests further research. The structure and content of the report seek to meet the requirements imposed on it, whereas the present conclusion summarizes the obtained results primarily from the perspective of our research on landscape and according to the order of the chapters.

We regard the chapter titled "*Geology of the Danube's river bends*" as relevant as it examines seven areas on the entire length of the Danube where despite the different geological and geographical conditions the river created similar spatial formations. From this we conclude that the results of our research on the Hungarian Danube Bend can be tested in other areas and are valid along the Danube. Another finding of the research is – vividly presented in the table at the end of the report – that in the comparative analysis of the seven examined areas greater or lesser differences can be as revealing as the similarities.

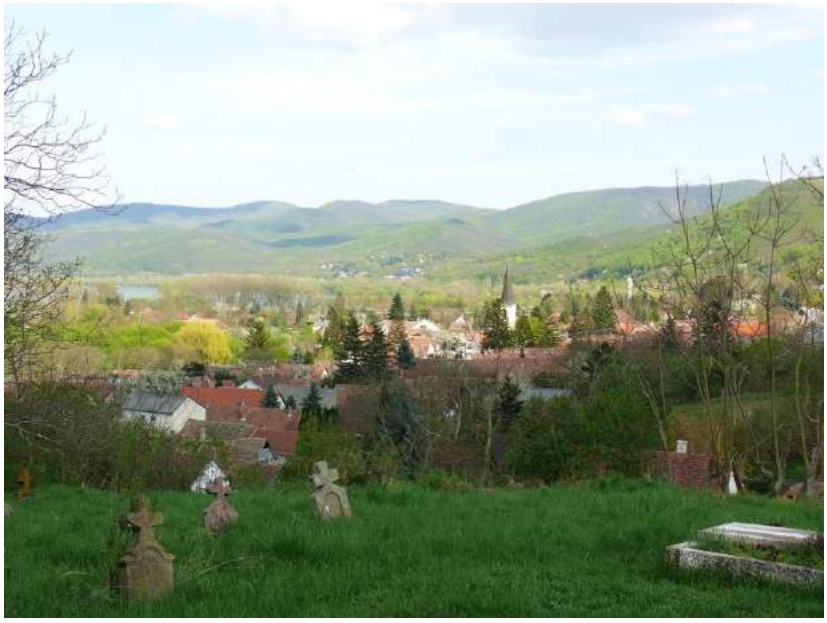


Fig.85 (photograph by Réka Kirchknopf, student of BME)

The next chapter titled "*Aspects, conditions and causes of the emergence and development of riverfront settlements*" reviews factors that influenced the settlement of humans in riverfront areas in general and in the Danube Bend in particular. Humans appeared in the untouched natural landscape and by the cultivation of the land and the creation of the built environment they further enriched the landscape of the Danube Bend as a result of which they became attached to it and it increasingly became part of their identity.

Following the presentation of the researched area, with its definitions and assertions the chapter titled "*Spatial worlds in river bends*" is the point of departure for our research on the spatiality of the landscape. It formulates our hypothesis that the landscape where we spent our childhood or a significant part of our lives, as well as its spatial world are imprinted in our spatial memory and thus shape our identity. The more possibilities and time we have for perceiving a landscape space, the more complex and richer our spatial experience will be and the more strongly it will be preserved in our memory. Consequently the landscape and its spatial world where we spent the most sensitive periods of our lives fix indelibly in our spatial memory. And if we suppose that these spatial experiences can be transferred to and accumulated and preserved in successive generations, than we might assume that we carry our spatial memory in ourselves since birth, and by time it becomes a collective memory attached to a given landscape that can vary in the plains, the mountains or the riverside areas and thus it shapes different landscape preferences and identities of individuals and their communities.

Fig.86 (photograph by Tamás Stranning, student of BME)

After examining general aspects of the subject we focus on the specific case area of our report, the Danube Bend. After defining and justifying its borders we interpret and apply what has been said earlier about the landscape space to the case of the Danube Bend. We refer to the municipal report prepared by us during the summer 2018 which examines the agglomeration of Budapest along the Danube (the section between Esztergom and Ráckeve) as a macroregion, as well as to the 25 datasheets presenting unexploited heritage items of the Danube bend and a 3 pages long description of the region.

The landscape space of the Danube Bend is approached from a different perspective in the following chapter examining the morphological transformations of the region's settlements. It analyses the morphological relationships first in general and then in the particular cases of ten settlements, the result of which can be summarised as follows:

The settlements of the Danube Bend evolved typically on plain areas near the river and only later did they begin to expand into the surrounding thalwegs. Until today in most of the cases their built areas don't have direct physical contact with the shores. The historical cores of the examined settlements did not change considerably in the last few centuries, their spatial structure, the division of plots as well as the architectural and urbanistic character of the built fabric has been preserved. The spatial structure of the individual settlements shows great variety: while all of them have a main street running parallel with the Danube but other structural elements are organized in different ways, as they are adapted to local terrain conditions. The development of plots has followed the common pattern with the building standing on the plot border, however due to the diversity in the relief and the course of the streets they show a colourful variety of streetscapes and individual features.

Based on our research we can conclude that the structure, plot development patterns and spatial use in the examined settlements is historically less connected with the river, although the latter considerably determines their location and typology. The functional requirements influencing the relationship to the river have significantly changed since the early 20th century when – with the emergence of holiday resort areas – the desire for a visual contact with the river have gradually gained prominence. However, since the historical structure and plot development patterns preserved their traditional characteristics these new requirements couldn't assert themselves on the settlement scale.

Fig.87 (photograph by Dávid Fehér, student of BME)

Even today, the region's settlements have direct contact with the river only partially what needs to be kept in mind when one considers the possibilities of the integration of riverbanks into the settlement structure and spatial use for touristic purposes. On the other hand, riverside life is certainly a strong element of local identity, especially in small settlements where the river is constantly in view. In a number of settlements the riverbanks' extension and width, their existing spatial structure and relationship with local plot development patterns does not enable to use them permanently and in their full length but only occasionally and at certain parts. It should be accepted

that they can accommodate uses and events temporarily or seasonally but in most places constant direct connection with the water is not possible.

Recent events call attention to an additional circumstance. Due to climate change drastic shifts of the shoreline can be expected which may significantly alter the relationship of riverfront settlements and the landscape space of the Danube Bend to the riverbanks. This can further increase the distance between the local settlements and the river what the former can either accept as the environmental impact of events of historical dimensions, or they can try to move closer to the river, e.g. by new development. At least as significant changes in the spatial scale of the Danube Bend can cause the decrease of the water level and the shrinking (at parts even the disappearance) of the water body accompanied by the expansion of sandy areas. We assume that these may bring forth fundamental changes in the character of the region's landscape and settlements already in the near future.

Fig.88 The Danube Bend on August 10, 2018 (source: index.hu)

The SWOT analysis in the next chapter is related to the morphological analysis as it is reviewing and recording in a table the strengths, weaknesses, opportunities and threats to the 10 Danube Bend settlements examined in the latter. Most of our conclusions in some way touch upon the morphological and spatial conditions in the region discussed in the previous chapter and they also allude to the topics of the following two chapters. This way the table serves as a connection between the chapter dealing with the region's landscape spaces and the one investigating the possibilities of the revalorisation of its natural and cultural heritage.

Fig.89 (photograph by Benedek Pál, student of BME)

The remarkably rich cultural offer of the region in the year 2018 is presented in a table according to the yearly schedule of the individual settlements in the next chapter titled "*The tourism potential of the Danube Bend*". This makes the image of the region and its settlements richer, more colourful and more attractive for tourists. Although the precise venues of the local events can be identified only in a few cases, in general it can be said that the potentials offered by the riverfront location are not exploited in this respect, as the riverside spaces and landscape rarely serve as a site or backdrop for the settlements' cultural programs.

Fig.90 (photograph by Réka Born, student of BME)

And finally, the last chapter discusses the transportation conditions in the Danube Bend, calling attention to its potentials and limitations. Here we did not intend to survey the steps necessary for the improvement of the region's transportation but instead we reviewed these conditions with respect to the requirements of enhancing and popularising the image and heritage of the Danube Bend. This makes the report complete on the basis of which tourism experts can prepare the one to three days or even one week long thematic programs which would enable the visitors to get a comprehensive picture of the Danube Bend and its unique natural and cultural heritage. We believe that this way the regional report will meet the requirements imposed on it.

Fig.91 (photograph by József Sári, student of BME))

We also hope that the present documentation and its theoretical framework will draw attention to the importance of analysing the impacts of landscape spaces on identity, serving as a point of departure for a separate research on this subject. In any case it was also one of our aims!

Budapest, December 2018.

5.0 APPENDICES

5.1 MATERIALS CREATED BY MUT (Hungarian Urban Knowledge Centre)

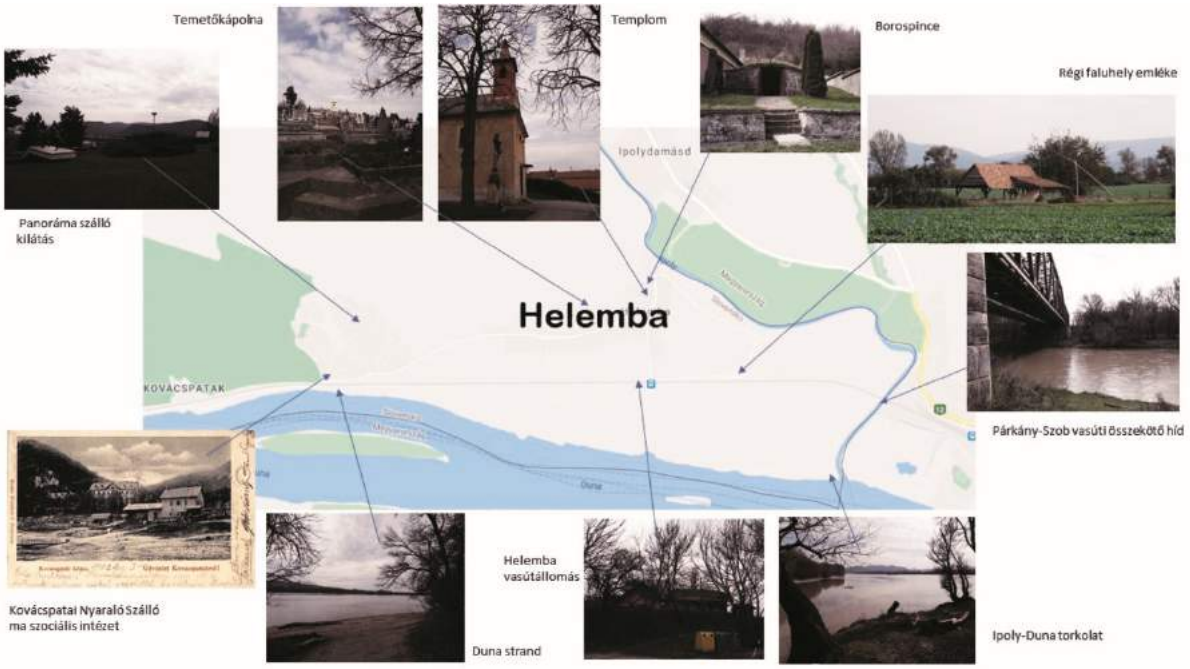


Fig.92 User's impressions 1

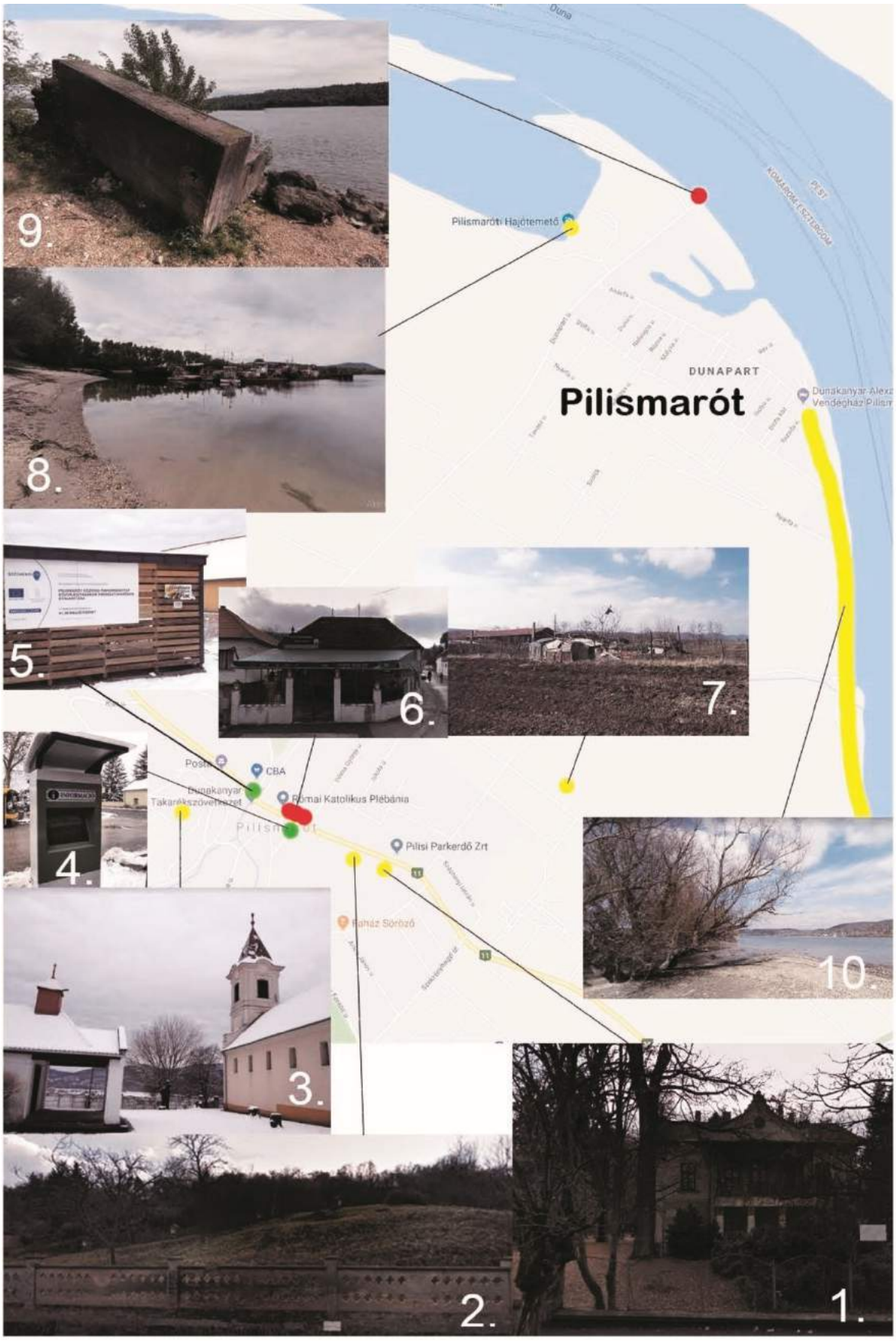


Fig.93 User's impressions 2

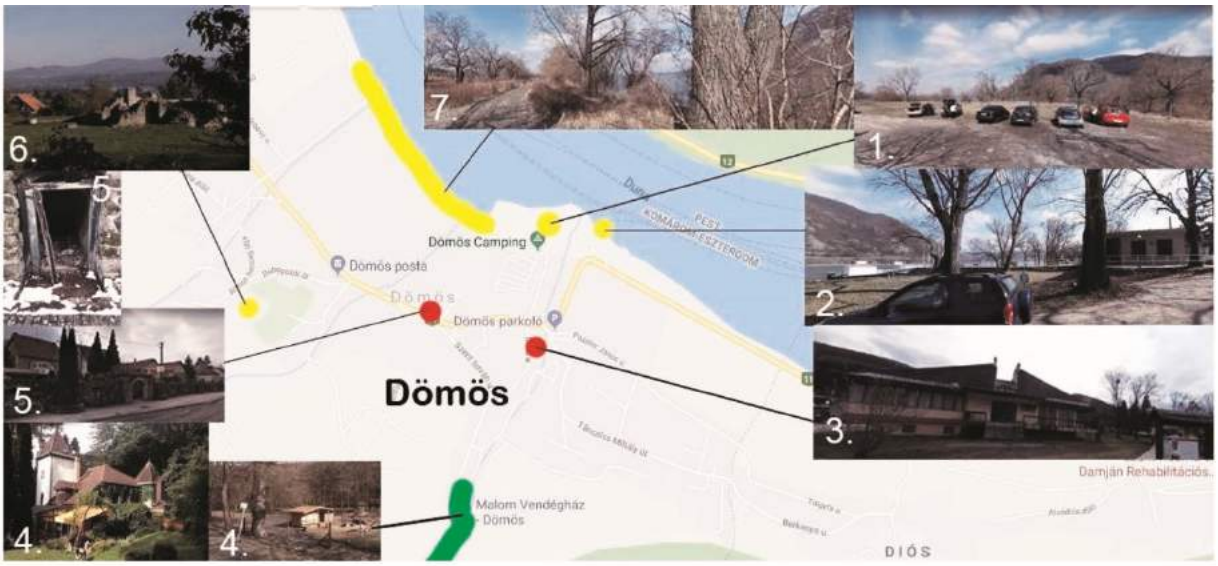


Fig.94 User's impressions 3

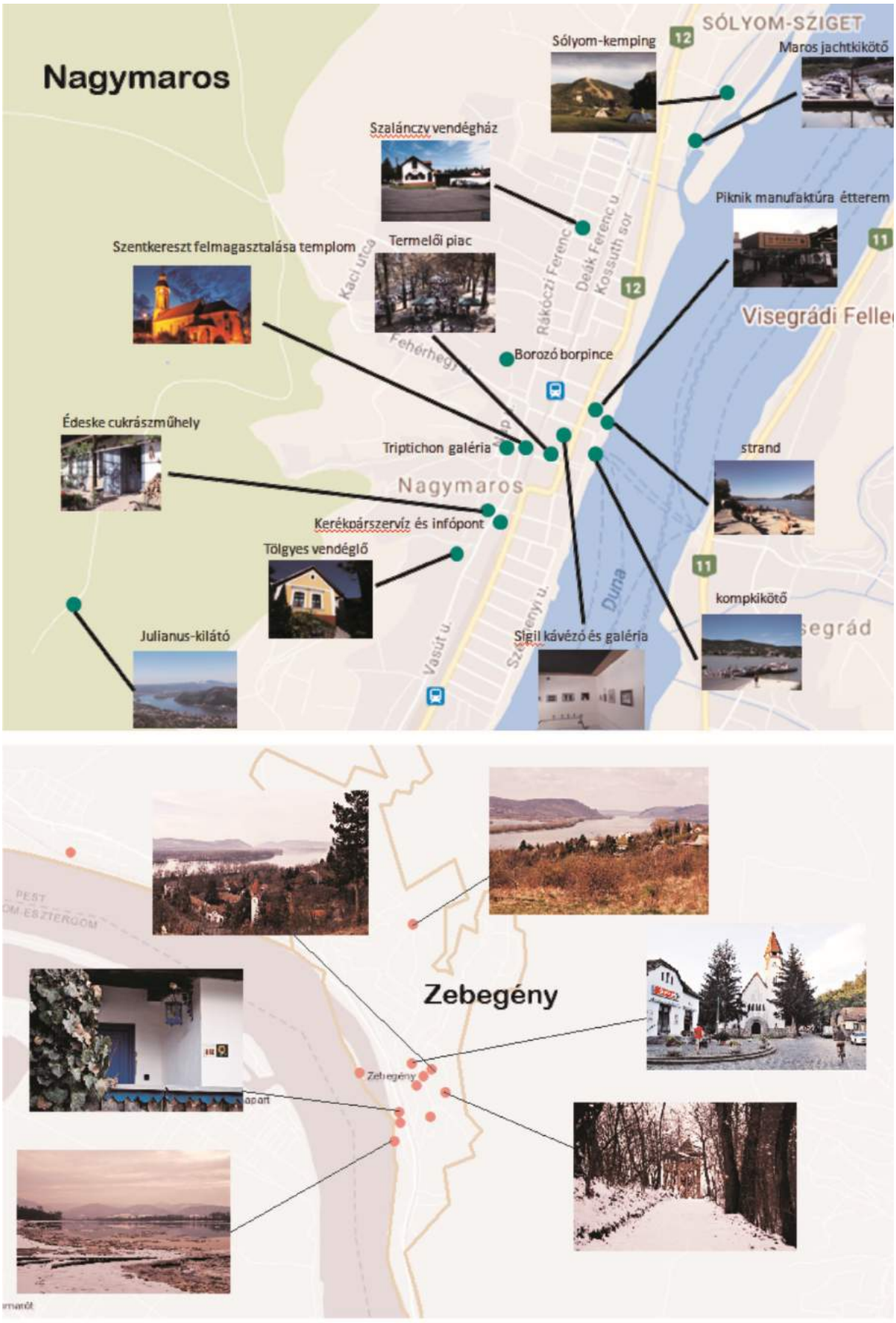
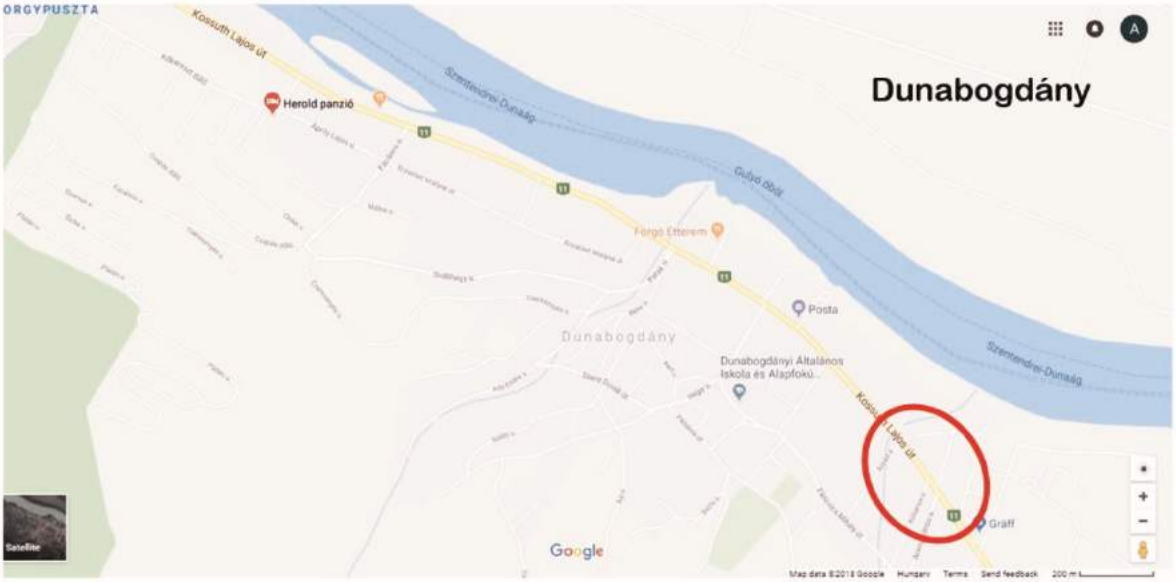


Fig.95 User's impressions 4



A településre beérve...

- Fábián-sebestyén kápolna

Árpád kert

Kiapadt patak a kápolna mellett

Becsületkassza

Fig.96 User's impressions 5

Művelődési Ház és Könyvtár

A szabadtéri színpad

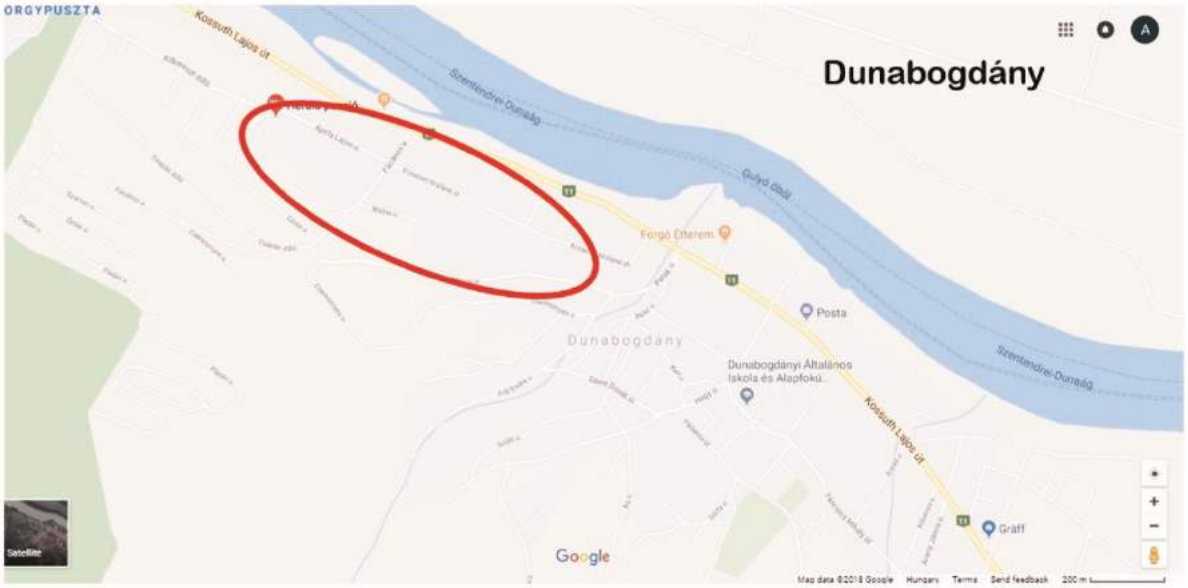
Községháza

Mézes Mokka és Tündér Lakk

Posta, trafik, lottozó

Frédi és Piroska

Fig.97 User's impressions 6



Református és katolikus templomok

Coop és Herold Panzió

Herr cukrászda

Fig.98 User's impressions 7

5.2 STUDENT WORKS IN BME (Budapest University of Technology and Economics)

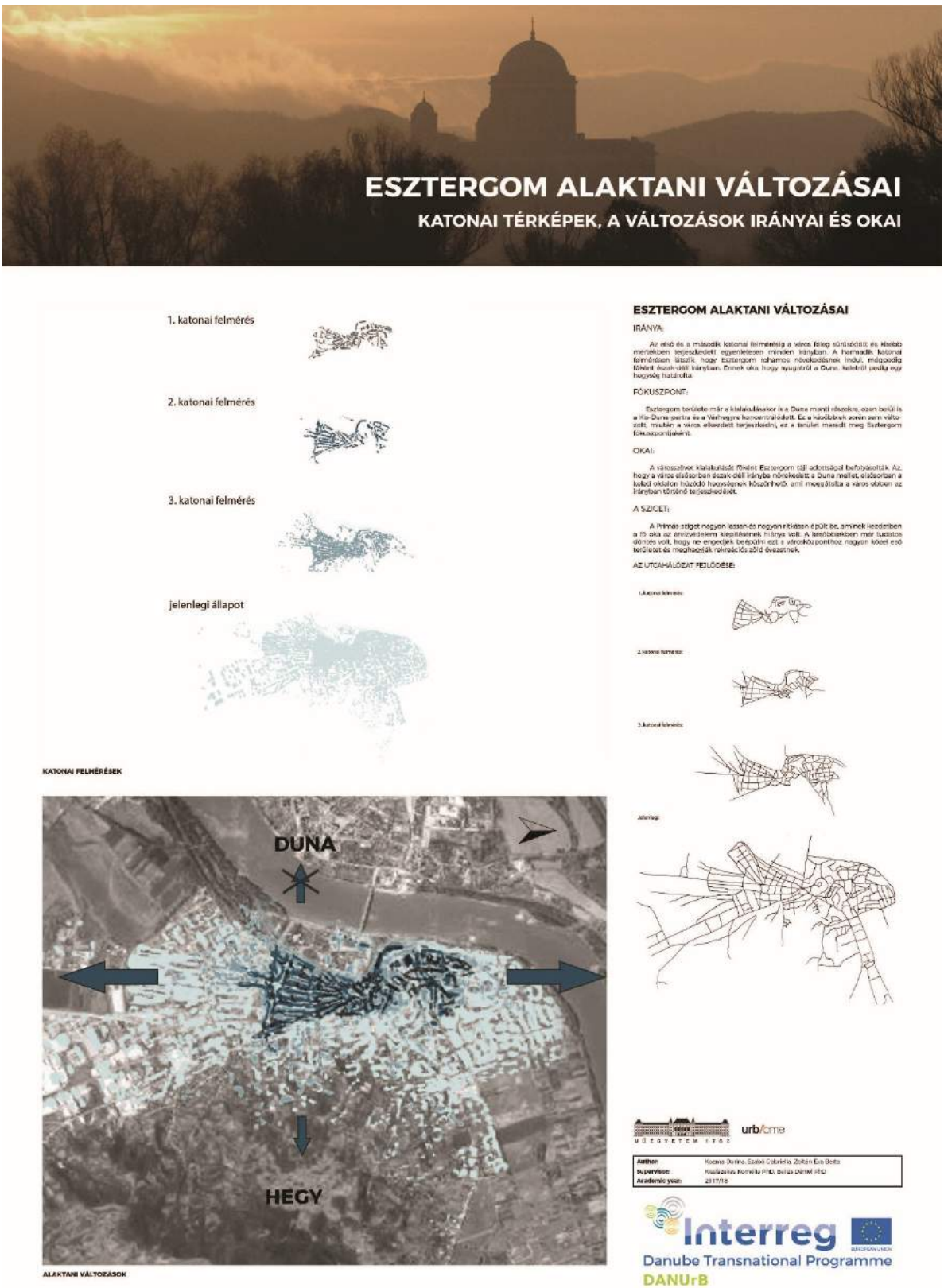


Fig.99 Plan Esztergom 1 made by Kozma_Szabó_Zoltán

Fig.100 Plan Esztergom 2 made by Kozma_Szabó_Zoltán

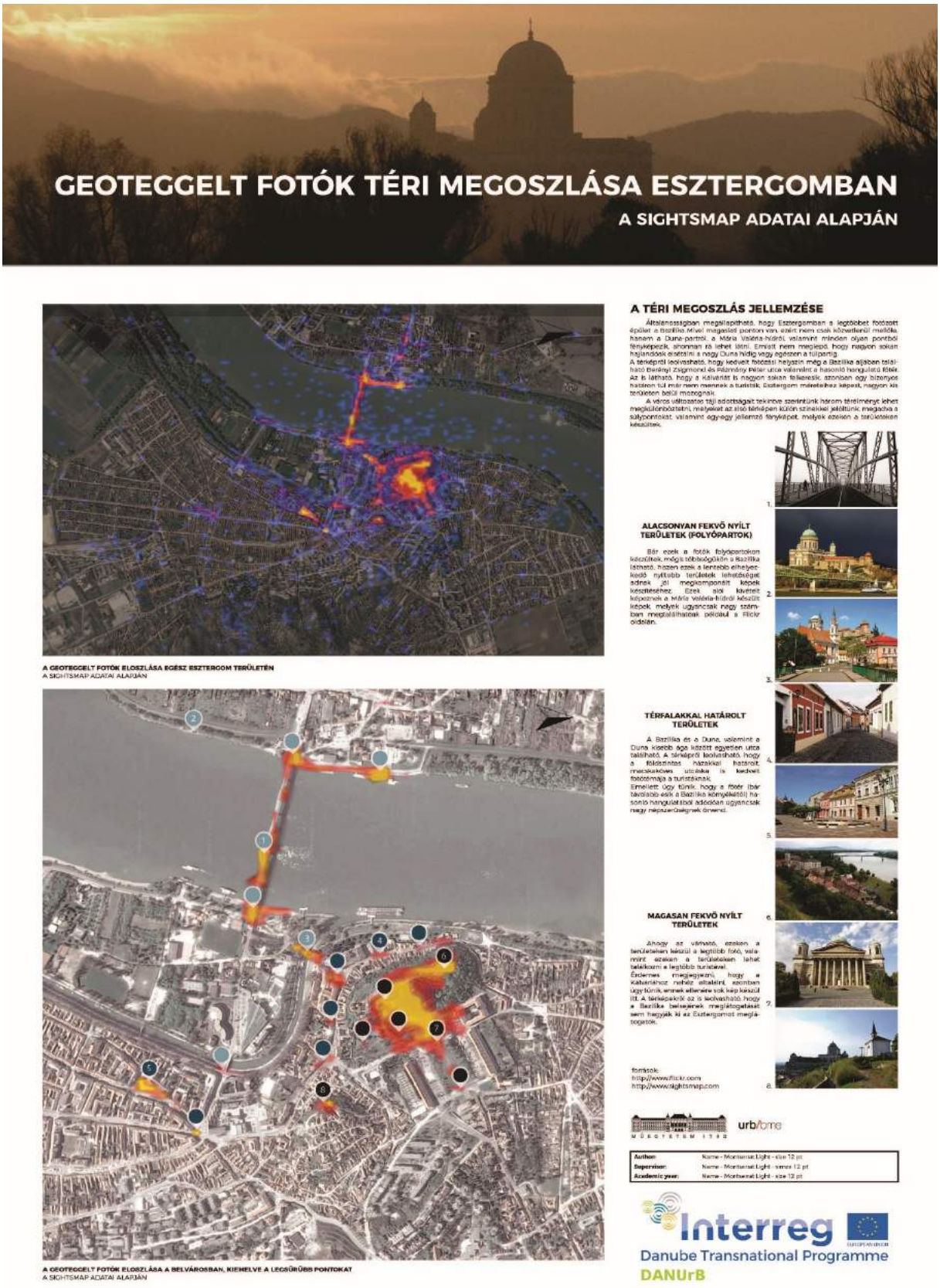


Fig.101 Plan Esztergom 3 made by Kozma_Szabó_Zoltán

GYAKRAN FOTÓZOTT (VILÁGOSKÉK), ÉS A VILÁGHÁLÓN SOKSZOR JAVASOLT HELYEK (SÖTÉTKÉK)
AZ ÁLTALUNK BEJÁRT ÚTVONAL

PROBLÉMÁK, JAVASLATOK
AZ ÁLTALUNK BEJÁRT ÚTVONAL ALAPJÁN

ESZTERGOM A PROMENADOLÓGIA SZEMLÉLETÉVEL

Az első térképen látható az az útvonal, amin mi - előzetes elgondolások alapján - bejártuk Esztergomot körülbelül fél nap alatt. Egyikünk már járt itt korábban, így volt egy kis elképzelésünk az általunk optimálisnak vélt útvonal összeállításában. Ezért lehet például az, hogy míg a turisták döntő többsége a Bertényi Zsigmond utcán elkanyarodik a mecsetkilépcsőn fel a Bazilikától (első térkép), mi inkább tovább mentünk, rajta, mintsem kíváncsiságból is, hogy megnézzük a nemrég felépült/készülő Dísznyt.

Esztergom kellően nagy város ahhoz, hogy aki gyalog be akarja járni, nagyjából csak a belvárosra tud korlátozódni, viszont itt is van annyi látnivaló, hogy ez kitegyen egy teljes napot. Mi autóbusszal érkeztünk (vakációhoz a magyar turisták többsége is ezt a módszert választja), így az autóbusz állomásról először a főtérre mentünk, ahol végre megérezhettük a belváros igazi hangulatát.

Esztergom táji adottságai a séta során olyan hangulatot eredményeznek, amit kevés város tud. A váltakozó terek és térélmények folyamatosan fenntartották bennünk a kíváncsiságot a város iránt, újra és újra lenyűgözött minket. A főtér kiváncsiságot a város iránt, újra és újra lenyűgözött minket. A főtér kiváncsiságot lepetése és hangulata után a kis Dunakeg pedig már egy teljesen más hangulatú térélmény. A Dunához elérkezve még jobban kinyílik a látószög, megjelenik a panorámát dominálló, magaslaton álló Bazilika. Ezután a Bertényi Zsigmond utcára befelene újra beszűkülnek a területek, és egy elkavarodásra hangulatú, macskaköves utcán találjuk magunkat. Ezt követően fokozatosan a Bazilikához megint kinyílik a tér, most már belátva mindent fentről. Sok turista nem ezt választja, de mi ezután tovább mentünk a Kálvária felé, amihez újra kis utcácskákon keltett haladnunk, hogy aztán Esztergom egyik legmagasabb pontjára feljöjjünk, ahonnan már azonos magasságból is megcsodálható a város főtér tornyosuló Bazilika és a vár.

Ez a változatosság a térélményekben az, ami miatt szerintünk Esztergom tökéletes arhoz, hogy egy napot eltöltsön itt az ember. Mi nem láttunk be múzeumokba, étteremekbe, még a Bazilika kupolájába sem mentünk fel, csak a város hangulatára, a benne koncentráltunk, azonban Esztergom igyis megévet ragadott minket.

PROBLÉMÁK, JAVASLATOK

Esztergomot gyalogos turistaként alapvetően három helyről lehet megközelíteni: a Duna-parti sétahajóval, a vasútállomásról (ami nagyon messze van a belvárostól) és a buszpályaudvarról. Ez utóbbi már közelebb helyezkedik el a látnivalókhoz, azonban a környék állapota egyáltalán nem méltó a város többi részéhez, ami kicsit beárnyékolja az első benyomást. Szerintünk ezen mindenképpen változtatni kellene a jövőben.

Azt is érdemes megemlíteni, hogy bár úttuka buszpályaudvaron, hogy a város rendelkezik kerékpáros kölcsönzési lehetőséggel, ezek állapota megsem mondható minket arra, hogy a segítségükkel járjuk be Esztergomot, vagy legalább ezekkel jussunk el a városközpontba, holott valószínűleg sokkal jobb és gyorsabb megoldás lett volna. Mi ösztönzést tapasztaltuk arra a városi, valószínűleg nyáron többen választják ezt a közlekedési eszközt. Véleményünk szerint erre lehetne nagyobb hangsúlyt fektetni, egy jobb állapotú és jobban publikált kerékpáros hálózat kiépítésével.

A mi gyalogos megközelítési módunk nem tette lehetővé, hogy a városi nagyobb területen megnézzük, térképeinken szért is csak ekkora területet vizsgáltuni, holott voltak bőven olyan részek, melyekre szerettünk volna eljutni, azonban nem találunk olyan útvonalat, ami időben is és sétálás mennyiségben is alkalmas lett volna erre.

az általunk fél nap alatt megtett útvonal
gyakran fotózott helyek, amik szerintünk is indokoltak
gyakran megemlített helyek, amik szerintünk is indokoltak
szerintünk jobb sorsra érdemes, az interneten alulreprezentált hely

helyek, amik szerintünk alul vannak prezentálva az internetes oldalakon
helyek, amiket érdemes lett volna megnézni, de nem tudtuk útbaejteni
az összképhez nem illő problémás területek

urb/lome

Author:	Kozma Dorina, Szabó Gabriella, Zoltán Éva Berta
Supervisor:	Kovácsics Kornélia PhD, Bálint Dániel PhD
Academic year:	2017/18.

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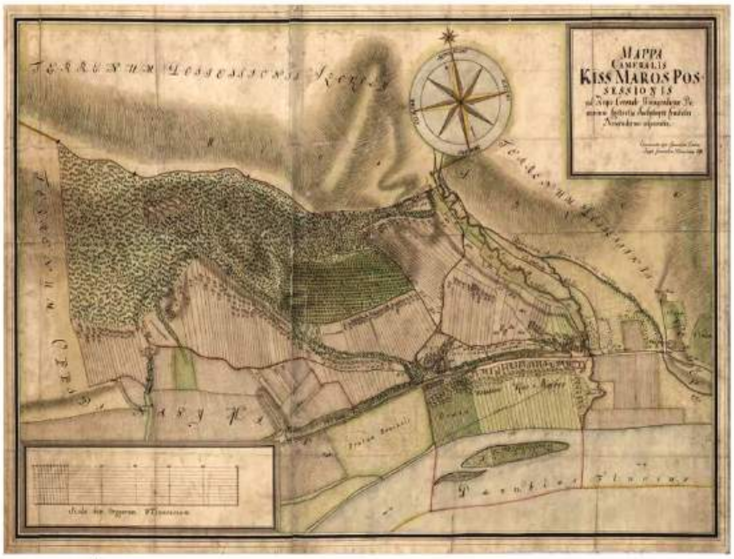
Fig.102 Plan Esztergom 4 made by Kozma_Szabó_Zoltán



KISMAROS A 18. SZÁZADBAN
FORRÁS:MAPS.HUNGARICANA.HU

KISMAROS

A Duna bal partján, Verőce és Nagymaros közt, a Dunakanyarban fekvő település Budapestről nagyon könnyen, rendszeres, óránkénti vonatjárattal megközelíthető. Többször szerveztünk már tábort a faluba, s mindig békés, nyugodt, biztonságos környezetben tölthettük el azt a pár napot.

Érdekessége a településnek, hogy nem túl nagy mivolta ellenére igen sok szervezet/alapítvány/intézmény működik a faluban. A hivatalos honlap szerint 21 szervezet tevékenykedik aktívan. Ezek között találunk Cserkészcsapatot, sportegyesületet, tűzoltó egyesületet és asszony kórust is.

MORFOLÓGIA

Mint az első képen is látszik, a 18. században még nem volt túlságosan nagy kiterjedése a falunak, hiszen Kismaros 1697-1705 között települt be a Fekete-erdőből, Württembergből származó németekkel és 1776 szeptember 16-án nyert szabadalomlevelet Mária Terézia királynőtől. A térkép a 18. század végéből származik, így jelentős fejlődést nem találunk ha korábbi térképeket nézegetünk.

1770-ben már a visegrádi koronauradalomhoz tartozott és annak része volt még 20. század elején is.

A 19. század nem kedvezett a településnek, mivel több tűzvész és árvíz sújtotta a falut, amely ezeknek köszönhetően többször megsemmisült.

1892-ben 447 lakosa volt, körülbelül 82 ház volt a településen. A település növekedését jól mutatja, hogy 1910-re már 615 lakosa volt. A 20. században nőtt meg jelentősen a lakossága, hiszen jelenleg kb. 2200 fő lakik a településen, és 2015-ös adatok szerint körülbelül 12 négyzetkilométer kiterjedésű.

A település nagy kiterjedésűnek számít, egyes elképzelések szerint 9 különböző "karakterű" terület található meg. Megkülönböztetnek kertvárosias, falusias és tanyás karakterű részeket is. Elhelyezkedéséből adódóan természetesen sok zöld területtel rendelkezik, a faluban a főút kivételével igen kicsi a forgalom, s emiatt egy csendes, nyugodt hellyé válik (ami miatt egyre keresettebb hely napjainkban).

KISMAROS NAPJAINKBAN
FORRÁS:MAPS.HUNGARICANA.HU

MŰEGYETEM 1782 urb/bme

Author:	Holecska Dávid
Supervisor:	Kissfazekas Kornélia, Balics Dániel
Academic year:	BsC 5év

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Danube Transnational Programme
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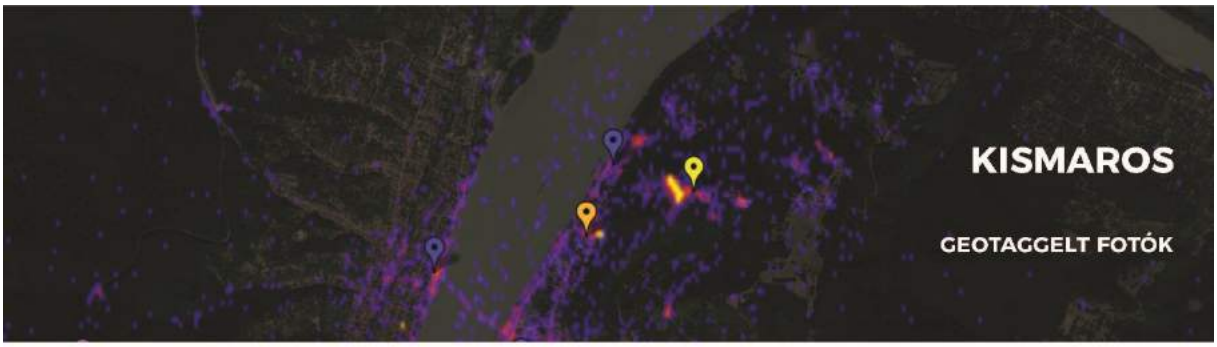
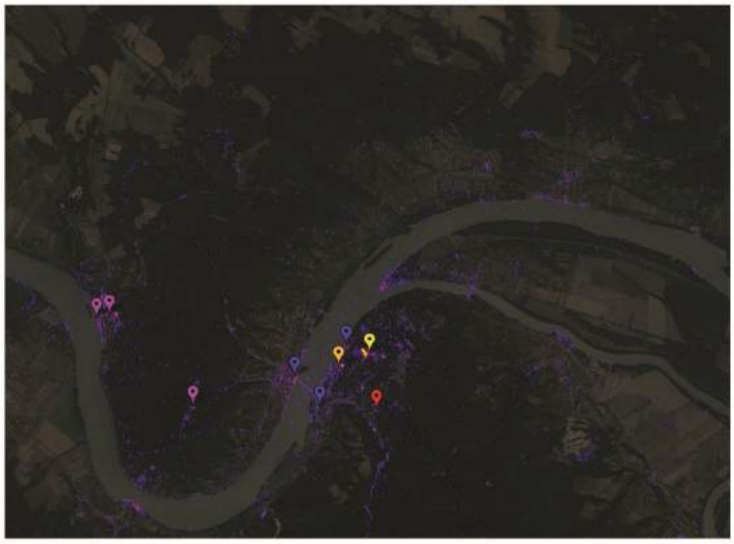
Fig.103 Plan Kismaros 1 made by Holecska





kismaros és környéke
forrás: sightsmap.com

HŐTÉRKÉP

Sajnálatos módon e negyedik, Kismarost körülölelő településnek mutatkozik a látogatottsága, azonban mégis szerepet játszik a környéken élők mindennapjaiban, hiszen egyetlen sem kell gondolni, de ott megy el a vonat minden alkalommal a főtérhez közel.

Érdekes, hogy a legkitapostottabb helyek között szerepel a főtér, a vasútállomás és egy városi is. Említhet találunk meg a dunapartról is, de egyik hely kapcsán sem kínál a jelölések száma.

Ezeket az állításokat erősíti az is, hogy a Google-ben való rákeresés után is többnyire ezeket adja ki egyből a rendszer. Megjelennek azonban is a térképen nem tűnik fel, mint jelentős pont) a találatok között a "Kismarosi Skála Múzeum gyűjteménye" is, amely egy múzeumhoz, a a falu korábbi, főként mezőgazdasági tevékenységet, annak eszközeit hivatott bemutatni. Igen érdekes, hogy a térkép szerint nem túl látogatott hely pedig a keresőbe beírva igen sok találatot találunk.

Az olvasóknak jó kívánnó, hogy a Google kereső rendszere főként a látogatottságokat helyezi előtérbe, míg a lakosság nem minden esetben azt tartja a legfontosabbnak.

kismaros és környéke
forrás: sightsmap.com

urb/forme

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Academic year:	DLC 5.4.1

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Fig.104 Plan Kismaros 2 made by Holecska

AZ INTERNETEN FELLELHETŐ LEGFELKAPOTTABB HELYSZÍNEK
FORRÁS: GOOGLE

LEGNÉPSZERŰBB HELYEK KISMAROS TÉRKÉPÉN
FORRÁS: GOOGLE

KISMAROS

Az internetes vizsgálódás nem volt túl egyszerű, mivel kevés hivatalos, vagy annak mondható oldal található. A legfájóbb pont az volt, mikor szembesültem, hogy a hivatalos honlap sajnos eléggé használhatatlan, mivel sok esetben az egyes oldalnak alatt nincs tartalom, vagy nem működik, aminek ott kellene megjelennie. A másodi részek is csak magyarul elhetlek el. Beszámuma viszont a weboldalnak, hogy imint egyébként fő vonzerőként találhatjuk máshol is) a lehetséges túraútvonalakról, túrázási lehetőségekről részletesen és szinesen írnak, mikor kerességtem felkeltették a kedvem egy jó túrára (ezért a borítókép választás)

A művelődési ház ekkv, sok programjuk van, de túl sok információ nem elhető el ajnos, csak a programok neve. Inkább ems bizterjek az érdeklődéket, hogy személyesen kérdezzenek, egyébbis ezekből ems következtethetünk.

Érdekes viszont, hogy a Facebookon lévő "kismaros" nevű csoport igen aktív, pár hónapra több tucat poszt megy k, de kb a lakosság fele kitsám alapján benne van a csoportban.

A legtöbb esetben szállásheleyket, éttermeket és kiránculásternező/túraterező oldalakat találunk. Ezek is többségében magyarul. Idegen nyelven gyakorlatileg semmit nem találtam.

Források

https://maps.hungariacms.hu/hu/MOLTerkeptar/1651/view/?bbox=-6902%2C-6884%2C15863%2C-612
https://www.utazzitthon.hu/latnivalo/kismaros
https://hu.wikipedia.org/wiki/Kismaros
https://www.tripadvisor.co.hu/Attractions-g1163714-Activities-Kismaros_Pest_County_Central_Hungary.html
http://kismaros.konyvtar.hu/latnivalok-programok
http://www.kismarosmuvhaz.hu/muvelodessi-hazirorunk/

urb/forme

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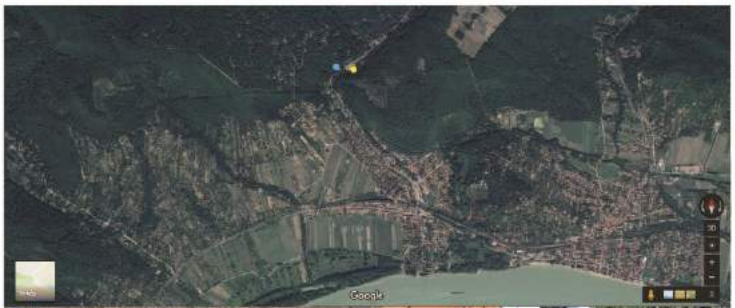
Fig.105 Plan Kismaros 3 made by Holecska



A KISVASÚT

KISMAROS

Két olyan helyet fedeztem fel korábbi, illetve e munka elkészítése során, amelyet mindenképp javasolok, hogy aki tehetí kerese fel.
Természetesen felkeresetem a mások által említegetett sorozát is hogy megbizonyosodjam valóban olyan nemek helyi, és elmondhatom, hogy nekem is tetszett, valóban érdemes arra, hogy ennyien említést tegyenek róla.

Az első "hely" amit javaslok az mindenképpen a kisvasút, és az ahhoz kötheto helyek (például a kismarosi vasutállomás, ami a főtér mellett található). Az ember kicsit, magánt gyereknek érezheti magát miközben utazik, s gyönyörű tájakat csodálhat meg. Az ára sem drága, de személyes véleményem szerint többet is megérne egy ilyen felejthetetlen élmény, amelyet elhatározhatnak "vonatozás" közben az emberek.

A másik kedvenc helyem Kismaroson, és amely szerintem sajnos nincs elégge értékelve, az a Börzsönyligeti tábor. Sok nemek emlékem kötődik e helyhez. Az oka egyszerű csendes, barátságos, az ember a természetben érzi magát, még is közben 21. századi környezetben. A hely alkalmas bármilyen korosztály táborozására.

Problémá szerintem jelenleg, hogy kevés a mellékutcákban az élet sokszor, a főút mellett, a kötöpart közelében mindig találni emberekket, érdeklődő tekintetekket, viszont jó lenne máshol is.

Amit még említésre méltónak, az a hajó (kajak-kenu) tározónál. Viszonylag a falu szélén, eldugott helyen található, s nincs is annyira "felkapottként" kezelve a térképek meg sem jelentik. A mesés táj, a csend és a nyugalom miatt azt gondolom sokkal többet lehetnefellene abból kihozni – ha persze ön régóta szeretnémese vagyok e kijelentésnek.

BÖRZSÖNYLIGETI GYERMEK ÉS IFJÚSÁGI TÁBOR

urb/form

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Fig.106 Plan Kismaros 4 made by Holecska

LEÁNYFALU | TELEPÜLÉS FEJLŐDÉS
1763 | 1806 | 1869 | KATASZTERI TÉRKÉPEK | 1941 | MAI NAP

TELEPÜLÉS FEJLŐDÉS

Leányfalu a Duna partján fekszik, Pest megyében, a fővárostól 27 km-re. A megyeiszékhely a Dunakanyar szerkezetileg ága és Visegrádi-hegység között terül el, a folytonos mederlépcsős utcán felfutnak a hegyláberre, ez öt másik oldala a folyóvíz régi ártérén terül el.

TÖRTÉNET

Mint minden település Pannonia provincia területén a Duna mentén. Leányfalu is a kelet védvonal erődjeként indult. A 4. században épült őrtorony és kiszolgáló épületek romjai részben feltárva állnak a település központjában. Ezek a 5. század népvándorlásai és pártyái idegenítik a Dunamenti védvonalat, ezután évszázadokon keresztül nem esik szó a területről.
Feljegyzések szerint a település mindig is szőlőtelik és gyümölcsösök helyszíne volt a gazdasági épületekkel és présházakkal. Területileg a folyam túloldalán fekvő Pócsmegyerhez tartozott.
Évszázadokig nemes tulajdonú szőlőskertek és erdőket a 19. században parcellázták fel és második felében indult meg a tartósabb letelepedés. Fekvése miatt télen a gazdaságokat nem lakták.
Leányfalu ezután indult el a tőzsgyökeres üdülő település útján. A présházak és gazdaságok magánkezbe kerültek, ezekből alakultak ki az első nyaralók és alkotóházak. Szántalan művész, író, költő és színész választotta otthonának vagy alkotóhelyének a Dunakanyart, és ezen belül Leányfalut is.

A nagyvíz egyik legbiztosabb bizonyítéka volt az 1960-as években végzett próbafúrások, melyek során 36 °C-os hévizet találtak. Ezután épült meg a strandfürdő, amely még több embert vonzott Leányfalura.

ADOTTSÁGOK

A nyaralók a korábbi présházakból alakultak ki, amelyek a szőlőskertekkel együtt felfutnak a hegyláberre. Később az újabb nyaralók is követték őket.
A part mentén sokáig csak az ártéri erdő húzódott, ami még vonzóbbá tette az elvonulni vágyók számára Leányfalut. Ez megváltozott a híres fekvésével, a strand mellé kiszolgáló egységek és vendéglátó helyek nyíltak, és így alakult ki a üdülőközpont. Később megépült a posta, a polgármesteri hivatal és boltok nyíltak a főút mentén. Sok, nem teljesen kiépített parkoló várja a látogatókat illetve egy benzinkút is épült a központban.

Erősen érződik az ezek látogató és a lakó egységek elkülönülése egyik a part mentén, másik a hegyláberen. A nyaraló telkek formája a régi parcellázást mutatja, emiatt a főúttól mindig hosszú kocsifejtő vezet a fejlett lévő házakhoz. Ez az elkülönülés nem vált kárára a településnek, a későbbi programok és fejlesztések során érdemes lesz ezt fenntartani és megőrizni. Szerencsére fele terhe, az újabb lakóberuházások egy kertvárosias környezet jelenik meg.
Ezen a részen református templom, iskola, lakóházak és panziók találhatók.

A környék adottsága a közeli természetvédelmi és Nemzeti Park területek valamint a túra útvonalak, amik a hegyekből vezetnek le, illetve az európai kerékpáros túraútvonal, amely a strand mellett, a dunaparton vezet el. Itt több bisztró és étterem is nyílt a turisták fogadására. Lehetőség van vízes túrákra is, a Dunakeszon csónakot lehet bérelni és kirándulni a kompokon.
A Leányfalun lévő alkotóházak, régi kúriák, kápolna és rónnai kori romok is kiemelt látnivalók a környéken.

urb/form

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Academic year:	2019/2021

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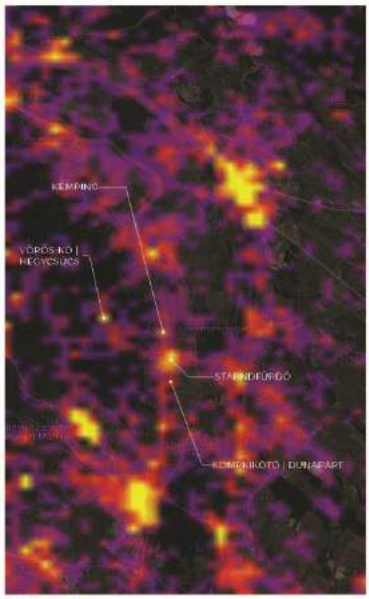
Fig.107 Plan Leányfalu 1 made by Reszegi



SIGHTSMAP HOTPOINTS
KIEMELT PONTOK: VÖRÖS-KŐ(HEGYCSÚCS), STRAND, KERÉKPÁROS PIHENŐ

GEOTAG ELEMZÉS

A sok nyaraló miatt a legtöbb geotag és fotó nem látogatóktól, hanem ott lakóktól származik. Ez nem jelenti a látogatók hiányát, sokan érkeznek a strandfürdőbe, illetve a Dunapartra, akár kerékpárosként, akár túrázóként.
Az egész településre jellemző, hogy költségkímélő kirándulásokat lehet szervezni, mind a fürdőbe, mind túraútvonalakra és vízitúrákra.

A 11-es főút teljes mértékben leválasztja az autóforgalmat a Duna partról, ahol egyik, rövidebb részén kiépített szabadtéri tevékenységekre alkalmas területek vannak, fás ligetekben, másik részén az árvízi erőd húzódik a folyam mentén.
A régi kempingek jó része már bezárt, panziókban és vendégházakban lehet szállást találni.

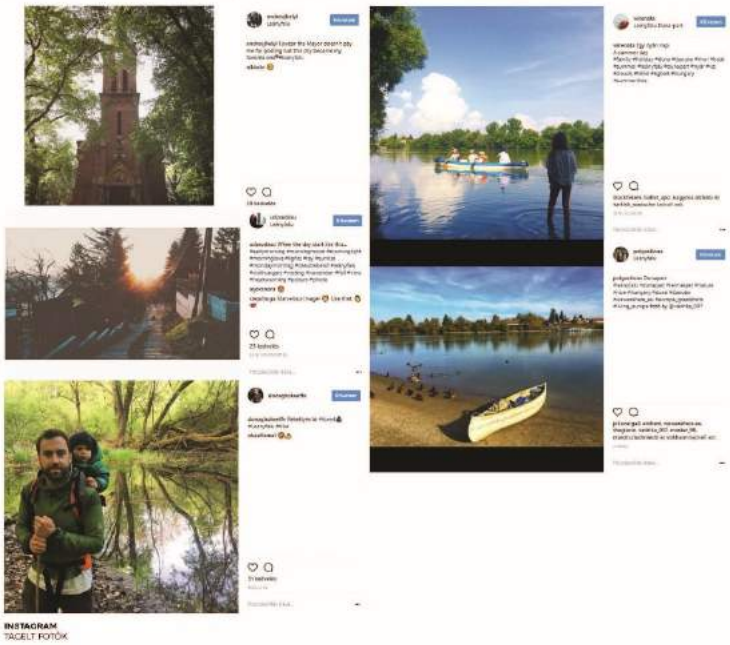
A főút mentén és a strandfürdő környékén a vendéglátó egységek (bisztrók, kávézók, pizzériák) nagy forgalmat látnak el, ismét nem csak a turisták igényeit, hanem az ott lakókét is teljesítve.

SIGHTSMAP

Legfőbb pontok: strandfürdő, kerékpárút pihenő, Duna part, Vörös-kő (hegycsúcs, túraútvonal, kilátás)

FLICKREAD

-első látogatás: 28 (5)
-helyi: 473 (36)
-hosszútávú látogatás: 1 (1)
-visszatérő: 23 (5)



INSTAGRAM
TAGELT FOTÓK

urb/orm

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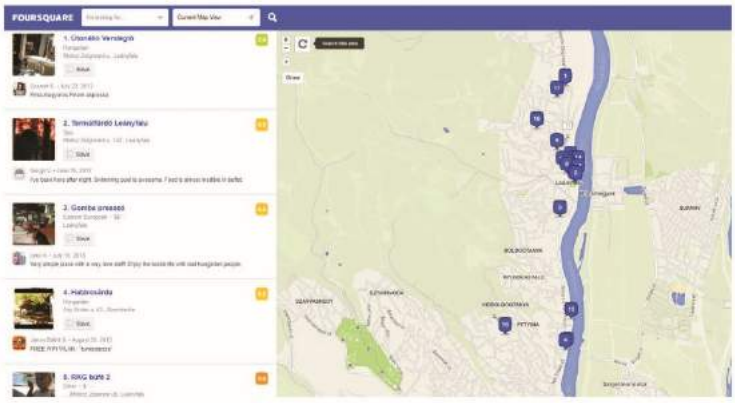
Fig.108 Plan Leányfalu 2 made by Reszegi



FOURSQUARE
HELYEK MEGJELENÉSE AZ INTERNETEN

LINKEK

Leányfalu hasonló színben jelenik meg a világhálón, mint a legtöbb magyar település. Az önkormányzati honlapon felül meg találhatóak a bíróság és könyvtár, illetve a fürdő saját dominyó honlappal. Ezek közül csak az utóbbi rendelkezik idegennyelvű változattal.
Más weboldalakon is megjelenik a nagyközség, akár hashtag formában, vagy külön bejegyzésekben, lapokon.

SAJÁT OLDALAK

Az önkormányzati honlap nyilvános adattárként és közönségként működik. Tartalmazza a legfontosabb rendeleteket, híreket, információkat, eseményeket, emlékeket rendszeresen frissítenek és időnként lé. Emellett előnyös egy rövidebb fotogalériára és a településre más jelentős intézményeinek honlap hivatkozásra.

A faluház és könyvtár oldalain láthatóak a kulturális hírek és események, hirdetések. Ugyan ide szervezik a nagyközség rendezvényeinek egy részét, valamint itt található a helyismereti vetélkedő.

A fürdő honlapja tartalmazza a belépő árakat és szolgáltatásokat, valamint beleírnak ad a fürdő történetébe és élvezhető galériákon és leírásokon keresztül.

IDEGENNYELVEN

Sajnos a wikipedia néhány idegennyelvű, rövid bejegyzésén kívül csak a fürdő honlapja rendelkezik idegennyelvű változattal, angol, német és olasz nyelven.

FOURSQUARE

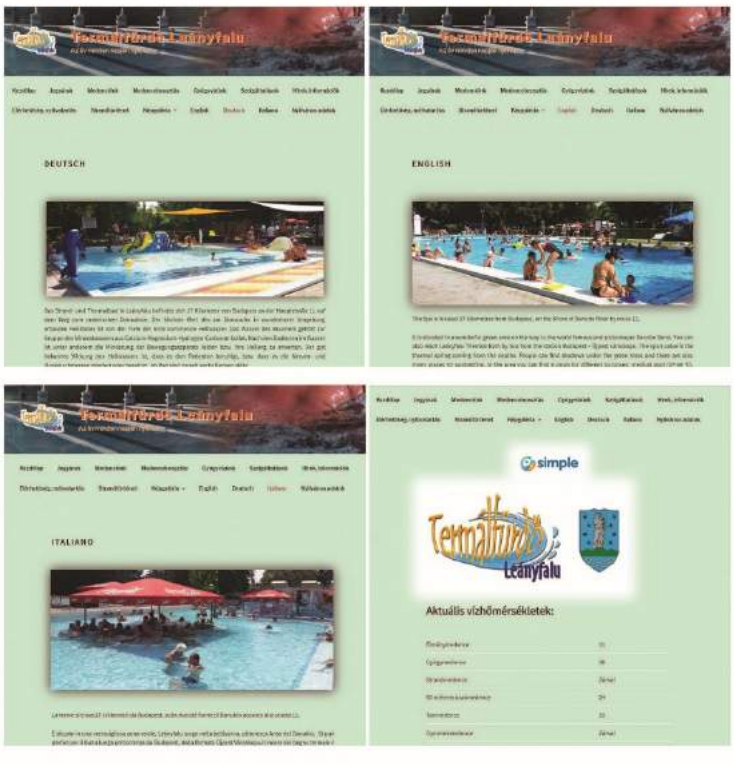
A település megjelenik a foursquare-en, egészen pontosan a vendéglátó egységek, régi szerint.

TRIP ADVISOR

Itt mindössze a strandfürdő jelenik meg, azonban itt találunk egy angol nyelvű értékelést is a helyről.

FACEBOOK

Sok érdekes és különleges oldal tart fent külön facebook oldalt. Kiemelkedő látogatottságú csak kettő sincs.



FÜRDŐ
IDEGENNYELVŰ OLDALAK

urb/lume

Author:	
Supervisor:	
Academic year:	

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Fig.109 Plan Leányfalu 3 made by Reszegi

MEGLÉVŐ (NEM)HELYEK
KIALAKÍTOTT HELYSZÍNEK TOVÁBBVITELE, ADOTTSÁGOK KIAKNÁZÁSA

BEAVATKOZÁSOK

Leányfalu a múlt évtizedekében berendezkedett a fürdő és néhány törvényi látogatónak kiszolgálására. Az üdülni vágyókon túlól nagy az átmenő forgalom is. A strandszezonon kívül is sokan haladnak át a túraútvonalakon és találnak időszakosan és pihenőket a part mentén. A település ezen részét az ezeket a feltételeket mindenképp érdemes fejleszteni.

DUNAPART

A kerékpár út mentén és a piros túraútvonal mentén sok a pihenő és a tűnőzésre is berendezkedő részletek. Ezek a helyek igényelnek még pár padot és részeő asztalt, játszóteret és kerékpártárolót.

ÉTKEZDÉK, KISZOLGÁLÓK

A főút mentén és a strand környékének a vendéglátó egység, de még mindig van hely a bővülésre és további üzletek, kávézók, cukrászdák nyitására.

VÁROSKÖZPONT

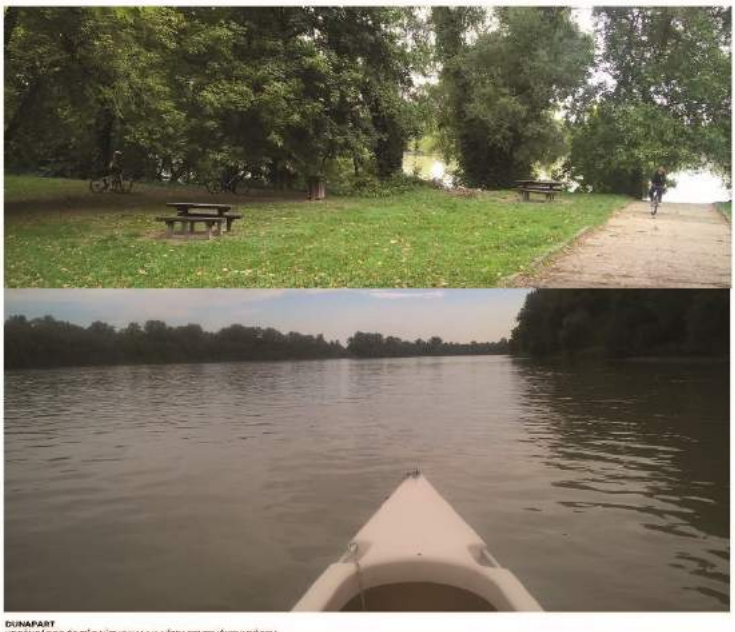
Leányfalu központja a lakóházak, polgármesteri hivatal és kúriakörnyék környékei. Üzletsorok mellett erdemes lenne a terület zöldítése és hívogató jellegének erősítése. Ez már jelen van a közeli Szent Anna templom környéke.

RÓMAI-KORI ROMOK

A lakóházak mögé szorult őrtorony romjai és környéke sokkal több lehet a jelenlegi magas falaknál. Parkosítás és tematikus kiállítás is helyet találhat magának, akár a helytörténeti kiállítás részeként.

ÁRTÉRI ERDŐ ÉS FOLYAM

A vadregényesebb kalandra vágyók is találnak elfoglaltságot magunknak. Az árter alacsony vízállás mellett egy könnyen elérhető, kavicsos ligetet rejt. A túraútvonalakon elérhető pedig csónakot lehet bérelni. Itt még hűvösek a nyaralóhelyek, pihenők sora, ami még vonzóbbá tenné a part ezen részét az idelátogatók számára.



DUNAPART
KERÉKPÁROS ÉS TÚRAÚTVONALAK, VÍZPARTI TEVÉKENYSÉGEK

urb/orne

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Academic year:	2019/2021

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Danube Transnational Programme
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Fig.110 Plan Leányfalu 4 made by Reszegi

A TELEPÜLÉS ALAKTANI FEJLŐDÉSE AZ 1700-AS ÉVEKTŐL NAPJAINKIG
A KATONAI FELMÉRÉSEK TÉRKÉPEI ALAPJÁN

A TELEPÜLÉS TÖRTÉNETE

Nagymaros múltjához a vele szemben, a Duna jobb partján, meges szikladarabon emelkedő középkori királyi székhely, Visegrád története is szorosan hozzátartozik. A Visegrádtól szemben, ezzel szemben lassan földnyelvekre épült Maros az ureltkorok kedvelt tartózkodási helye volt. Nagy Lajos, Zsigmond és Mátyás korában. A Visegrádtól szemben Maros sósága különösen alkalmas volt lovagi játékok megtartására, melyek közül Mátyás korában vadászatok, de a bécsi Udvarnak 1592-ben a török Portára, Konstantinápolyba tartó királyi követei is említik a marosi lovagi játékokat, mikor hajón érkeznek Maroson néhány órára kikötöttek. Maros az időkben a főurak időtöltésre tartózkodási helye volt, amely kuriózus építészek magukának. Korszerűsített a vonzott a helység, aki hajókon érkező emberek emlékei a visegrádi hermincacsonban terültek vermiketesetségükhez a Marosról már értékesítették azokat.

Mindezek megítélésének a település alakjának kialakulásában az első katonai felmérésen egy később építészeti-szempontosulás figyelhető meg a rév mellett, a második katonai felmérésen már látszik, hogy az épületek a Duna mentén kezdtek elterjedni, és a település a Duna mentén hosszan elnyúlóvá vált. Nagymaros Imrután nem tudott tovább a terjeszkedni a Duna partjának mentén), nyugati irányban, a hegyek völgyeinek irányába kezdett el csúszásszerűen terjeszkedni, míg el nem érte mai alakját.

MAROS AZ ÁRPÁD-KORBAN

Visegrád már 1002-ben királyi vármegye központja, akkor Maros már lakott hely lehetett. 1241-ben minoriták megtelepedni a településtől. Első írásos említése 1257-ben történt Marus néven. IV. László király 1285-ben Rosd nemzetségbeli Herbord fiainak, Mártonak és Miklósnak Marus nevű birtokát Visegrádhoz csatolta, s cserébe adta a Pilisi erdőrőlk Bogud nevű földjét.

A tatárok által kipusztított lakosság helyébe német származású telepesek (hospesek) érkeztek ide, és a szomszédos Vendvár, mely a váci püspöki birtoka volt. III. Andrásként halálozott jogos adományozott a Duna felé részén a marosi hospesek kivételek. Lovászik szigetéről Ipaithuaig, 1296-ban a dömösi prépostság és kápolnán tilalmazásra azonban a halászati jog kivételével a király visszavonta – elismerve, hogy az egész folyamszakasz teljes terjedelmében az egymás tulajdonába tartozik.

AZ 1300-1400-AS ÉVEK

Az Árpád-ház kihalását követő trónviszályok során Károly Róbert királynak 1316-ban sikerült Visegrádot elfoglalnia, de csak 1323-tól tartózkodott itt udvarával. Károly Róbert 1324-ben Maros idősb Buda város kiváltságlevelét nyújtja fel, s Marost Visegrád ikervárosává nevezte ki. Ekkor foglalta írásba Maros kiváltságait is, melyek oklevél szerint Gyártól Visegrádig, sőmmen Földvárig (Dunaföldvár) a Dunán vámmentességet élvezhet. Maros a városi kiváltság elnyerését Károly Róbert királyi trónt hűsége jutalmaként a címeres pecsétjén látható páncélos gyalogos szolgálatán kívül közvetítő kereskedelmével nyújtott érdemei elismeréseként kapta, hasonlóan Buda polgárainak kiváltságához.

A település elsőszirban Károly Róbert 1324. április 22-én adományozott privilégiumának köszönhette felemelkedését, melyet majdnem minden utódával megerősíttetett. Pl. Lajos király 1345. április 20-án átírja és megerősíti atyja eredeti oklevelét. Ulrich Zsigmond király 1388. április 17-én, május 1-én, július 8-án írja át, és erősíti meg 1388-ban kelt saját oklevelét. Legkésőbb I. Mátyás király 1466. június 7-én, majd II. Ulászló király 1492-ben erősíti meg előzővel kiváltságlevelét.

AZ 1500-1600-AS ÉVEK

A Habsburg uralkodók közül I. Ferdinánd 1528. január 26-án, majd II. Miksa 1571. november 7-én ismerte el és erősítette meg előzővel kiváltságlevelét.

A dunai halászat fontosabb szerepet játszott a város életében.

A tizenöt éves háború és az azt követő közel fél évszázad alatt a marosiak a pozsonyi Kamaránéhoz hasonlóan benyújtották, hol visszakérték és megkapták a privilégiumukat.

Az 1683-ban megindult felszabadító háború alatt Marost közvetlen zsoldjában az ötvenfős szövetséges hadsereg magyar elleni ismét a privilégium nyújtotta védelmet.

1684-ben, mikor a közeli Vác rövid időre felszabadult, Maros elsőjáradéka I. Lipóthoz került kiváltságlevelét újbóli átírása megerősítése végett. A kívánt megerősítés 1686. május 17-én lett, megadta fogadja Károly Róbertől kezdve az összes utódokét. Amire azonban ezt végleg kaphatták volna – a város a közben többször elpusztult helyek átszervezésével esett. A lakosság elmenekült, csak két évtized 1686-ban a török kiűzése után tért vissza otthonába.

AZ 1700-AS ÉVEKTŐL NAPJAINKIG

A török kiűzése után visszatért lakosságot előbb a felállított Budai Kamara akarta megadóztatni, majd 1700. július 20-án I. Lipót király Visegrádi várát és erősségeit Negymarossal, Szentendrével, Nagy- és Kiscsoszlal együtt Kontzin Vincenc gróf-nek adományozta. Az új földesúr 1715-ben bekövetkezett haláláig újabb adományozás folytán gróf Starhemberg Tamás kezére került.

1737-ben az I. Lipót által jogtalanul elajándékozott Marost a Kamara vissza is váltotta a Starhemberg családtól.

1709-ben a pestisjárvány idején teljesen elnéptelenedett, majd 1715 és 1795 között németek települtek be Mainz környékéről, akik újra benépesítették a települést. Nagymaros lakossága 1760-ra már 1055 főre emelkedett.

1920 és 1923 között Pest vármegye Magyarországon maradt részének székhelye.

1946-1948 között a német lakosság többségét kitelepítették és helyükre a csehszlovák-magyar lakosságcsere keretében felvidéki magyar családokat költöztettek be. A település mellé tervezett dunai vízerőmű munkálatait a kormány 1988. május 13-án állította le. Városi rangot 1996-ban kapott.

TÖRTÉNETI KÉPEK NAGYMAROS MÚLTJÁBÓL
JOBBRA: A FIUME GŐZHAJÓ NAGYMAROSNÁL // BAL: DUNAPARTON ÖSSZEGYŰLT TÖMEG // KÖZÉP: A NAGYMAROSI VASÚT

urb/tome

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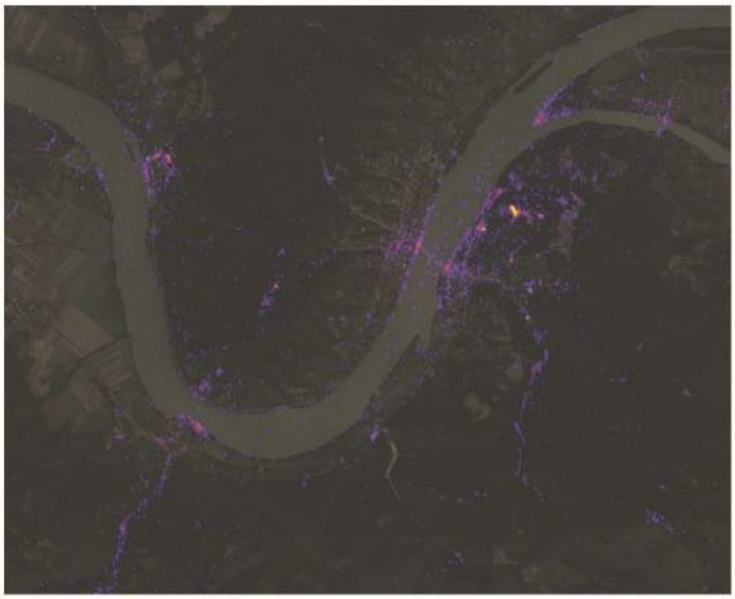
Fig.111 Plan Nagymaros 1 made by Jászberényi_Tóth



A DUNAKANYAR GEOTAGGELT FOTÓINAK ELOSZLÁSA
FORRÁS: WWW.SIGHTSMAP.COM

A DUNAKANYAR FOTÓI

A Dunakanyar településeiről közül jól láthatóan Visegrád emelhető ki a geotaggelt fotók mennyisége alapján. Ezen felül kirajzolódik az Országos Kéktúra útvonala is, amely Nagymarosról és a Julianna-látóról ér vissza.

A térségben még Zebegény emelhető ki, amelynek vasútállomásáról készült arról a mellé szánt fotó, valamint a Nagymaros közelében található Julianna látóról.

NAGYMAROS - VISEGRÁD FOTÓI

Ahogy a Dunakanyarról készült térkép is mutatja, a térségben Visegrád emelkedik egyedül a geotaggelt fotók számát illetően. Nagymaros szoros kapcsolatban áll a Duna túlpartján fekvő Visegráddal. Ezt a tényt mi sem támasztja alá jobban, mint az, hogy a Dunakanyar eme részén az interneten feltehető fotók nagy része még ha Nagymarosban készült is a Duna túlpartján fekvő Visegrádot ábrázolja.

KIEMELT HELYEK

A térképekről leolvasható, hogy melyik helyeken készültek a legnagyobb mennyiségű fotók. Ezek alapján a következő lista állítható fel csökkenő sorrendben aszerint, hogy hol készült a legtöbb geotaggelt fotó:

1/ Visegrádi Fellegvár
2/ Visegrádi Mátyás Király Múzeum
3/ Visegrádi Hotel Honti
4/ Visegrádi Vár Hotel Kastélyszálló
5/ Visegrádi Kilátó

Látható, hogy a legtöbbet megörökített helyek mindegyike Visegrádon található.

NAGYMAROS NAGYÍTÓ ALATT

Nagymarost Visegrád nélkül vizsgálva a következő lista állítható fel a legtöbbet megörökített helyekről, csökkenő sorrendben:

1/ Nagymaros, Dunapart sétány
2/ Maros Bt.
3/ Cserkúti 93 Kft.
4/ Nagymarosi Rév
5/ Nagymarosi Strand

A listából látszik, hogy az első helyen a Dunapart sétány szerepel, amely nem véletlen - innen ugyanis remek kilátás nyílik a túlpartra, az itt készített fotók nagy része a Visegrádi Hegységet örökíti meg.

A lista 2. és 3. helyén a helyi üzletek (kvázi "városközpont") szerepelnek, míg a 4. és 5. helyen ismét a Dunapart szerepel a Rév, valamint a Strand formájában.

Mindezekből megfigyelhető, hogy Nagymaros nagyon épült arra, hogy gyönyörű kilátást biztosít a Duna túlpartjára, Visegrádra.

NAGYMAROS ÉS VISEGRÁD GEOTAGGELT FOTÓINAK ELOSZLÁSA
FORRÁSOK: WWW.SIGHTSMAP.COM

urb/lume

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Fig.112 Plan Nagymaros 2 made by Jászberényi_Tóth

LÁTVÁNYOSSÁGOK TÉRI MEGOSZLÁSA KÜLÖNBÖZŐ WEBOLDALAKON

TURISZTIKAI ÉS KULTURÁLIS JELENLÉT A VILÁGHÁLÓN

Nagymaros a Duna Visegrádtól szemközti oldalán helyezkedik el, ebből adódóan nagyon szoros a kapcsolatuk. Ez a város turisztikai koncepciójában is megjelenik, hiszen Nagymarostól kitűnő kilátás nyílik a Dunakanyarra. A város látnivalói csak rövidebb idejű kötik le az ide látogatókat, ezért főleg tematikus túraútvonalak, hajóutak egyik állomásának szerepét tölti be. Áthalad a városon az Országos Kéktúra útvonala, az Eurovelo 6 kerékpárút, illetve a Mahart sétahajójáratai is megállnak itt.

Nagymaros a magyar turisták célpontjaként definiálja önmagát, hiszen semmilyen idegen nyelvű leírás nem található sem saját honlapjukon, sem máshol. Ennek valószínűleg a keren látnivaló lehet az oka. Már a hőlégballon és a személyes tapasztalatok alapján is jól kivehető, hogy a város csak a kikötő és a katolikus templom közötti területtel foglalkozik, itt rendezett a környezet és itt történik minden arra fontos a város életében. Ezen a tengelyvonalon zajlik a város élete.

LEGFŐBB LÁTNIVALÓK

1. Római katolikus templom
2. Kikötő / parti sétány / szabadtéri
3. Julianus barát kilátó

PROGRAMOK

A kézségben erős egyházközség működik. Számos különböző érdeklődési körű klub és csoport működik a hívők körében. Minden évben kétszer (!) rendezik meg a nagymarosi Újkígi találkozót, mely rengeteg embert vonz a környező településekről és az egész országból is.
További programok még a Kittenberger Kálmán Napok és a Nagymarosi Cséplők Fesztivál, melyek egy-egy napos programok.
A község szélén yacht club működik, állandó vendégkörrel.

SZÁLLÁSHELYEK

Az időszakosan nagy terhelésnek megfelelően kisebb szálláshelyeket találhatunk Nagymaros területén. Főleg panziók, vendégházak üzemelnek, melyek többletesen kiszolgálják a jelenleg felmerülő igényeket.
A szálláshelyek többsége a 10 fő körül, attól felfelé sétatávra helyezkedik el.

LEGFŐBB LÁTNIVALÓK
JULIANUS BARÁT KILÁTÓ // SÉTÁNY A DUNAPARTON // RÓMAI KATOLIKUS TEMPLOM

FELHASZNÁLT LINKEK

https://hu.wikipedia.org/wiki/Nagymaros
http://www.nagymaros.hu/
http://www.szemelyhajozas.hu/hu/hajojaratok/dunakanyari-kiran-dulohajok/tobbes-tappek-kulonleges-helyszinek/
http://www.kektura.hu/okt17.html

urb/form

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Fig.113 Plan Nagymaros 3 made by Jászberényi_Tóth

KILÁTÁS A DUNAPARTRÓL // HINTÁZÓ KISMERMEK // PIHENÉS

KIKÖTŐ // HELYI LAKOSOK

LEHETŐSÉGEK

A DUNAPARTI SÉTÁNY

Nagymaros egyik legpotencionálisabb helye a Dunaparti sétny lehetne. A Visegrádi-hegység látványa mellett nyugodt környezetben tölthetjük szabadidőnket. A város térképét éles vonalként vágja ketté a vasútvonal, mely kettéosztja a területet. A vasút alatti átjutás a településközpontban megoldott, azonban a külső területeken ritkán találunk átjárót, nehéz az átjutás. A községre jellemző képlet, miszerint csak a középső tengely van fejlesztve a Duna-parton is tetten érhető. A kompkikötő környezete rendezett és jól karbantartott, a város széle felé haladva mindkét irányban csökken a kiépítettség. Jól használható városi terület csak egy rövid, kb. 100 m-es szakaszon jött létre.

A javaslatunk tehát a Duna-part jobb kihasználása, több térbútor lehelyezése és a rendezettség igénye a teljes szakaszon.

INFOGRAFIKUS TÁBLÁK

Ottjártunkkor azt tapasztaltuk, hogy meglehetősen kevés információs tábla található a községben. Nehezen találhatók meg a központon kívül eső látnivalók. Több látványosság nincs eléggé kiemelve a településen. Amennyiben ezeket a kívül eső helyszíneket is felkeresik a látogatók több időt töltenek a településen és jobban megismerik a helyi atmoszférát is.

VASÚTI KÖRNYEZET

A vasútállomás és a vasúti átjárók környezete illúzióromboló képet mutat érkezéskor a városról. Sokkal jobb első benyomás tudna kialakulni Nagymarosról, ha nem azzal az "ipari jellegű" környezettel szembesülne először az ide érkező.

MŰEGYETEM 1782 urb/bme

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Fig.114 Plan Nagymaros 4 made by Jászberényi_Tóth

A SZENTENDREI-DUNAÁG ALAKULÁSA
DUNA VONALA XVIII. SZÁZAD DUNA MAI VONALA

ELSŐ KATONAI FELMÉRÉS 1763-1787.

MÁSODIK KATONAI FELMÉRÉS 1806-1869.

KATASZTERI TÉRKÉP 1865.

SZENTENDRE

Szentendre a Duna mentén, a "Dunakanyar kapujában" található település. A lételeinek köszönhetően a fejlődéséhez is nagyban hozzájárult a Duna. Illetve a környéken található patakok, sziklakanyonok. A terjeszkedése északi irányban a folyam mentén, továbbá a Bükkös-patak mentén, a hegyek felé indult meg. Végül a környező kisebb településekkel összenőve érte el mai formáját.

A település fejlődése, alakulása

Szentendre területe már a rómaiak korában lakott volt. A Római Birodalom határát a Duna vonala jelentette az e mentén húzódó limes egy fontos erődítménye volt itt (Ulcisia Castra-Földvár). A környező területeken először a rómaiak teremtettek civilizációt, akkor érte első világkorát Szentendre is.

A középkorban nem volt jelentős település. Az első említésük a Bükkös-patakhoz kapcsolódnak, mely az Apor(g) folyó elnevezéssel szerepelt az oklevelekben. A patakok, melyek mára többnyire kiszáradtak, a környék korai lényegei voltak, gyakran település ezek mellé.
Udvarhelyek, pihenőhelyek épültek. A megerősített udvarházakhoz templom is tartozott, valamint vásárokat is rendeztek itt. A város elnevezése a templom védőszentjéről, Szent Andrástól származik. A középkori település az egykori udvarház és templom környékén alakult ki, ez nagyjából a mai belváros területét jelenti. Kedvező földrajzi helyzetéből adódóan (Duna menti elhelyezkedés, patakok) a XIII. században Pilis vármegye egyházi központja lett. Jelentős a szőlőtermelés, a Bükköspatak menti malomipar, halászati, illetve vámjogokkal rendelkezett.

A török uralom alatt csaknem teljesen elnéptelenedett a település. A törökök előrenyomulását követően települtek ide balkáni népek, szerbek, délmátok, bolgárok, kisebb-nagyobb népcsoport az ideérkezést és együttélésüket megőrzése cserbenhagyta. Ekkor templomból, két még ma is álló, többnek a neve is jázi a menekülő népek származását.
A kedvelten fatól készült templomokat kőből újraépítették a XVIII. században, a magyarországi barokk építészet jelentős alkotásai ezek.

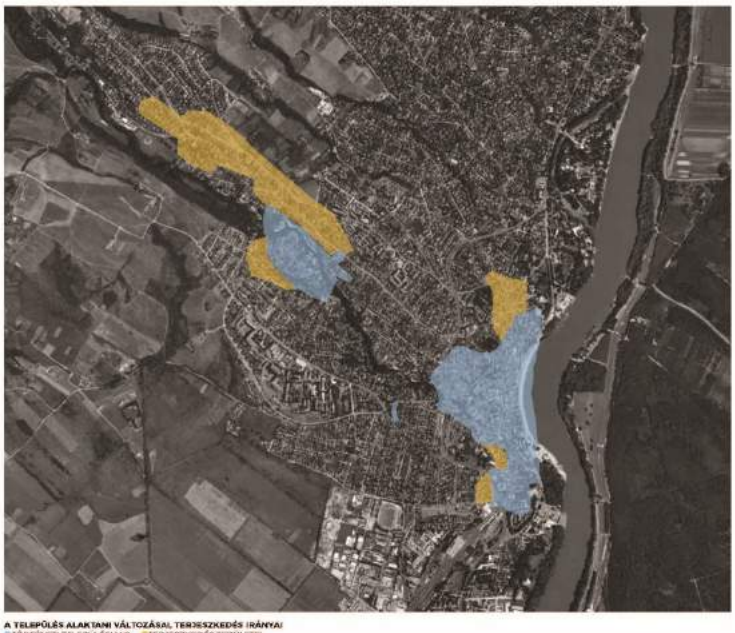
Szentendrén jelentős volt a céhes ipar és a kereskedelem. A kereskedők a Duna-parton építettek emeletes házakat, földszinten üzleteiket. A hegyek mentén pedig szőlőskertek, szántóföldek voltak. Az utcaszerkezet a terepszerkezethez igazodik. A sikeres területeken viszonylag stabilnyosabb a telekosztás, míg északra és nyugatra haladva egyre szabálytalanabba válik.
A Bükkös patak mindkét oldalán kialakult egy-egy központ. A Fő tér felett álló templom körül kőtelepülés jellegű is mutatkozik, továbbá a többi szerb templom is egy-egy kőtelep központja.

A sajátos meditatív hangulatú az utóbbi évszázadok során alakult ki, a mára kis utcákkal és szabálytalan telkekkel. Az építkezésekhez a középkori és római épületek maradványait is felhasználták, gyakran korábbi épületek alapjaira építkeztek. Sűrűn települtek, kis telkeket vásároltak.

A XIX. század elején árvizek, tűzvészek, járványok (kolera- tömkolerája a szőlőföldeket) pusztítottak, a város hanyatlásnak indult. 1838-ban százhetvenhét ház dőlt össze.
Majd a gőzhajó, görcsöt megjelenésével újra felélénkül a város. A lakosság is változik újabb betelepülések történnek (németek, szlovákok, magyarok).

A környező kis települések belterületbe csatolásával (mint Izbég, Derecske) alakult ki a mai városalak. A további terjeszkedések főként a hegyek felé (pl. Szentlászlóhegy) irányba történnek.

Felhasznált források:
mapnews.hu/; fortepan.hu ; Google Earth ; pmh.szentendre.hu ; wikipedia



A TELEPÜLÉS ALAKTANI VÁLTOZÁSÁVAL TERJESZKEDÉS IRÁNYAI
TÖRTÉNETI TELEPÜLÉSMAG TERJESZKEDÉS TERÜLETEI

urb/orm

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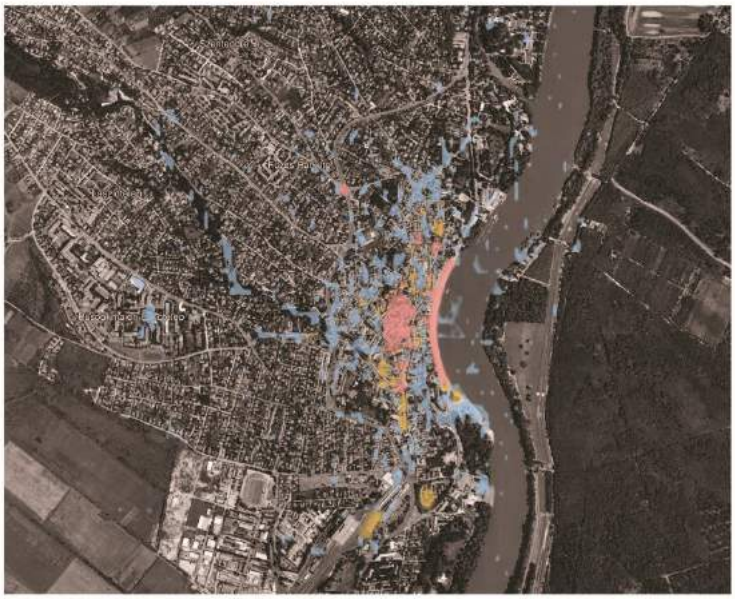
Fig.115 Plan Szentendre 1 made by Bakó_Molnár_Tabi



GEOTEGELT FOTÓK TÉRBELI MEGOSZLÁSA SZENTENDRE BELVÁROSÁBAN
LEGTÖBBET FOTÓZOTT ÁTLAGOSAN FOTÓZOTT LEGKEVESEBBET FOTÓZOTT

GEOTEGELT FOTÓK TÉRBELI MEGOSZLÁSA SZENTENDRÉN
LEGTÖBBET FOTÓZOTT ÁTLAGOSAN FOTÓZOTT LEGKEVESEBBET

TÉRHASZNÁLAT - GEOTEGELT FOTÓK TÉRBELI MEGOSZLÁSA

Geotagging (a görög geo = föld, és az angol tag = címke szavakból – tagging, címkézés, jelölés) általában valamely képi adathoz földrajzi koordináta hozzárendelését jelenti.
(https://hu.wikipedia.org/wiki/Geotagging)

A térképeken a közösségi médiában megjelent fotók vannak ábrázolva. A piros a legtöbbet fotózott helyszín, a kék pedig a kevesebbszer fotózott.
A képek eloszlásából és sűrűségéből a helyek, és a turisták érdeklődését, és akár még a látogatás idejét illetően is vonhatunk le következtetéseket.

Azt feltételezhetjük, hogy a piros szín azokat a turistákat mutatja, akik csak rövid (maximum 1 napos) kirándulást tettek a helyszínen. Ezek a közösségi média legtöbbször beállított és megjelenő fotói, a nevezetességei, Szentendre esetében ilyen frekventált részek a Duna korzó, a békéros, és a Skanzen.

A kék szín a helyekre engedi következtetni. Elsőrtan jelenik meg a térképen, általában olyan helyeken, ahova a kirándulók nem mennek. Ezek beszámolásekkel találhatóak vélhetően a Szentendrei lakosok által kedvelt, de a turisták által rejtve maradt helyek.

A kettő közötti árnyalatok a sárga színnel jelölt részek alkotják. Ezek a helyek már átlagosabbak, nem csak a legjövedelmezőbb látványosságokat mutatják be. Ebből ere kiindulhatunk hogy ezt a szint is turistákhoz társíthatjuk, ám itt nem csak a fő látványosságokban van a hangsúly van kiajuk több mindent is megnézni a városból (egynél több napos kirándulások).

KÖZÖSSÉGI MÉDIA

FLICKR
A flickeren Szentendrére keresve 39544 találatot kapunk. Ebből 21362 kép van Szentendre címkével ellátva és 13258 fotó van geotegelve.
(https://www.flickr.com/map)

SIGHTSMAP
A sightsmapen hőtérképen tudjuk megnézni a panoramio keszit.
(http://www.sightsmap.com/pt)

FACEBOOK
A facebookon szentendrére keresve több opció közül is választhatunk. Megnézhetjük ismerőseink Szentendrén készült fotóit, de geoteg szerűen, térképen a megtekinthetjük a közösségi helyek és szolgáltató egységek becsmkézésével megjelenő fotéket.
(https://www.facebook.com/)

INSTAGRAM
Az Instagram kicsit elsőr az előzőekről itt nincs lehetőség a térképes elkötönítésre, de rengeteg találat van a hídfők keresési módra. Lehet Szentendrére mint városra keresni, és #szentendre hashtag-re is keresni (körülbelül 50000 találat mind a két verzióra).
(https://www.instagram.com/)

Ezen térképek és adatok összegzéséből készültek el a térképeink. Jól látható an a város két jól elkülöníthető részén vannak a beszűrődési pontok amiből az egyik a belváros, a másik pedig a Skanzen. Ezek a turisták által kedvelt helyek is.

urb/forme

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Academic year:	2017/2018.1.

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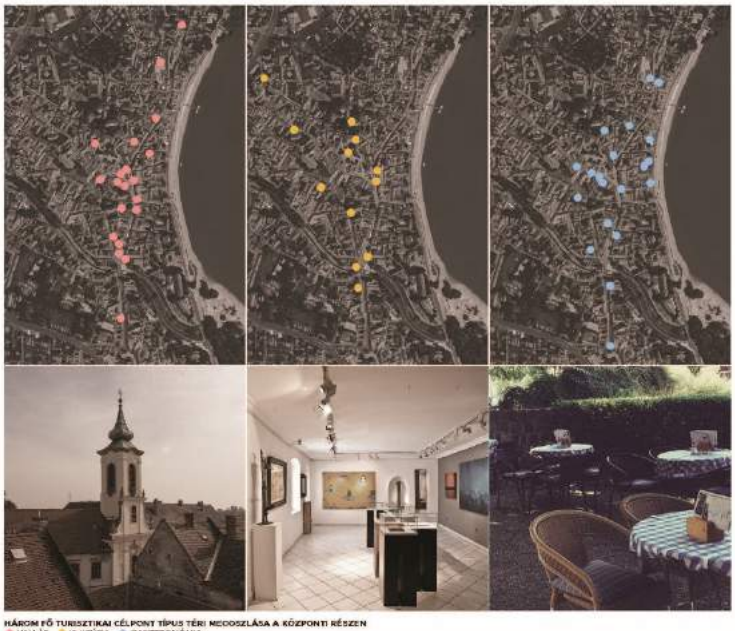
Fig.116 Plan Szentendre 2 made by Bakó_Molnár_Tabi

INTERNETEN FELLELHETŐ TURISZTIKAI INFORMÁCIÓK ÖSSZESÍTETT TÉRI MEGOSZLÁSA
A LEHATÁROLT KÉT FŐ TERÜLET: ● SZENTENDREI SKANZEN ● SZENTENDREI KÖZPONT



HÁROM FŐ TURISZTIKAI CÉLPONT TÍPUS TÉRI MEGOSZLÁSA A KÖZPONTI RÉSZEN
● VALLÁS ● KULTÚRA ● GASZTRONÓMIA

SZENTENDRE JELENLÉTE AZ INTERNETEN

A település fővároshoz való közelsége, és könnyű elérhetősége miatt viszonylag fejlett turisztikával rendelkezik. A világhálón a helyeinek hazai látogatóinak és a külföldi turistáknak egyaránt felhalmozott információk a város látnivalóiról és programjairól. Turisztikai szempontból két fő központot lehet kiemelni a középkori jellegű városközpontot és a nyugati szélen fekvő szabadtéri néprajzi múzeum területét. A magyar és idegen nyelvű internetes anyagok is arra a két területre koncentrálódnak. Az elsőként felkeresett információs portálon - a wikipédián - több nyelven a bőséges információhoz jutnak az érdeklődő a városról, vallásáról és a helyi képzőművészetről. A Dunabrand Kiscell ezek a három alapvetően épült a város múltjából adódó vallásközpont jellegére a helyi képzőművészeknek és művészetkedvelőknek köszönhető pezsgő kulturális életre és a különféle betelepült népek elkülönítő kulturális és gasztronómiai sokszínűségre.

PROGRAMOK, TURIZMUS

A városközpontban egész évben sok szervezett turisztikai és kulturális programon lehet részt venni, melyeknek fő hirdetési felülete a város turisztikai honlapja, az "inszentendre.hu". Az ide látogatók különböző tematikájú városnéző sétákra jelentkezhetnek, online templom séta, művészeti séta, gasztronómiai séták és egyéb kulturális és szabadidős programokról értesülhetnek. A helyi több látnivalót több külföldi utazási portálon is megjelennek, mint például a "visitbudapest.travel"-en és a "theculturetrip.com"-on. A helyek és hazai turisták számára érdekes programokról a Szentendrei Kulturális Központ által szerkesztett szentendreprogram.hu" és a város hivatalos honlapja, a "szentendre.hu" budasit, az utóbbi előszobában a település és a környező területek állandó lakosainak szól.

A Szentendrei Szabadtéri Néprajzi Múzeum szintén sok szervezett programmal várja a turistákat, melyeket saját hivatalos honlapján, a "skanzen.hu"-n lehet böngészni, mely angol változatban is elérhető. Az oldalon minden fontos és hasznos információ, szavtól online séta, fajtából és letölthető anyagok is megtalálhatóak.

VALLÁS

A város vallásikultúra tekintetében ámint sok más tekintetben is a sokszínűség jellemző. A középkorban görög majd bencés szerzetesek települtek be, a 17szaz-ban a vezprémi püspökség oltalmát vállalta magát az esztergomi érsek formálta a mai képét. Ebben az időben épült legtöbb római katolikus temploma, a Keresztelő Szent János-plébániatemplom (régiében Szent András-templom). Az újkorban, a szerb bevándorlással került ide a településre a szerb ortodox vallás, mely területi hat templom építését vonta maga után. A mai legismertebb templomok többsége ezen templomok közül kerül ki. A településen református és evangélikus templom is épült.

A googlemaps térképes keresőjével csak a belvárosban 4 különböző vallás 18 temploma található meg, gazdag lehetőséget adva a vallási turizmus vagy a templomépítészet kedvelőinek.

KULTÚRA, KÉPZŐMŰVÉSZETEK

Szentendre nyugodt ám sokszínű kívánosként az utóbbi évszázadban vonzza a képzőművészeket, itt alkalt a Nincs művésztelep, ahol sok hazai tehetség került felfedezésre. A városban több tesző szobrász alkot és állandó, galériák és múzeumok sora látogatható. Legismertebbek a Kovács Margit Múzeum, Ferenczy Múzeum, Barcsay Múzeum és a Czóbel Béla Múzeum.

VENDÉGLÁTÁS, GASZTRONÓMIA

A betelepült népek szerbek, dalmatiok által hozott kultúra és hazai gasztronómia, a különféle tájak ízvilágát nyújtó éttermek lehetőséget adtak a gasztroturizmus kifejlődésének. Ezen vendéglátóegységek többsége a Duna partjának mentén helyezkedik el, de távolabbi és cukrászdákkal kiegészítve a történelmi belváros többi részén is felfedhetőek. Ugyanit a szélés jellegű vendéglátás nem jellemzően alakult ki, hisz az idelátogatók nagy része csak egynapos kirándulást tesz Budapestről.

APPLIKÁCIÓK

A város felfedezését még gyerekcipőben jár ám egyre fejlődő alkalmazások teszik érdekesebbé. A viszonylag fiatal "MISTORY" appliáció interaktív feladatok és állomások segítségével vezet végiga Szentendrén, de a Skanzen is készített magának egy saját alkalmazást, a "SKANZEN APP"-ot, mely online térkép, online túravezető, játékos felfedező és tematikus túrák segítségével tartalmat a múzeumot, de az alkalmazáson keresztül lehetőség van az információk elérésére és online jegyvásárlásra is.

urb/form

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Academic year:	2019/20/1

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Fig.117 Plan Szentendre 3 made by Bakó_Molnár_Tabi

SZEMÉLYES TAPASZTALATOK TÉRBELI MEGOSZLÁSA SZENTENDRE BELVÁROSÁBAN
SOK INTERNETES JELENLÉT SOKSZOR GEOTECELT JOBB SORSRA ÉRDEMES ALUL REPREZENTÁLT TEREK

A VÁROSSZÖVET ALAKÍTOTTA ÉRDEKES TERESEDÉSEK
FŐ TÉR PÁTRIÁRKA UTCA - ALKOTMÁNY UTCA KMETTY JÁNOS TÉR

SZEMÉLYES TAPASZTALATOK

A térképi jelölések alapján is jól látható, hogy a sárgával jelölt, közösségi médiában megjelenő fotók, illetve a pirossal jelölt, az interneten említett kultúra, gasztronómia és vallás terei gyakran megegyeznek.

Szentendre, a "festők városa", számos kulturális intézménnyel rendelkezik, múzeumok, műtermek, műhelyek, kézműves műhelyek várják az idelátogatókat. Ezek a helyi látnivalóságok a turisták által is kedvelt helyek.

A mediterrán hangulatú kisváros jellegzetessége továbbá a számos itt megtalálható templom, amely mindegyike más népcsoport gyülekezete által épített. Ezen templomok a betelepült szerb, dalmát, bolgár népcsoportok által kezdetben fából, majd a XVIII. század során többi újraépített épületek, melyek a hazai barokk építészet remekei. A templomok, mint helyi sajátosságok szintén kedvelt fotózási pontok.

A Duna-part mentén számos kávézó, éttorem található, mely várja az idelátogatókat.
A Duna szintén kedvelt témája az itt megjelölt képeknek. A Duna korzó és a Duna-part hangulatos sétánnyal, kerékpárúttal rendelkezik.

A Duna parton túl, a legkedveltebb helyszín a történeti belváros területe, mind a helyek, mind a túristák számára. A sajátos szűk utcák, sűrű szabálytalan beépítések adják Szentendre hangulatát. Az emlékek, közelkori maradványokra épített épületek, a számos templom jelkorai, melyek gyakran barokk, copf vállas jegyeit mutatják.

Lehetőségek

A szabálytalan, kisméretű telkek, épületek rendszere által kialakult utcahálózat gyakran alakít érdekes formájú teresedéseket.
Ezek a terek több utca keresztezõdéséből tevődnek össze, különõs téri viszonyokat alakítva. Ezen helyek a túristák által kevésbé fotózott, kevesebb említett pontjai a városnak.

Az egyik ilyen potenciális lehetőséget rejtő tér a Kmetty János tér.
Öt utca keresztezõdik itt, elnyújtott alakjával a belvárostól északra helyezkedik el. Érdekessége az, ide érkező utak eltérő szélessége, egy kedves kávézó, és kisvárosias környezete adja.

Egy másik hasonlóan említésre méltó helyszín a Pátriárka utca és Alkotmány utca találkozásánál látható teresedés. Négy út marszakban, a belvárostól nyugatra esik, szintén nosztalgikus Szentendrei hangulatot mutató hely, ahol azonban többnyire csak autók parkolnak vagy közlekednek át rajta.

A harmadik általunk kiemelt helyszín a Sikátor- Fő tér- Görög utca találkozása.
Az érdekes formájú tárlat a belvárosban található. Talán az a leginkább kihasználtabb az említett pelsek közül. Található itt templom, üzlethelység stb. A tér különös hangulata, a sikátorból hirtelen feltáruló teresedés élménye az épületek megjelenő találkozással további említést érdemelnének.

urb/form

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Academic year:	2017/2018.1.

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Fig.118 Plan Szentendre 4 made by Bakó_Molnár_Tabi

VISEGRÁD MA
DOMBORZATI ADOTTSÁGOK

MŰHOLDKÉP

VISEGRÁD

Stratégiai jelentőségét mutatja, hogy már a római időben állt itt erődítmény. Kelet-Európa a magyar középkori megkerülhetetlen elemévé vált. A Visegrádi vár a királyi palotával Magyarország szinte teljes történet árnyékában született meg Visegrád városa, ami úgy tűnik nem tudott, és nem is akart előrébb lépni kiszolgáló szerepéből. Az, hogy milyen volt a XV. század Visegrád városa egészen elképzelhető az alapján, amit ma láthatunk belőle. Egykoron a királyi udvart kiszolgálásában segítő falu népe, ma pedig az egykori udvart, és fellegvárat megcsodálni érkező turisták teszik ugyanezt. Így egyértelműen reneszánszát éli a település. Az igazi kérdés az, hogy vajon a kettő között mi történt itt. A morfológiai, településföldrajzi adatok alapját az utóbbi mandulák ként, ezekből szeretnénk következtetéseket. A település fejlődésében nyilvánvalóan meghatározó a környék domborzati viszonyai.

DOMBORZAT

A Dunakanyarban, a Budai oldalon helyezkedik el Visegrád a Pilis lábánál. A várost legnagyobb formáló tényezője a Duna. Illetve a Rétszentmárcsoki lecsorgó Apát-kúti patak. Ahogyan a vizek megalakítják a hegyek közti nyugodt vonalakat a város is ezekre szerveződik. A településhez képest a Fellegvár kb 300 méter magasságban emelkedik a hegytetőn. E két - egymáshoz nagyon közel fekvő - pontok összekötő utak hosszú száz méterekkel át kerülgetnek a hegyoldalban.

MORFOLÓGIA

A korai falu egy utcára szerveződik. Az utca elején - ahogy a domborzat engedi - kettéválik az utca. Kialakul egy gócpont a templom környezetében az utca végén pedig egészen beszorul a városka a hegy és a folyó közé. Ettől a ponttól északi felé a kiköthetőkben sem tud terjeszkedni, két lehetőség adódott. Egyrészről déli felé növekedhet a Duna mentén. Másrészről a már korábban - akkor még csak a fennálló szerkezeten belül - jelen lévő pontok mentén tengely vonalában nyomulhat be a településsel a hegyek közé. A terület eleinte maga a városon kívül volt a völgyben, mára a falu része. A terület körül, és azon túl megépült házak száma önállóvá a település fejlődésének mértékéről. Gócpont alatti városrész: vélhetően egykor a terület utáni részek. A város történetében nem igazán volt robbanásszerű növekedés. Évszázadok alatt egészen minimális változások figyelhetőek meg.
A város környezetéhez való viszonyán jelentősen változtatott a Dunapartot közvetlenül kiépülő 11-es út megjelenése. Ez levágja a korábbi Dunára néző házsorokat a folyótól. Azzal, hogy az új "fő út" a régi fő utat kiverőli, bár logisztikailag kötségtakarékos nyer rajta a település, nagyon átrendezi a súlypontokat, legérzékenyebb a már említett fő út szerepét.

A legújabb városrész a központtól délre, közúton emlékektől legtávolabb eső pozíción épült ki. Itt már nem is annyira a folyó sokkal inkább a 11-es út jelenti a nyugati határvonalat. Mivel itt a hegy meredek részén helyezkedik el a folyótól, nem csak egy uccára fűződnek a telkek, hanem többnyire radiális utcahálózat jött létre. Ezzel kialakult egy T alakú, a völgyben felfelé kúszó Mátyás király utcára, mint tengelyre tájimmanens város.

VÁROS

Turisztikai jelentőségének köszönhetően városi rangot kapott egészen kicsiny népessége ellenére is. Megközelítőleg 1800-an lakják a várost, ebben kontextusban meglepően csang, hogy évente körülbelül 60.000 turista látogat ide. Ezt a jelenséget próbáljuk megérteni, és fejlődési irányában javaslatot tenni.

TÖRTÉNELMI TÉRKÉP, 1783-1787.

1868-1887

VÁROS FEJLŐDÉSE, TERJESZKEDÉSE
TÖRTÉNELMI TÉRKÉP, 1887-1925

1941-TŐL

urb/orne

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Academic year:	2017/2018.1.

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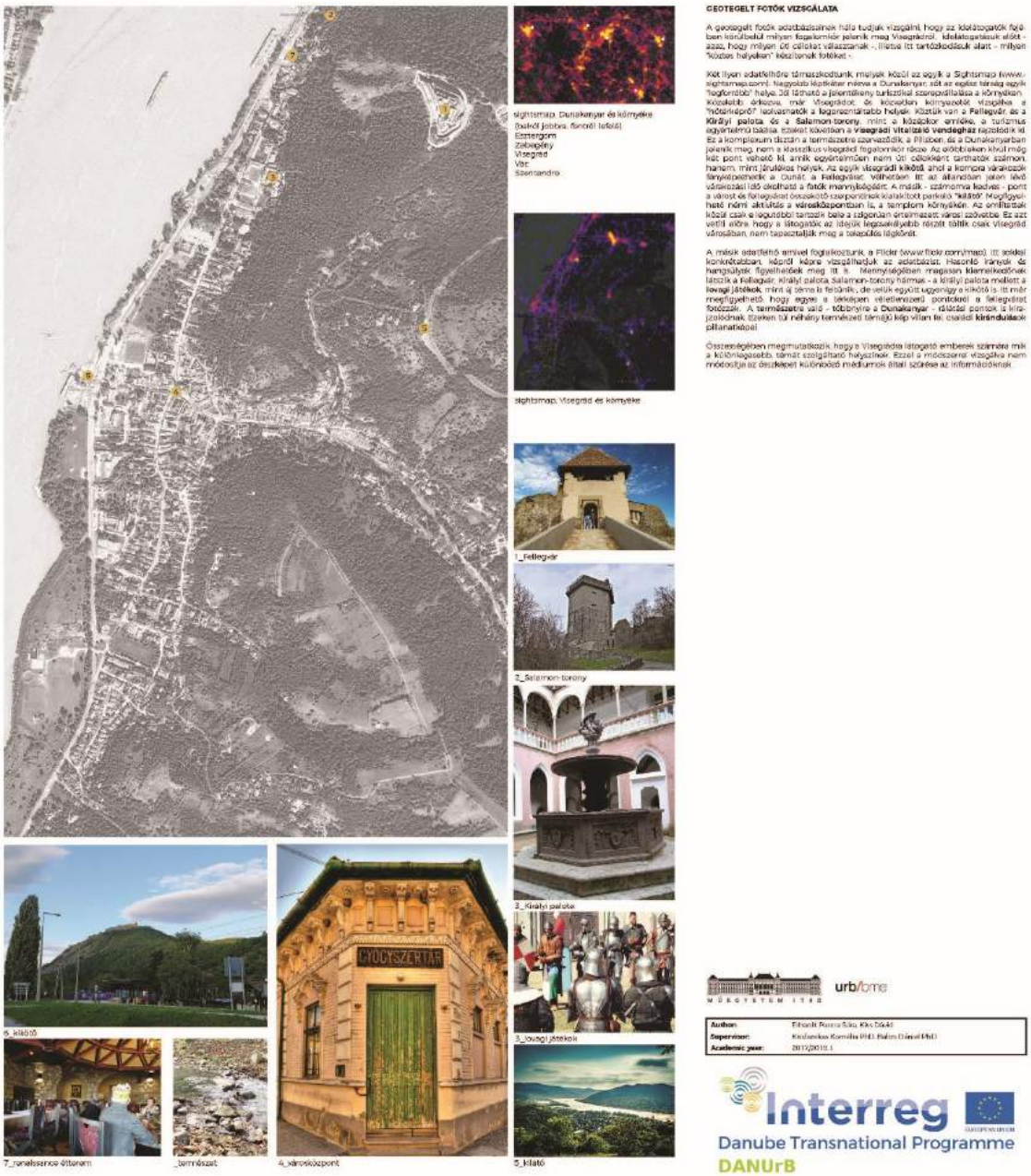
Fig.119 Plan Visegrád 1 made by Erhardt_Kiss



GEOTEGELT FOTÓK VIZSGÁLATA

A geotegelt fotók adatbázisainak hála tudjuk vizsgálni, hogy az idelátogatók fejében körülbelül milyen fogalomkör jelenik meg Visegrádról. Idelátogatásuk előtt - azaz, hogy milyen ott célokat választanak -, illetve itt tartózkodásuk alatt - milyen "kötelező helyeken" készítenek fotókat -.

Két ilyen adatforrásra támaszkodtunk, melyek közül az egyik a Sightsmap (www.sightsmap.com). Nagyobb településen nevét a Dunakanyar, sőt az egész térség egyik "fogfehérítő" helye. Jól látható a jelentkezők turisztikai szempontú eloszlása a környéken. Kicsikét árnyalva, már Visegrádon, de kisebban környezetét vizsgálva, a "hótáblapróf" is olvasnivalót a fogalomtárolóbb helyek. Köztük van a **Fellegvár**, és a **Királyi palota** és a **Salamon-torony**, mint a középkor emléke, a turizmus egyértelmű bázisai ezeket követően a **Visegrádi vitalizáló Vendéglő** kapcsolódik itt. Ez a komplexum dúzán a természetre szerveződik, a Pilisben, és a Dunakanyarban jelenik meg, nem a klasszikus visegrádi fogalomkör része. Az előbbiekben kívül még két pont vehető itt, amik együttesében nem ötl célokként tarthatók számon, hanem, mint áruházas helyek. Az egyik **visegrádi kilátó** and a kompra várakozók fényképezhetik a Dunát, a **Fellegvárat**. Vélhetően itt az állandóan jelen lévő városázsi idő okolható a fotók mennyiségéért. A másik - számomra kedves - pont a várost és fellegvárat összekötő szerpentinek szalagtott perkelés "kilátó". Megfigyelhető némi aktivitás a **városközpontban** is, a templom környékén. Az említettek közül csak a legutóbbi tartozik bele a zárgondján ömlemezett városi szövetbe. Ez azt vetíti előre, hogy a látogatók az idejük legszakértőbb részét töltik csak Visegrád városában, nem tapasztalják meg a tekintés légkörét.

A másik adatforrásra támaszkodtunk, a Flickr (www.flickr.com/map). Itt sokkal konkrétabban, képről képre vizsgálhatjuk az adatbázist. Hasonló trények és hangsúlyok figyelhetőek meg itt is. Némiképpen magasan kiemelkedőnek látszik a Fellegvár, Királyi palota, Salamon-torony hármas - a királyi palota mellett a **lovagi játékok**, mint új színe is feltűnik, de velük együtt ugrásszerű a kilátó is. Itt már megfigyelhető, hogy egyes a tekintésen véletlenszerű pontokról a fellegvárat fotózzák. A **természetre** való - többnyire a **Dunakanyar** - rálátást pontok is kirajzolódnak. Ezeken túl néhány természeti térnyű kép villan fel, családi **kirándulások** pillanatképei.

Összességében megmutatkozik, hogy a Visegrádra látogató emberek számára mik a különlegesebb, tán szolgáltató helyszínek. Ezzel a módszerrel vizsgálva nem módosítja az összképet különböző médiumok által szűrése az információknak.

urb/form

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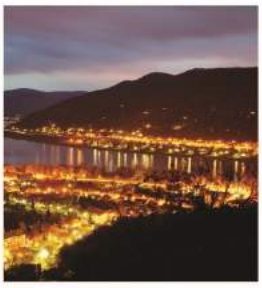
Fig.120 Plan Visegrád 2 made by Erhardt_Kiss

Fig.121 Plan Visegrád 3 made by Erhardt_Kiss



BEJÁRT ÚTVONAL
SAJÁT FÉNYKÉPEK

VISEGRÁD

Mi a szemünkkel bejárjuk a környéket, hogy közvetítő nélkül, közvetlenül hassan ránk a környezet. Autóval utaztunk, GPS irányítása alapján, pontos cím megadása nélkül. Ez fontos volt számunkra, hiszen az élmény pontja mindig megtalálható. Így szerettük volna, ha egy hely nem azért válik kiemelté, mert azt látjuk meg először, hanem hogy tényleges, valós érzelmek útján tudjuk megismerni, átélni ezt. Első út a kompkikötőhöz vezetett, hiszen az adja a legközelebbi kapcsolatot a Dunával. Miker beszállunk a látványnyal, megfordultunk, és naivségtunk a település szűk utcáinak, természetesen elsőként a Fő utcával kezdve. Templom, antikvárium, hustolt, minden megtalálható arra egy kisváros számára szükséges. Vasárnap az jelent a különbséget, ez pedig a hatalmas kontrasztot. A kihalt turizmus a felleges-ben, míg lent lassúfolyással elsuhk Visegrád lelkességének központja.

Ahogyan sétáltunk az utakon, minden egyes lépésnkkel megismertük a várost. A táblákon rajta hedonizmusi hírek, a házak utcakőben megjelenő összegyűlt, az utcán elvetve sétáló, ám szemeivel fürkésző lakosok, mind-mind közelebb vittek ahhoz, hogy megismerjük Visegrád mindennapjait. Utunk során több gócpontot találtunk. Legelső dínómyként a nők, ami csak az autósok számára volt kialakítva. Mintha az az egyik, hogy gyalog is át akarnának kelni emberek a Dunán, az nem lenzsna. Célirányosan szinte ipari tudattal csak a komphoz vezető út van kiépítve, körülötte laza falúsi beépítés található. A következő lépésünk a Fő utcán található templom volt, ami egy fontos Y elágazás mellett került. Ahogy a jelen magyunk, végig szemünk előtt van a templom. Ugyan az utca nem benevedik kl, mered a szűk járda végig, mégis mintegy főtérként viselkedik a településen. Éttermek sarokteleplatos bolnok övezik a templom környékét.

Távolodva a Dunától, nekinduliva az emelkedőnek, egyre mélyebbre láthatunk Visegrád hétköznapjaiba. Egy-egy elkerült, padokkal ellátott parkolóhely, máshol tábla az aktuális adókövezések hírekkel, valamint a lakosok számára fontos közérdekű közleményekkel.

Visegrád piaca nem messze van a templomtól. Ez a tér inkább mint egy szűk átjáró a Fő utca és a Duna között, az emberek átfutnak rajta, megvesznek, amit kell, és mennek tovább. Ennek a végében található az apjusarchitects építész iroda által tervezett Visegrádi központ. A kortárs szellemű épület Visegrád számára megfelelő tér lehetne közösségi programok megrendezésére.

FELVETÉSEK

A turizmus általános problémája, hogy hiányzik az élményszerű interakció, művi, sablonos jelenségek sora követi csupán egymást. Felszínessé válik az érzékelés, kiüresedik a tartalom. Az emberek igen könnyen választhatók két csoportba a turisták, illetve a vendégjátók csoportja. Ezen két csoport között szinte mindig csak felszínes párbeszéd zajlik. Visegrád városát is hasonló vészélyben látjuk első benyomásaink alapján.

Az 1-6. képeken keresztül próbáltuk közelebb hozni Visegrádot, mint egy magyar települést a Duna parton. Szükséges friss szemmel tekinteni erre a városra. Gyönyörű, ahogy a Hős és a Duna erőteljesen formálódott és formálódik a város. Amilyen természetességgel tölti ki a parton kialakult kis részletet, egészen beleolvadva a hegy lábához, és amilyen elevenen kúszik fel a völgyben, tévkörbe a folyosó. Telis tele az élet apróságaival, amikre megen tecsodálkozni, a falusi élet lassú pulzálása köt is bizlosít, hogy ezt megtegyük. Az ember ide látogat, hogy megnézzen, megcsodáljon, de kínagyja a lehetőséget, hogy otthon érezze magát egy kicsit.

Feladatunk szerint többet kellene tapasztalni az visegrádi ÉLETből a környékre látogatóknak. Rengetegen jönnek ide meglátogatni a felsorolt célpontokat, ez az látogatás lehetőséget jelent a magyar falusi élet megismerésére a nagyvárosból érkezőknek. Ezt a lehetőséget kellene kiaknázni. Ehhez életszerű találkozási pontokat lenne szükséges létrehozni turista és helyi között, ahol ebből a szerepből ki lehet esni.

urb/form

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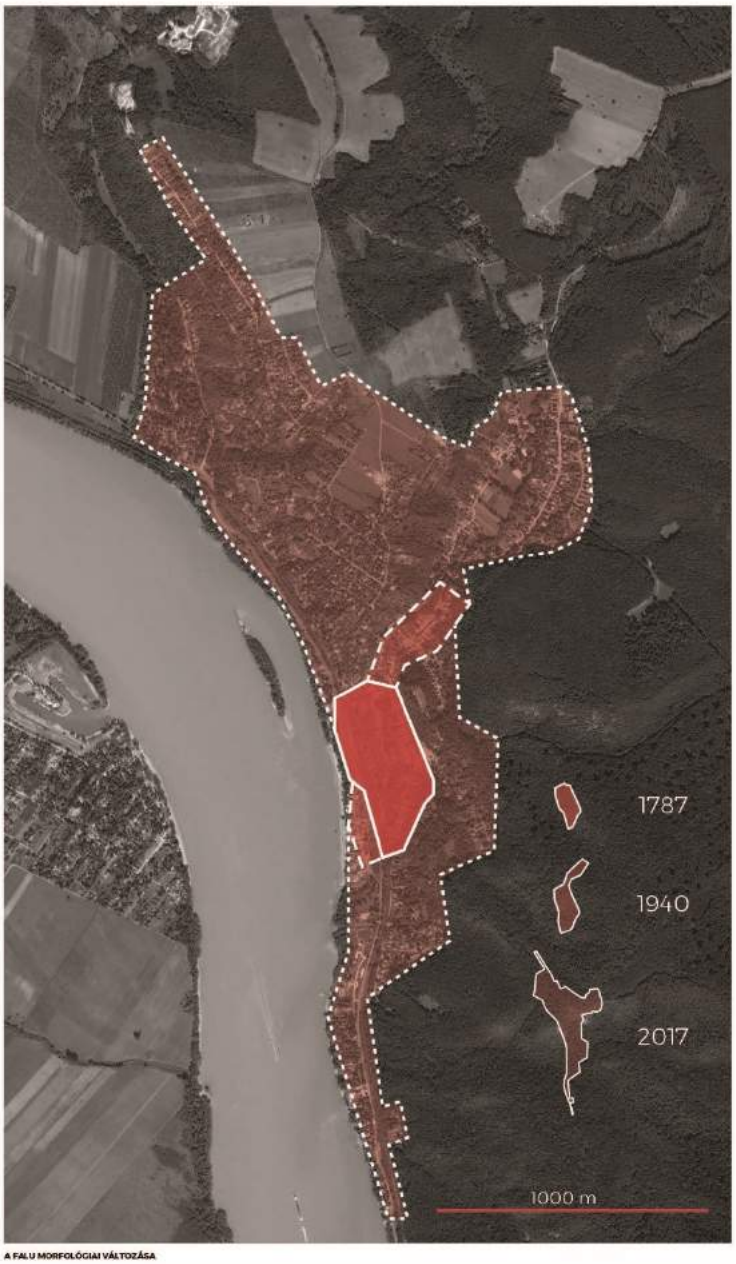
Fig.122 Plan Visegrád 4 made by Erhardt_Kiss



A FALU MORFOLÓGIAI VÁLTOZÁSA

ZEBEGÉNY

Báró Cőry Vilmos őrnagy a 20. század elején így döntött, hogy addig hajózik le a Dunán, amíg meg nem találja a legszebb helyet leendő otthona számára. Zebegénynél már nem is ment, ez pedig pontosan olyan, milyen varázslatos hely is a falu.

Zebegény egy kicsiny település a Dunakanyarban, ami elsősorban páratlan természeti adottságaival hívta fel magára az idő látogató figyelmét, ahogy Cőry Vilmos is. Fejlődése legalábbis a 19. században indult meg, miután meghosszabbították a Pestről Vácra vezető vasútvonalat Zebegényen is keresztül. A vízi szerepe megyilt tovább.

MORFOLÓGIAI ELEMZÉS

Ahogy a térképen is látszik a falu az 1700-as évektől a második világháborúig a kiterjedését tekintve kevesat változik. Csupán a Hrakan-völgyi patak mentén látszik pár új épület, viszont maga a falu beépült területének jelentősen megnőtt.

A falu morfológiai fejlődése erősen korlátozott volt a természeti, illetve domborzati adottságok miatt. Egyik oldalról a Börzsöny dús növényzete, másik oldalról pedig a Duna korlátozta a település méretének növekedését, így városmag értelmében a patak völgyében épült. A 1930-as évekig nem volt indokolt a domboldalakra is építkezni, az viszont ekkor elkezdett megvalósulni, amikor a budapestiek elkezdték felfedezni a vidéket, nyugalmat találni. Zebegény Legyenis kevesebb, mint egy óra alatt elérhető vonattal vagy autóval, így az 50-es évektől kezdve jelentősen elkezdett növekedni a lakosságszáma a faluban. A 60-as és 70-es években évente több, mint 50 lakás épült - sajnos kivétel nélkül önkéntes. Az 1941-es 861 lakosról lépett a 60-as évek elejére már 1341 lakosa lett a falunak, ami azután vagy csökkent vagy stagnált. A '80-as években kezdték beépíteni a Nagyvegyet üdülőkkel, majd a '70-es években további lakóházakat is építettek be, miután felszámolták a mezőgazdasági területeket.

A lakosságszám jelenleg 1200 fő körül mozog, nyáron viszont megháromszorozódik a Zebegényben lévő emberek száma.

Forrás: wikipedia.hu, origo.hu, zebegeny.hu

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Fig.123 Plan Zebegény 1 made by Dobos_Gosztonyi

Fig.124 Plan Zebegény 2 made by Dobos_Gosztonyi

BALRA: BERÉNY RÓBERT: CSELLÓZÓ NŐ, 1928 FENT: SZŐNYI ISTVÁN: DUNAKANYAR ZEBEGÉNYNÉL LENT: SZŐNYI ISTVÁN: ZEBEGÉNYI TÁJ
FORRÁS: MOLOSZKI.HU, PINTERAUKCIOSHAZ.HU, ZSOLNAIGALERIA.HU

KULTÚRA & TERMÉSZET

Zebegény a kötődésében a környék egyik kulturális és természeti értékeként jelenik meg, sok helyen a „gyöngyszem a Dunakanyarban" jelzővel illetik.
Mértékhez képest valóban nagyszámú kulturális programot, fesztivált rendeznek itt. Ikonikusnak és turistának egyaránt. Ezek közül a talán legnagyobb hírnévnek örvendő Sárkányfesztivál, a 10. éve megrendezésre kerülő Tűzkitáló fesztivál, a Cowgirl&Boy fesztivál és a Waldorfest.

A 20. században több híres festő is szívesen használta a művészkolónia megalapítása a Budapesttől idealitásban Szőnyi István nevéhez fűződik. Talán a leghíresebb intézmény az ő nevét viselő Szőnyi István Emlékmúzeum és a Szőnyi István Baráti Kör Egyesület kulturális egyesület, ahol a nyári táborokon és képzőművészeti fotóiskolákon tall élmező és időközi kiállításaikat is adnak helyt.

A kiszolgáltság és a környéki megközelítés miatt a szállásheltyek általában a budapesti intézmények és az onlo illogyvó kötődéseket zeborzik meg. Turisztikai szempontból több cikk is található, ahol a fraseriő szempontok miatti Innek Zebegényről.

A község honlapja kiemelkedően sok részletre kitegad, hírekről és programnaptárról kezdve a helyi szolgáltatásokon át a falu történeti és strukturális kérdéséig. Aktív a hivatalos facebook oldal is.

Angolul vagy más idegen nyelven kevés link található, azok is többnyire csak szórásiselhetőségekről. A falu hivatalos weblapja is csak magyarul érhető el.

források:

https://www.zebegeny.hu/
https://zebegeny.wlap.hu/
https://hu.wikipedia.org/wiki/Zebegény
https://www.szonyimuzeum.hu/
https://www.szonyitabor.hu/
https://www.facebook.com/szony.tabor/
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https://wolovelo.budapest.com/toplistak/hetvegi-kalandok-pest-kozelben-zebegeny/
https://szallas.hu/zebegeny
https://naturalith.hu/kezdooldal/oturink/

BALRA: WALDORFESZT 2017, JOBBRA: SZŐNYI TÁBOR
FORRÁS: FLICKR.COM, SZONYITABOR.HU

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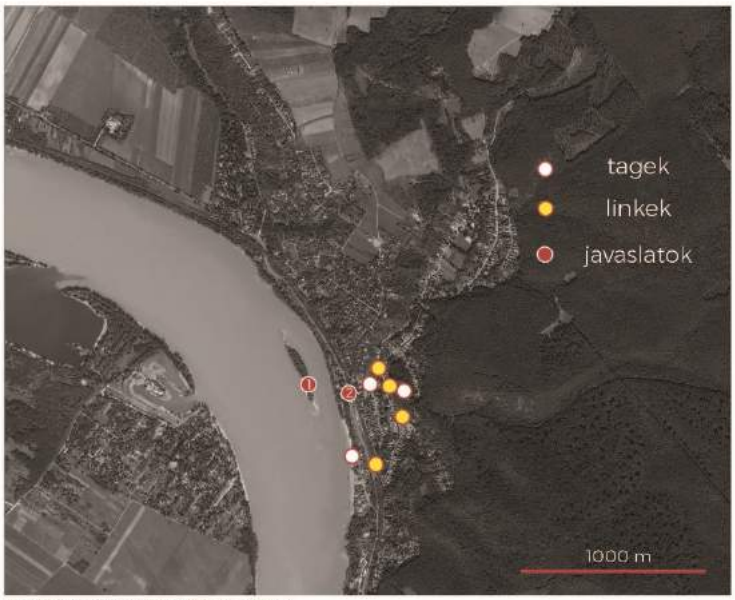
Fig.125 Plan Zebegény 3 made by Dobos_Gosztonyi



A TAGEK, LINKEK ÉS JAVASLATOK ELHELYEZKEDÉSE A TÉRKÉPEN

ZEBEGÉNY

Zebegény egy félig-meddig Dunakanyarban, ami meglepően sok látnivalóval rendelkezik. A falu mindenképp elvárja, hogy látogassuk, így itt. Ott járunkkor még fiatalos és zajlott a településen.

A tagek alapján kevésbé jellemző a koncentrálódás, többnyire az idelátogatók a saját ötletük szerint töltik az idejüket. Mindenesetre koncentrálódás figyelhető csak meg a Dunaparton, a Fekete Boldogasszony-templom körül, illetve a Trianon emlékműnél. Ezek közül leginkább a templom az, ahol a fiatalok magukra a településre vagy egy elmúlt kikapcsolódásra, hiszen az emlékműnél és a Dunaparton kívül a csodás kilátás körül is a fényképezőre.

Az Interneten fellelhető információk alapján Zebegényben leginkább szintén a templom a kiemelkedő, de a Bátyi István múzeum és művészetek is hamar előkerül, hogy Zebegény után kutatunk. E kettőn kívül a Hétbukki tó és a Hétbukki múzeumra is könnyen rá lehet találni az Internetben.

JAVASLATOK

A falu meglátásunk szerint viszonylag jól kerben van tartva. Az elhelyezkedése, Budapesthez való könnyű megközelíthetősége miatt egész évben látogatható. Minden évszakban egy új arcát ismerhetjük meg a falunak, és más lehetőségeket is tartogat a számunkra. A nyári időszakban fürdeni lehet a Dunában, a tavaszi és az őszi remek időt pedig túrázásra, télen a havas hegyi új bérenyi rejthet.

Mindezek ellenére maradt némi hiányérzetünk a falu látogatása során. A főút és a vasút a part - mint ahogy sok más településen a Dunakanyarban - elvágja a Dunától és a Dunát övégja a főutat is. Nehézkesen, csak pár helyen lehet átvágni a sínekon vagy leginkább átúszik, hogy elérjünk a folyópartra. Nyilvánvaló, hogy a vasutak szükség van a vasútra, de a főútra is ellenben a többiben megemelt vasút szint indokolatlan mértékű. Emellett a lejtésként a vasút sínjei a főút megosztják, becsődítenek tőlük és természetesen vasúti átjárókat lehetne a Duna felé létrehozni. Jelenleg ez egy földtől elrugaszkodott gondolat, viszont a jelenlegi átjáró kapuk kiszélesítése, több gyalogos átjáró létesítése egy általános megoldás lehet.

A másik jelenleg kiaknázatlan lehetőség itt, az a Zebegényi-sziget, ami a múlt században volt látogatott szigetek. Más tók borítják felületét a két kerecsés végétől eltekintve. A szigetre át lehet úszni vagy csónakkal is könnyen meg lehet közelíteni. Adott esetben egy szabadtéri bázisra nyílnának a környezet megújulás mellett. A sziget déli, kavicsos végét strandként és kempingező helyként lehetne használni és állandó csónakkikötési lehetőséggel.

A ZEBEGÉNYI-SZIGET ÉS A VÁROSMAGOTA SÍNEK ALATT A DUNÁVAL ÖSSZEKÖTŐ "ÁTJÁRÓ KAPU

urb/lome

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Fig.126 Plan Zebegény 4 made by Dobos_Gosztonyi