

DANURB+ DANube Urban Brand + Building Regional and Local
Resilience through the Valorization of Danube's Cultural Heritage

D+Atlas

**ATLAS of Hidden Urban Values
along the Danube**

Editors // A. Djukić, B. Kádár, A. Stan, B. Antonić

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Универзитет у Београду - Архитектонски факултет
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www.arh.bg.ac.rs

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D+ Atlas

ATLAS
of Hidden Urban Values
along the Danube — 2022

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DANube Urban Brand + Building Regional and Local Resilience through the Valorization of Danube's Cultural Heritage

DANUrB+

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DANUrB / Bratislava, Feb. 2018



DANUrB+ / Kolarovo, Oct. 2021



DANUrB / Štúrovo, June 2021



DANUBE



DANUrB+ / Rust, October 2021



DANUrB / Komárno, June 2019



DANUrB / Esztergom, June 2017

DANUrB+ / Sombor, June 2021



DANUrB+ / Baranja, Nov. 2021



DANUrB / Ilok, May 2018



DANUBE

DANUrB / Belgrade, Feb. 2019



DANUrB / Smederevo, Feb. 2019



DANUrB / Golubac

DANUrB+ DANube Urban Brand + Building Regional and Local Resilience through the Valorization of Danube's Cultural Heritage



DANUrB+ aims to reactivate underused cultural heritage and resources in shrinking settlements of Danube river's peripheral and border regions, to create new possibilities to make its towns and regions attractive again.

DANUrB / Budapest, Feb. 2017



DANUrB / Bačka Palanka, 2018



DANUrB+ / Moldova Noua, 2022



DANUrB / Giurgiu, October 2018



DANUrB / Tulcea, October 2018



DANUrB / Danube Delta, 2019



DANUrB+ / Călărași, June 2022



DANUrB+ / Orșova, April 2022



DANUrB / Bac, Oct. 2017



DANUrB / Lom, October 2022



DANUrB / Ruse, October 2018



DANUrB+ / Silistra, June 2022



DANUrB+ / Cernavodă, May 2022



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Foreword



FOREWORD

Aleksandra Djukić, Bálint Kádár, Angelica Stan

The Danube is the most international and multicultural river on Earth, the main connection for cultures in Central Europe and the Balkans, but also a spatial system fragmented by borders in need to reconnect in its identity.

The natural wonders of this river and the capital cities on its shores usually get all the attention, but it is the smaller towns, often neglected in peripheral situations, that still today hold the multicultural essence of the Danubian Region. With this Atlas compiled by the DANUrB partnership our intention is to present urban communities along the Danube River which share similar tangible and intangible heritage in their local identities. One of the main aims of the DANUrB INTERREG Project is the reactivation of underused cultural heritage and resources in shrinking settlements of Danube river's peripheral and border regions in order to make them more attractive again.





A vision of a collaborating network of cities along the Danube allowed us to better understand the potentials for development whilst also exploring possible strategies. Therefore, it is our mission with this Atlas to show an interconnected spatial and cultural system of communities along the Danube, helping to understand the highly complex and dynamic transformation of our region through the centuries and to value its natural and built resources.

Besides the presentation of Danubian medium and small cities, and their undiscovered heritage and potentials, our mission was also to spread the successful stories and projects from the region, promoting the transferability of good practices to less developed towns. We aimed to make comparable the spatial development of the selected settlements along the Danube by using the common format of this Atlas for many diverse maps, photos, illustrations, and short texts.

The Atlas has five parts, and it is thematically organized into three sections regarding the periods of development: past, present and future. In the first introductory part the the-



oretical background about shrinking cities and border regions is explained, as well as the urban morphology of the cities along the Danube. Furthermore, the selection criteria of the representative cities for each period are explained. The second part is dedicated to the historic development of Danubian cities and towns starting from the period of early industrialization. The third part responds with the present situation underlining the current prospects and challenges in the urban development of Danube' shrinking cities. The fourth part is dealing with future prospects of development, through the presentation of the best practices in urban planning and urban design, showing urban acupuncture, grassroots movements and other innovative methods. The last part of the Atlas includes concluding remarks, recommendations, and visions for





the future development of medium and small Danubian cities. The large maps of the Atlas illustrate the following chapters explaining different aspects that influenced the development processes treated in the different parts. The small maps within the chapters are placed to provide better understanding of the selected urban areas and highlight the most important facts.

We hope this publication is useful as an introduction to regional and local urban development of Danubian cities, as a base for further research, as a teaching tool, but also as a source of information for locals and tourists. We therefore do believe that this Atlas will bring a new contribution to the spatial and cultural analysis of settlements along the Danube, empowering their potentials and visions for successful and sustainable development.



chapter 01 – OVERVIEW

Learning from the Past — Embracing Heritage

2.1

PRE-INDUSTRIAL CITY IN THE DANUBE REGION INTRODUCTION

Adam Németh

Before the 19th century, when rapid technological innovation and increasing urban development radically altered the relationship between rivers and cities, the Danube was the source of both opportunities and dangers for the human settlements built on its shores. Until modern times the river was unregulated, and many cities were surrounded by side arms and islands and were highly exposed to flood risk. Islands on the Danube, on the other hand, provided the townsmen with pasture for grazing animals, as well as land for orchards, and in times of danger offered refuge for the population, just like side arms could provide safe harbour for merchant ships.

Since ancient times, a major trade route run along the Danube which gave rise to important urban centres. During the medieval and early modern periods some of the latter had become royal and imperial seats (Esztergom, Buda, Vienna, Bratislava, Smederevo), others evolved into commercial hubs (Baja, Ruse, Tulcea) or military strongholds (Komárno, Petrovaradin, Golubac). Cities with distinguished political and military functions were often established at places where the river passed an elevated point offering a more easily defensible spot.

The fortunes of such centres were strongly dependent on the wars with the Ottoman Empire taking place in the region between the 14th and 19th centuries which saw major battles fought by the Danube (Nikopol, Belgrade, Mohács).

Before the industrial revolution and still during its early phase, urban economy was highly dependent on the resources provided by rivers which was reflected on the cities' riverside townscape (Fig. 041-042). Watermills (Fig. 043), ship mills, fishers' hous-

Fig. 041 / View of Novi Sad in the 19th century (Author: M. Troh, 19th century).





es, granaries and warehouses were typical structures to be found on the shores. Some cities, however, were separated from the river by their defensive systems and thus these structures stood outside the area of the city proper. In other cases, in front of the walls of fortified cities new settlements arose on the banks of the Danube. After the demolition of urban fortifications in the 18th-19th centuries, these were usually integrated into the neighbouring cities in both administrative and physical terms. In most cities, the 19th century brought about sig-

nificant changes to the urban riverscape: the building of embankments and bridges, the creation of parks and promenades, and the emergence of modern ports and industrial facilities caused the disappearance of traditional structures and entirely transformed the use and appearance of urban riverside areas.

Fig. 042 / A view of Ruse from 1824: Lithography (Autor: A. von Saar after a drawing of L. Erminy, 1824).



Fig. 043 / Shipboard watermill in Kolárovo, Slovakia. Author: F. Radulescu, 2021.



THE ARRIVAL OF RAIL AS THE “PIONEER” OF EARLY INDUSTRIALISATION IN THE DANUBE REGION



Fig. 220_01: The oldest major railway in the Middle and Lower Danube Region in Szob – the railway between Bratislava and Budapest (Author: P. Wolf)



Fig. 220_02: The old railway bridge across the Danube in Cernavoda in Romania, a state-protected heritage from early industrial era (Author: Danubian Guide)

The “golden age” of railway was the period of the late 19th and early 20th Century when 2/3 of the analysed small and medium-sized cities and towns along the Danube got their connection to European railway system. Consequently, the railway replaced waterways - the Danube and its main tributaries (Sava and Tisa) - as the key transportation corridors in this region.

The railway capacities are currently oversized and are not fully utilised, including railway stations, obsolete railway lines, and other infrastructure facilities. However, recent development in the European railway sector, with modernisation of the entire system (high-speed rail), indicates the future increase of the potential of this type of transport.



Fig. 220_03: Old inter-modal node in Smederevo between the railway and old port on the Danube (Author: K. Dankov)

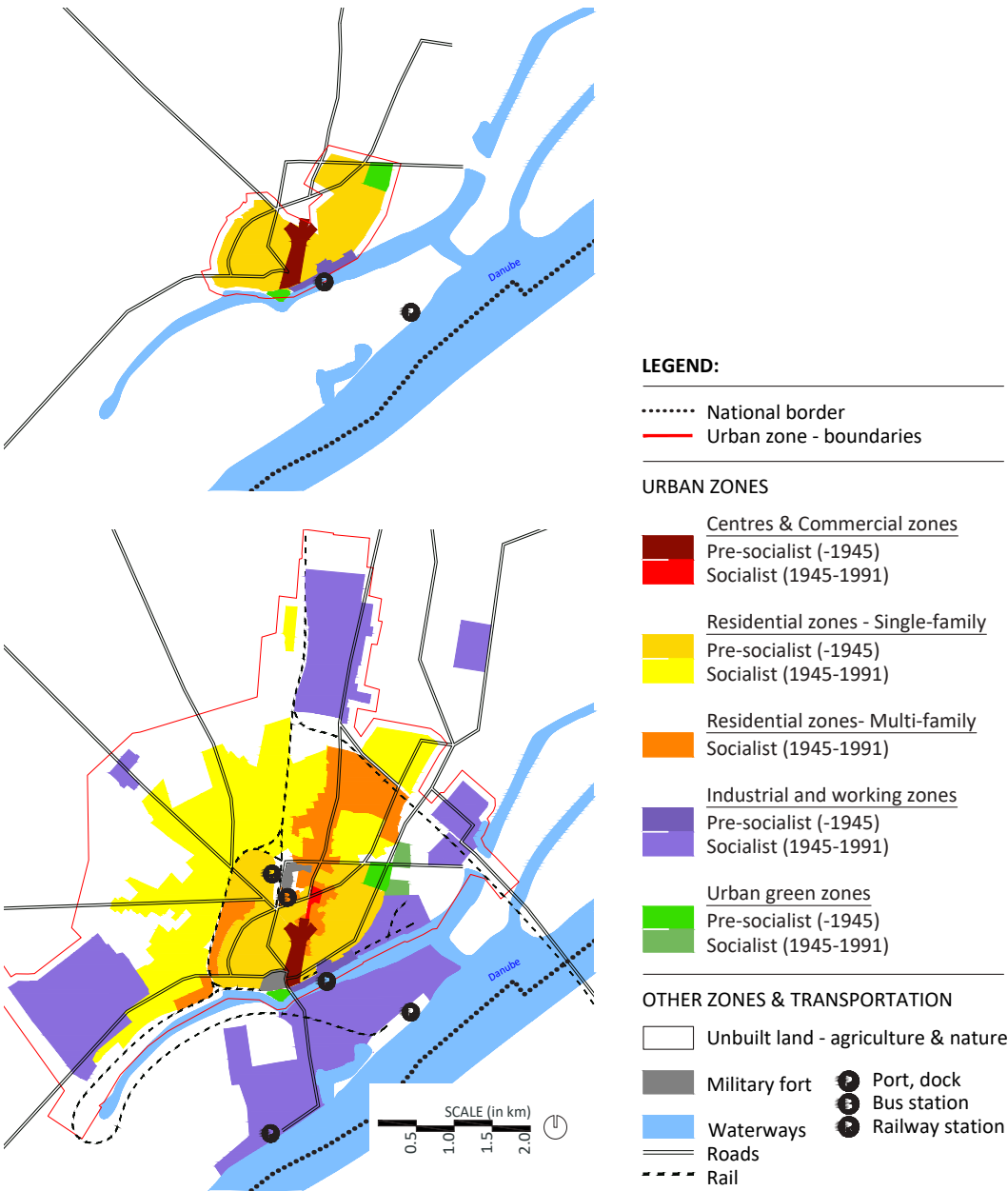
2.9.5

CASE STUDY 5 //
GIURGIU, ROMANIA

Angelica Stan
Sorin Manea

POPULATION:
1956: 32,413
1966: 31,999
1977: 51,440
1980: 74,191
1992: 74,000

Between 1945 and 1952, the Romanian communist regime triggered the process of “nationalisation”, confiscating large private properties and giving the agricultural land to so-called “cooperative working”. For the City of Giurgiu, whose development was essentially based on the relationship between agriculture in the Danube plenty meadows and the goods transportation on the Danube River, this stage was extremely harmful.



Like most cities in the country, Giurgiu enters a broad process of forced and fast industrialisation and urbanisation, meaning both gains and losses: the intra-muros territories are expanding, new infrastructure and urban amenities appeared in new functionalist districts (Fig. 128).

For this, the demolitions of old fabric were done without any prior documentation, with immeasurable losses; most part of the pre-war heritage – from architecture to culinary habits – if not physically destroyed, is denigrated, hidden for the new generation, eradicated or distorted. The urban planning ‘operations’ carried out in the existing urban fabric meant a distortion of the Giurgiu spatial identity and the imposition of a new aesthetic, consonant with the communist ideology. In 1963, a brutal intervention was made on the Central Square (“The plate”), when the historic system of streets and parcels was demolished and a new urban project based on a rectangular street system, totally alien to the existing morphological context, was imposed (Fig. 129). Meanwhile, the expansion of the urban fabric by the new mass-housing was outside the old city barriers.



Fig. 129 / Giurgiu Central area (“Farfuria” or “The Plate”) emblematic area partially demolished during the socialist period (photo credit: C. Ghita).

A very important moment of the socialist period is the construction of the “Friendship Bridge” over the Danube, the first one between Romania and Bulgaria, opened in 1954 (Fig. 130), almost in the same period with the Giurgiu Nord Railway Station (1952). During the socialist period, industrial development also imposed a larger connectivity, both on roads and rails, and Giurgiu extended its historical railway infrastructure.

Fig. 130 / The skyline of Giurgiu with “Friendship Bridge” over the Danube (Author: C. Ghita).



- Giurgiu Municipality (2009). Plan urbanistic general Municipiul Giurgiu / General Urban Plan of Giurgiu. Retrieved from [www.primariagiurgiu.ro/portal/giurgiu/primarie/portal.nsf/0/A1AB333C3D93A81A42257AB600332F0E/\\$FILE/RLU%20final.pdf](http://www.primariagiurgiu.ro/portal/giurgiu/primarie/portal.nsf/0/A1AB333C3D93A81A42257AB600332F0E/$FILE/RLU%20final.pdf).
- Ionescu, G- (1994). *Comunismul în România / Communism in Romania*. Bucharest: Litera.

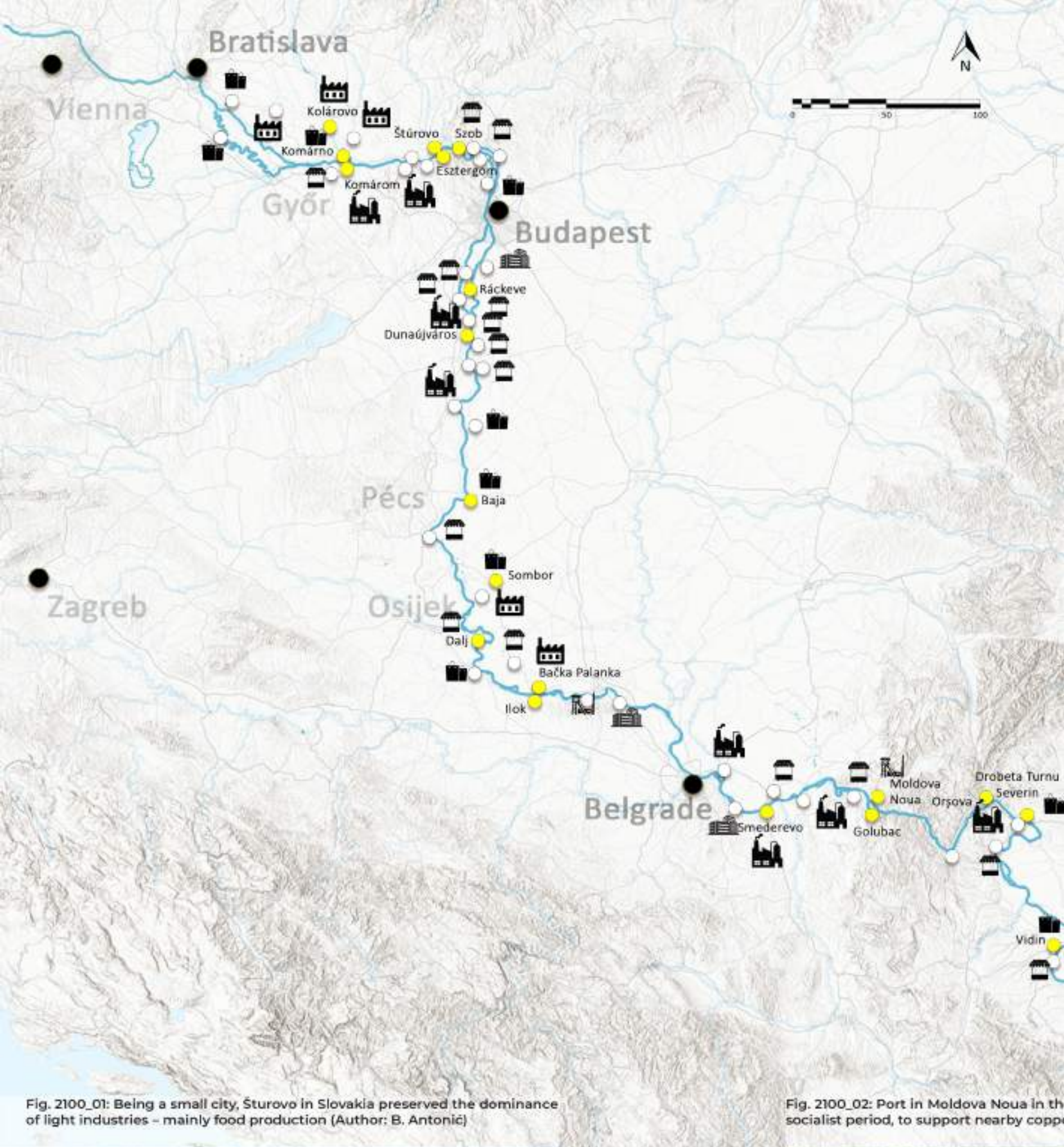


Fig. 2100_01: Being a small city, Šturovo in Slovakia preserved the dominance of light industries – mainly food production (Author: B. Antonić)

Fig. 2100_02: Port in Moldova Noua in the socialist period, to support nearby copper



THE CHARACTER OF URBAN ECONOMY DURING SOCIALIST MASS-INDUSTRIALISATION

One of the main features of urban development during socialist era (1945-1991) was mass-industrialisation. Many cities and towns along the Danube got spacious industrial zones along the river banks. This followed then modern "hygienic model" that a new industrial zone should be located at a river bank, downstream of a city or town. Today, many such zones are large brownfield sites. Interestingly, some smaller cities and towns omitted this destiny and have preserved their traditional role of market places for nearby villages.

- 1. HI:** Developed industrial city/town with the dominance of heavy industry in local economy (machinery, iron- and steelworks, automobiles, complex chemical)
- 2. LI:** Developed industrial city/town with the dominance of light industry in local economy and with the variety of industrial sectors (food, furniture, textile, leather, wood, ceramics)
- 3. EI:** Early industrial city/town with basic industry, such as food or wood industry, but where the main economic sectors are still trade and crafts
- 4. TM:** Mining town around a mine or quarry (based on mineral deposits, cement processing)
- 5. MT:** Market town with development active central market square/street and local crafts, but with no industry and with agriculture at outskirts
- 6. SC:** Service city where the modern tertiary sector (retail, services, tourism) is dominant, while industry is at the second place
- 7. SU:** A special type of the town with the facilities of a local service centre facilities which is under the strong influence of a big city in vicinity (but it still not a typical suburb)



...e Romania. The town was established in
...er mining activities. (Author: M. Danciu)

Fig. 2100_03: Donji Milanovac was relocated in the 1970s. However, the small enterprises of light industry were not sufficient to overcome the inherited position of a locally-relevant market town (Author: B. Antonić)



2.11

THE RISE OF MONO-CITIES AND NEW CITIES
ALONG THE DANUBE // INTRODUCTION

Ștefana Bădescu

The socialist and communist political regimes, which took hold of power in countries across Eastern and Central Europe following the World War II, significantly altered the existing urban landscape, be it through radical interventions within the built fabric or through new developments done accordingly to contemporary modernist principles.

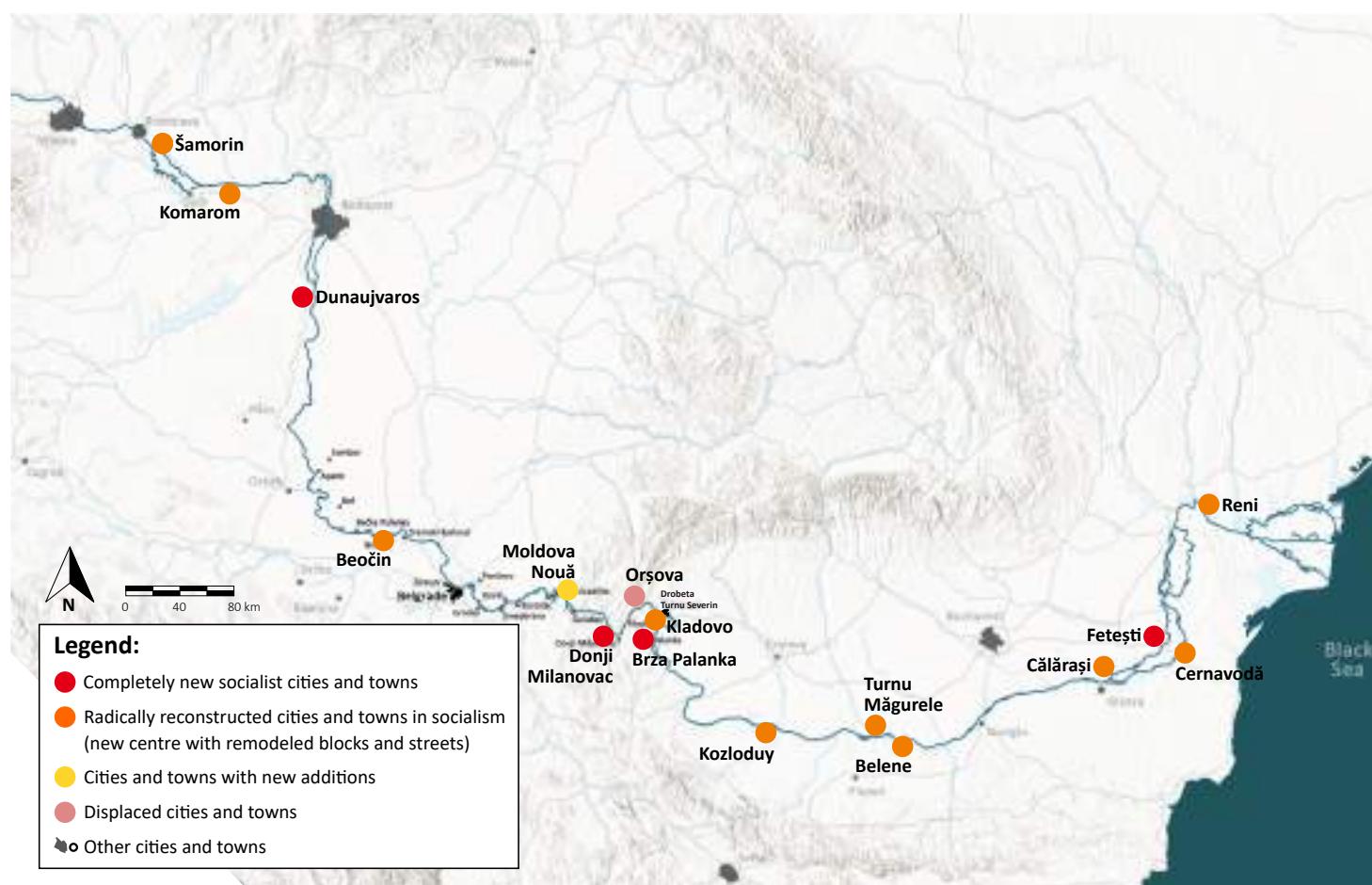


Fig. 131 / New (or radically-refurbished) towns and cities along the Danube under socialist administration (Author: Ș. Bădescu, 2021).

Born as a natural consequence of the accelerated industrialisation process (Bubulete, 2010), the new or newly-refurbished towns and cities were usually built next to a large, centralised industrial facility, which exploited the natural resources of the surrounding area. The Danube and its waterfronts hosted many similar interventions (Fig. 131) due to the high

accessibility and connectivity of these areas, as well as to the numerous (and various) resources found nearby. Attracting large numbers of workers from the rural surroundings, these new settlements experienced a rapid, sometimes formidable growth, while also serving another, more subtle, purpose – the ‘urbanisation’ of the population of these countries.

The new developments usually followed the principles of modernist urban planning, adapted to better suit the socialist philosophy (Fig. 132). As such, the new cities aimed towards a functional segregation, for instance, between industrial and residential areas. At the same time, the multi-family housing estates, conceived as independent units, offered both lodging and public facilities (such as schools, medical services and community centres) to their inhabitants (Bădescu, 2017). Moreover, in order to reflect the grandeur and welfare of the industrialised society, they sometimes incorporated large-scale urban arrangements (Zahariade, 2011), such as boulevards or squares, lined with public buildings and monuments glorifying the fathers of the socialist nation (Fig. 133).

This glory, however, significantly declined following the transition towards a free market economy, in the early 1990s. The industrial activities, the key economy in the “new” socialist towns and cities, gradually became irrelevant and thus many of the existing facilities were forced to shut down. Currently, the mono-cities built along the Danube thus face a difficult challenge: how to adapt to the new economic realities, while also maintaining their heritage and inhabitants.



Fig. 132 / Ivan Leonidov, 1930: proposal for an ideal socialist city – competition entry for the new city of Magnitogorsk (USSR) (Source: SOCKS project, 2016, socks-studio.com).



Fig. 133 / Eisenhüttenstadt was formed as a socialist model city in Eastern Germany in 1950. Today, the city is the showcase of extreme shrinkage. (Author: B. AntoniĆ, 2018).

R

- Bădescu, Ș. (2017). Locuirea colectivă în spațiul urban contemporan. Antecedente, realități actuale, perspective (Collective Living in the Contemporary Urban Space. Background, Current Realities, Perspectives). Timișoara: Editura Politehnica.
- Bubulete, D. (2010-11). Urbanismul socialist al anilor 1944-1969 (Socialist Urbanism 1944-1969). Urbanismul: Serie nouă, 7-8, 92-97.
- Zahariade, A. (2011). Arhitectura în proiectul comunist. România 1944-1989 (Architecture in Communist Project. Romania 1944-1989). Bucharest: Editura Simetria.

2.11.1

CASE STUDY 1 // DUNAÚJVÁROS, HUNGARY

Kornélia Kissfazekas

POPULATION:

1949: 3,949

1960: 30,976

1970: 45,129

1980: 60,736

1990: 59,028

In 1949, in the immediate vicinity of the old fishing village of Dunapentele on the banks of the Danube River in Central Hungary, the government started to build the country's first Socialist industrial city, Sztálinváros (meaning **Stalin's City**). Intended as a model city, its construction in the 1950s was a flagship project closely connected to the establishment of the ironworks, and thus the choice of the site had been determined by the needs of iron production technology (Pittaway, 2005).

Fig. 134 / A view toward the Római Városrész Microrayon/ district (left) (Source: Wikimedia Commons; Author: Akutyambuksi, 2010)

Fig. 135 / Vasmű út, the main boulevard, in 1962 (right) (Source: Fortepan / Lechner Nonprofit Kft. Dokumentációs Központ; fortepan.hu/hu/photos/?id=29241).

The planners sought to implement progressive urban design principles following the essential requirement of zoning. Their planning concept was defined as a 'microrayon' – a primary neighbourhood unit provided with basic social services (Fig. 134). The political leadership, however, demanded that the architecture and spatial organisation of the new settlements reflect the new social order, and so these had to express the ideological and functional role of heavy industry in the life of the city (Kissfazekas, 2017). Consequently, the Vasmű út (Iron

works road – Fig. 135), a boulevard of grandiose proportions connecting the city centre with the plant's main entrance, became the representative urban axis of the city touching the various neighbourhood units which, due to the prolonged construction period, show the architectural and urban characteristics of both socialist realism and modernism (Kustlits, 2013) (Fig. 136). In 1961, the city was renamed Dunaújváros. Around 1980 the city population peaked at 60,000 (Fig. 137).



At the end of the 1980s, Dunaújváros entirely lost its privileged position, yet it did not have to suffer such a traumatic transition during the regime change because the privatisation of the ironworks was delayed until 2004. However, the city lost its former youthful image and its population embarked on the path of rapid ageing (Szirmai, 2016) and has shrunk to the current number of 43,000, with a tendency to continue. Among the new cities in Hungary, Dunaújváros has the greatest potential for commercialising its past and thus the marketing of the city heavily relies on its unique built heritage stripped of its political connotations, what is exemplified by a decades-old educational trail showcasing the diversity of local post-war architecture.

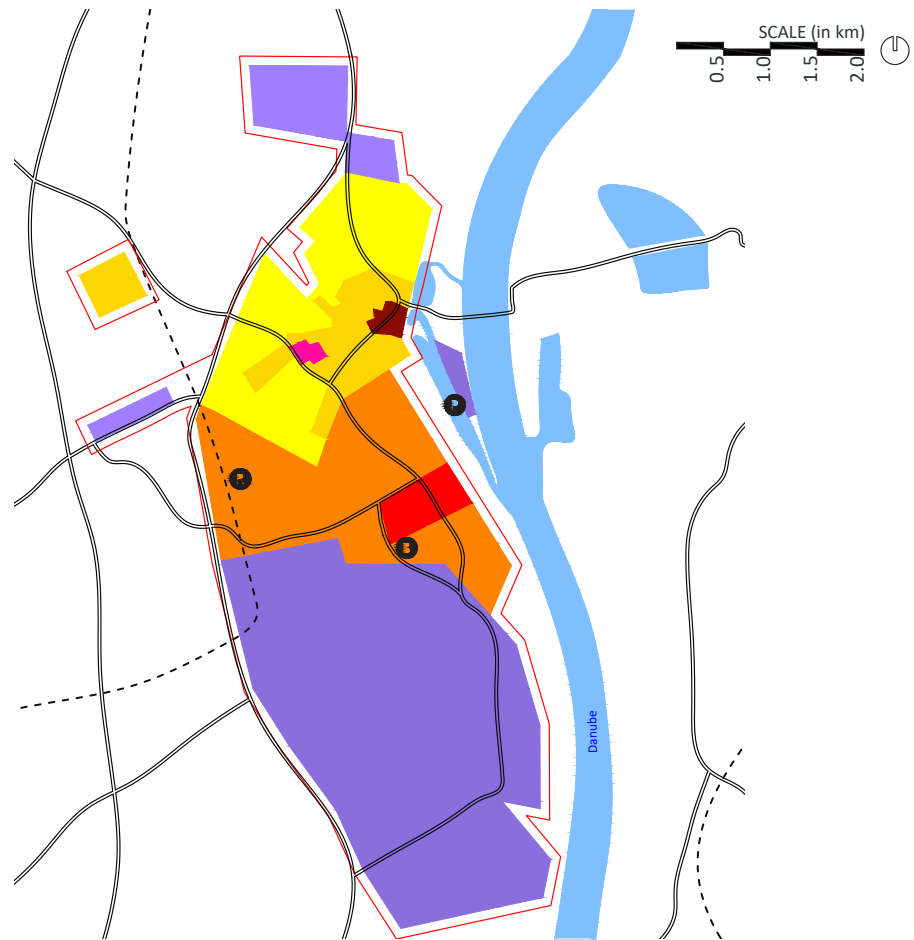


Fig. 137 / The spatial development of Dunaújváros 1945-1991 (Author: K. Kissfazekas, 2021).

LEGEND:

..... National border
 — Urban zone - boundaries

URBAN ZONES

Centres & Commercial zones
 ■ Pre-socialist (-1945)
 ■ Socialist (1945-1991)

Residential zones - Single-family
 ■ Pre-socialist (-1945)
 ■ Socialist (1945-1991)

Residential zones- Multi-family
 ■ Socialist (1945-1991)

Industrial and working zones
 ■ Pre-socialist (-1945)
 ■ Socialist (1945-1991)

Urban green zones
 ■ Pre-socialist (-1945)
 ■ Socialist (1945-1991)

OTHER ZONES & TRANSPORTATION

□ Unbuilt land - agriculture & nature
 ■ Waterways
 — Roads
 - - - Rail
 ● Port, dock
 ● Bus station
 ● Railway station

Fig. 136 / The town hall of Dunaújváros in 1970 (Source: Fortepan / Lechner Nonprofit Kft. Dokumentációs Központ. fortapan.hu/hu/photos/?id=29233).

R

- Kissfazekas, K. (2017). Changes of Town Centres in the Era of State Socialism – Processes and Paradigms in Urban Design. In: A&U Journal of Architectural and Town-planning Theory 51(1-2). 27-19.
- Kustlits, T. (2013) Szocreál építészet Magyarországon: Dunaújváros építéstörténetének különös tanulságai (Socrealist Architecture in Hungary: Special Lessons from the Construction History of Dunaújváros). Széchenyi István University. Retrieved from https://issuu.com/htms4/docs/atrium_szocreál_epiteszet_magyarorszagom.
- Pittaway, M. (2005) Creating and Domesticating Hungary's Socialist Industrial Landscape: From Dunapentele to Sztálinváros, 1950–1958. Historical Archaeology, 39, 75–93.
- Szirmai, V. (Ed.) (2016) „Artificial Towns” in the 21st Century. Social Polarisation in the New Towns Regions of East-Central Europe. Budapest: Institute for Sociology Center for Social Sciences MTA.

2.11.2

CASE STUDY 2 //
DONJI MILANOVAC, SERBIA

Vladimir Parežanin

POPULATION:

1948: 2,274
 1953: 2,629
 1961: 2,669
 1971: 2,595
 1981: 2,996
 1991: 3,265

Donji Milanovac is probably a unique town in Europe – it has been twice relocated and redeveloped by plan in the last two centuries (Fig. 138). The first settlement, known as Poreč, was formed on the nearby Danube Island in the 18th century as a safe location. However, due to frequent floods, Prince Miloš Obrenović of Serbia relocated the town by decree to the Danube right bank in 1832. The “New” Poreč was the first completely planned, orthogonal settlement in modern Serbia (Kojić, 1970). The town also got a new name – Donji (Serb. Lower) Milanovac – by this Serbian ruler in 1859.

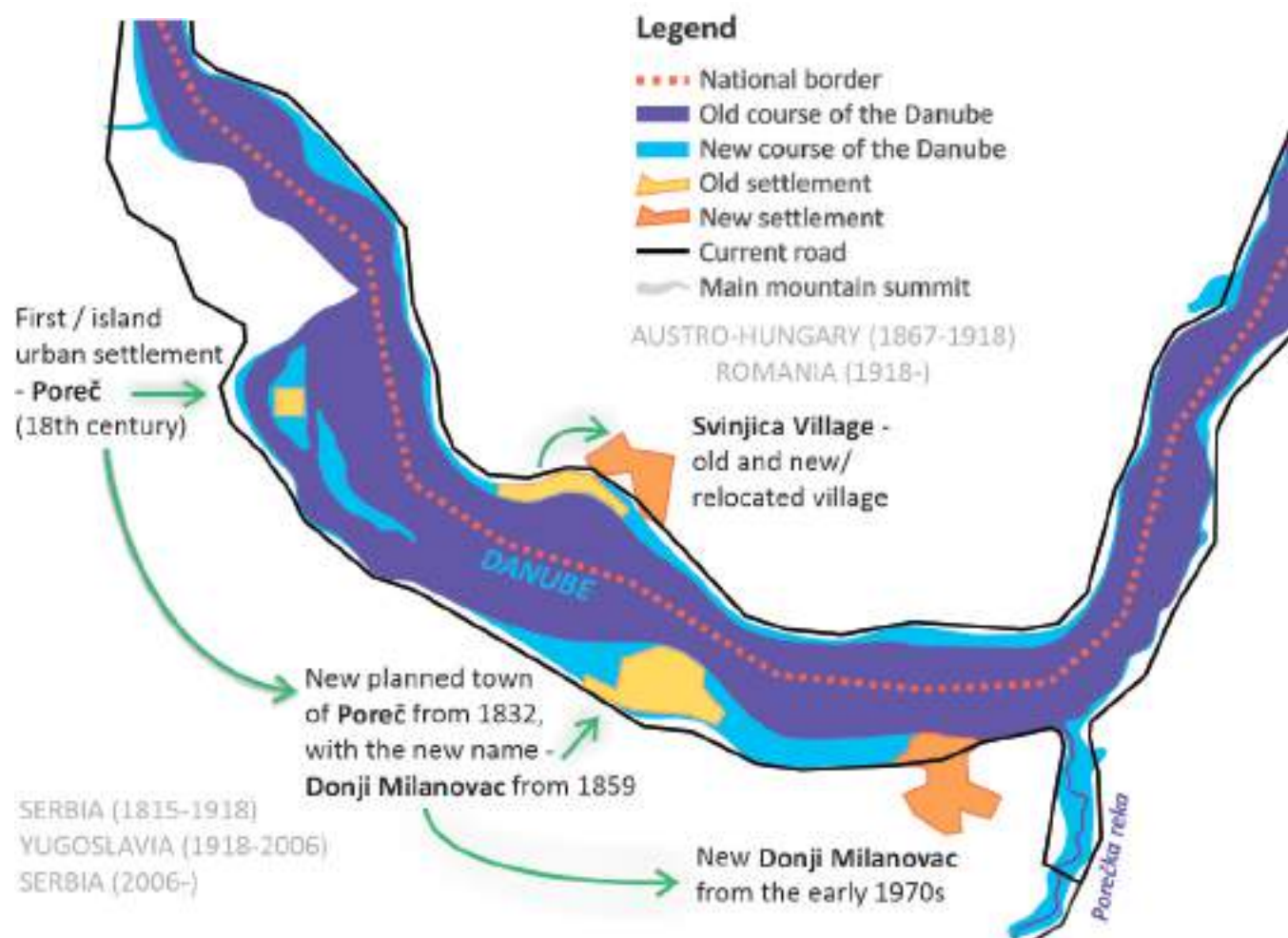


Fig. 138 / Three locations of Donji Milanovac in last two centuries (Author: B. Antonić, 2021)

Being one of the main ports and trade points on the Serbian Danube, Donji Milanovac had an intensive economic development during the middle 19th century, finally obtaining town rights in 1866. The town orthogonal matrix was easily implemented. Its core represented an intersection of two main streets, one following the Danube and the second linking the town port with Serbian hinterlands. The crossroad was enlarged into a central square, surrounded by a church and public buildings (Fig. 139).

The development of Donji Milanovac was slowed during 20th century as waterway transport and trade decreased. However, an upheaval for the town was the formation of the huge artificial Iron Gates Reservoir in the ear-

ly 1970s. This town was the largest of several relocated settlements on the Serbian side of the Danube. The settlement was relocated 5 kilometres downstream. The new town was shaped in a modernist manner, with the division between a lower central part with more rigid matrix, and an upper, residential part, with an intentionally winding street plan (Fig. 139). All main public institutions and open spaces were situated along the Danube Promenade (Fig. 140). Despite the achieved modern look and well-organised planimetry, the relocation of Donji Milanovac has proven to be a huge stress for local population and economy. Consequently, Donji Milanovac entered the period of stagnation and finally started to shrink rapidly during the post-socialist transition in the early 1990s (Orlović, 1994).



Fig. 140 / Donji Milanovac today: Town Centre with the Danube Riverside (Author: B. Antonić, 2021)

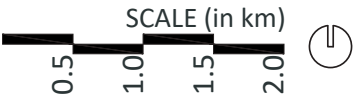
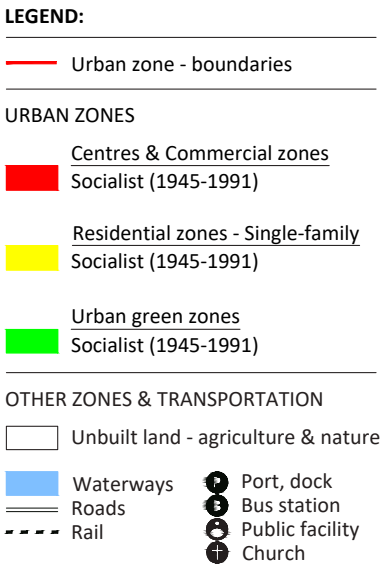
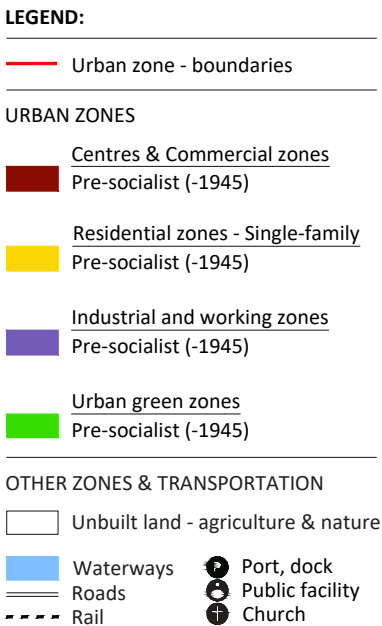
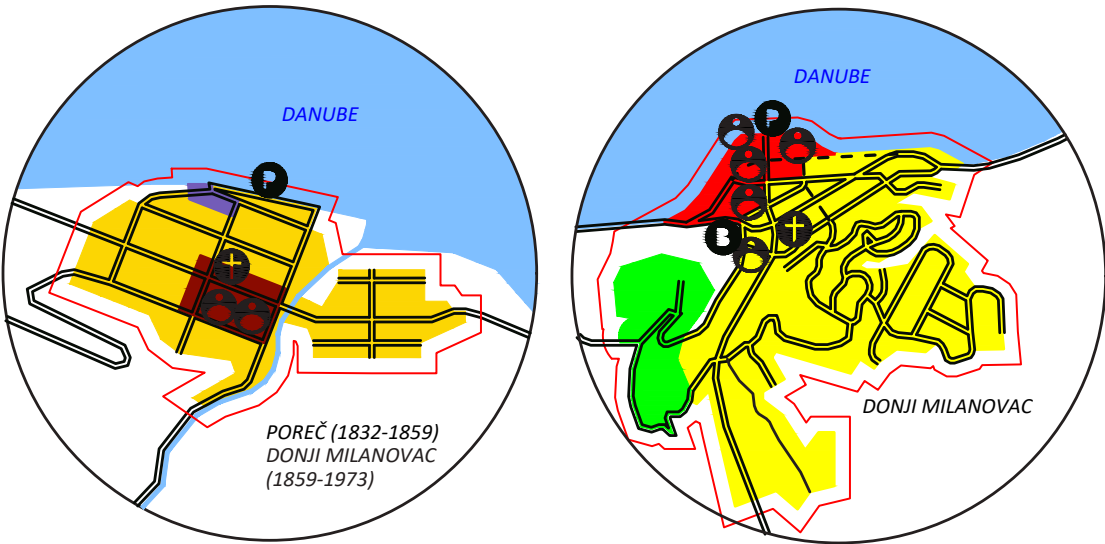


Fig. 139 / Old and new Donji Milanovac: Situation in 1945 (left) and Situation 1991 (Right) (Author: V. Parežanin, 2021)

R

- Kojić, B. (1970). Варошице у Србији 19. века [Market Towns in Serbia in 19th Century]. Belgrade: Građevinska knjiga.
- Orlović, J. (1994). Поречке сеобе [Poreč Migrations]. Donji Milanovac: Mesna Zajednica.

2.11.3

CASE STUDY 3 // MOLDOVA NOUĂ, ROMANIA

Ștefana Bădescu

POPULATION:

1956: 3,582

1966: 6,192

1977: 15,973

1992: 16,874

*** Moldova Nouă Urban Area includes four settlements: Moldova Nouă, Moldova Veche, Măcești and Moldovița**

Similar to other Romanian settlements along the Danube and elsewhere, the evolution of Moldova Nouă and its surrounding settlements was strongly influenced by the industrialisation process, led by the socialist administration during the second half of the 20th century (Bădescu, 2017).



Fig. 142 / The old part of the town – the former village of Moldova Veche – from the Danube (Author: N. Mitrović, 2022).

Initially a network of small-scale, rural settlements (Fig. 141 left), developed along the Danube ever since ancient times, in relation to the water and nearby non-ferrous resources, Moldova Nouă only became a city in the 1950s. From that moment on, the centralised admin-

istration began to valorise the mining potential of the area and developed a large industrial site between Moldova Nouă, Moldova Veche and the Danube itself (Fig. 141 right). The new-found economical boost attracted new settlers in Moldova Nouă, whose population increased



Fig. 141 / Moldova Nouă Urban Area before and after the socialist period: Situation in 1945 (left) and Situation in 1991 (right)

significantly in the 1960s and 1970s. This demographical explosion was naturally followed by the development of a new mass-housing neighbourhood (Fig. 142), built according to modernist principles (Derer, 1985) in the vicinity of Moldova Veche and along the Danube (Fig. 143). Although Moldova Nouă was not dramatically affected by the formation of the Iron Gates Lake in the early 1970s, its lowest lands were lost to the lake, which in turn led to a fractured relation between the urban fabric and the water itself.

The 1989 Revolution and the following transition towards a free-market economy led to the collapse of the industrial activities, which suddenly became irrelevant, triggering demographic decline. However, the real exodus began after Romania joined the EU in 2007, with large numbers of locals leaving home in order to find work in the Western countries. Nowadays, a few initiatives seeking to boost tourism, as well as the reopening of the local copper mine in May 2021, paint a more favourable image for the future.



LEGEND:

- National border
 - Urban zone - boundaries
- URBAN ZONES**
- Centres & Commercial zones
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
 - Residential zones - Single-family
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
 - Residential zones- Multi-family
 - Socialist (1945-1991)
 - Industrial and working zones
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
 - Urban green zones
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
- OTHER ZONES & TRANSPORTATION**
- Unbuilt land - agriculture & nature
 - Waterways
 - Roads
 - - - Rail
 - Port, dock
 - Public facility
 - Church

Fig. 143 / The new mass-housing neighbourhood, built near Moldova Veche under the socialist administration (Author: Ș. Bădescu, 2022).

R

- Bădescu, Ș. (2017). Locuirea colectivă în spațiul urban contemporan. Antecedente, realități actuale, perspective (Collective living in the Contemporary Urban Space. Background, Current Realities, Perspectives). Timișoara: Editura Politehnica.
- Derer, P. (1985). Locuirea urbană. Schiță pentru o abordare evolutivă (Urban Housing. Outline for an Evolutionary Approach). Bucharest: Editura Tehnică.

2.11.4

CASE STUDY 4 // ORȘOVA, ROMANIA

Mihai Danciu

POPULATION:

1956: 3,582

1966: 6,192

1977: 15,973

1992: 16,874

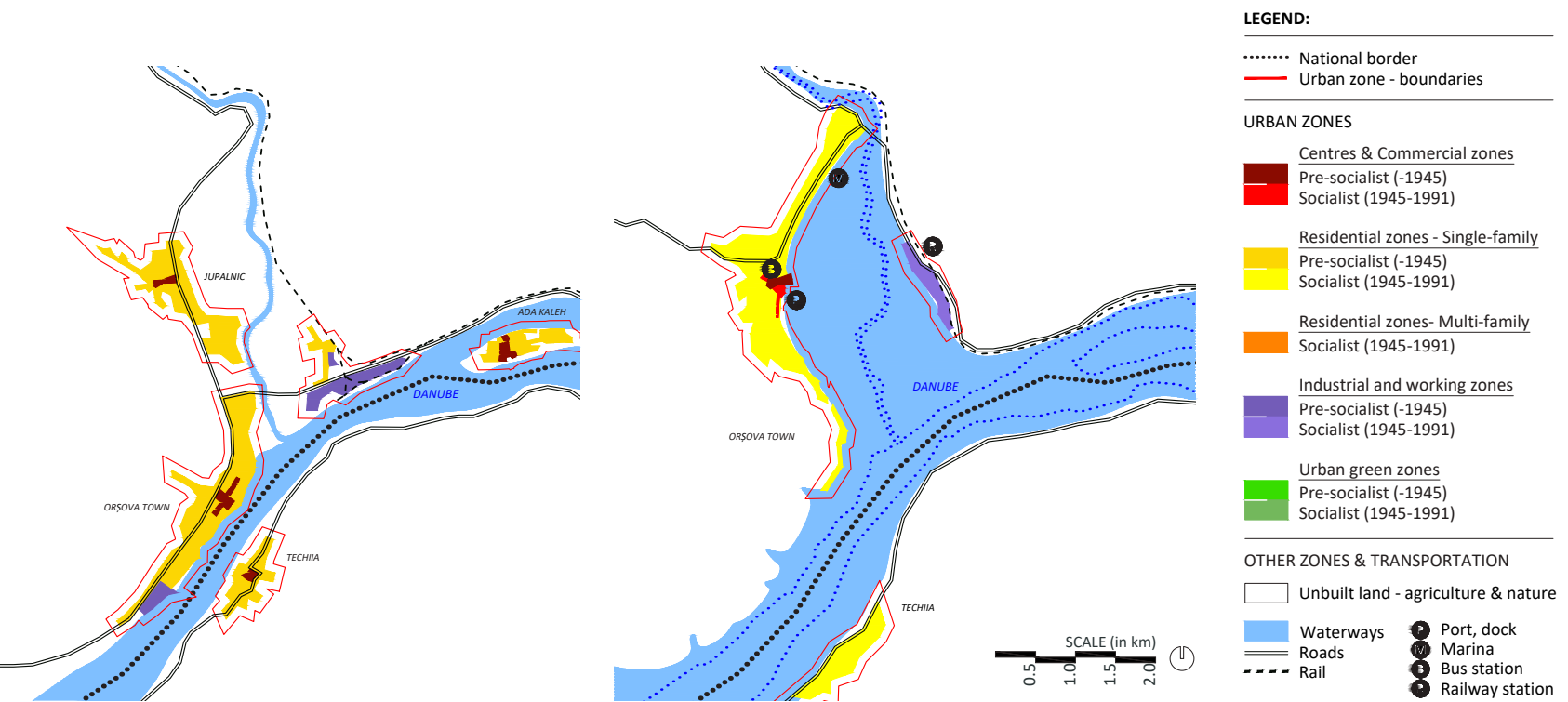
An objective observer can see the history of Orșova as being composed of two distinct historical stages, both influenced by the decisive position at the discharge of Cerna River into the Danube and the exit of the Danube from the Iron Gates Gorge. Its former character, as a border town in relation to the commercial island of Ada Kaleh, was lost with the appearance of the Iron Gates hydrotechnical lake (1965-1975) and the relocation of the town on the south-eastern slopes of the Almăj Mountain. Unlike most cities of its size, Orșova managed to keep its industrial character, imprinted with the relocation and formation of a new urban matrix (Fig. 144).



Fig. 144 / The new city, built on terraces along the Cerna Gulf (Author: Bianca Iagăr)

Between 1965 and 1975, the historic hearth of Orșova was relocated about 3.5 km to the North-West to allow the formation of the Iron Gates Reservoir (Fig. 145). The new location can be seen as an amphitheatre facing the Danube, with a specific architecture of socialist modernism embodied in a civic

centre. The town Church of The Immaculate Conception, the work of the architect Hans Fackelmann, which is the only Roman Catholic church built during the communist period, stands out as a particular architectural and cultural insertion (Fig. 146).



The economic role of the new town in the territorial structure of the communist state was one of a port and shipyard on the Danube, built to house the families of those who worked in the shipbuilding industry. From the perspective of the big scale economy, continuity is maintained. As before 1989, the port ensures efficient transport even today. It also has a modern passenger terminal with a river station. The shipyard remains to this day, as the most important economic driver of local economy. Developing tourism is also changing townscape, in the form of the beautified river esplanade or as the unplanned extensions along the Danube shores.

Fig. 146 / The Roman Catholic Church of The Immaculate Conception as a particular architectural and cultural insertion in the modernist fabric of Orșova (Author: Ș. Badescu, 2022).



R

- Voștinaru, M. (1981) Orașul Nou Orșova (New Orșova Town), Arhitectura Magazine, 4-5, 60-63.
- Miclăuș, M. (2018). Fackelmann – Biserica Catolică Orșova 1976. Text critic (Fackelmann – Catholic Church in Orșova 1976. Critique). Bucharest: eZeppelin.

2.11.5

CASE STUDY 5 // BELENE, BULGARIA

Miriana Yordanova

POPULATION:

1946: 6,898
1956: 10,746
1965: 8,905
1975: 9,177
1985: 9,134
1992: 10,453

*** Belene Urban Area includes six settlements: Belene, Byala voda, Dekov, Kulina voda, Petokladenci, Tatari.**

The socialist period (1945-1991) left a recognisable mark on Belene, the only Bulgarian Danube town without a port, leaving the Danube Shore in a natural state (Fig. 147). Belene became a town in 1964. In the early 1980s, a new urban plan was worked out, following the designation of a site for the construction of the second nuclear power plant in Bulgaria. Belene General Urban Plan (1983) reflected the socio-economic and infrastructural factors typical for a centralised planned economy. As a result, the construction sector marked a particularly intensive development. The preparatory construction works included an administrative building, a hotel and an ensemble (Fig 148), which was part of the new look of the central part of the city. The construction of the power plant began in 1987 and continued through 1990, along with the building of 2,044 new homes (117,649 m² of living space), kindergartens, schools and green areas in the central part of the town. A new modernist residential estate, Dimum, began to be built, but was never finished, and so was an industrial zone in the style of modernist functionalism, in the southwestern area.



Fig. 147 / Belene Islands Archipelago (Author: M. Iordanova, 2021).

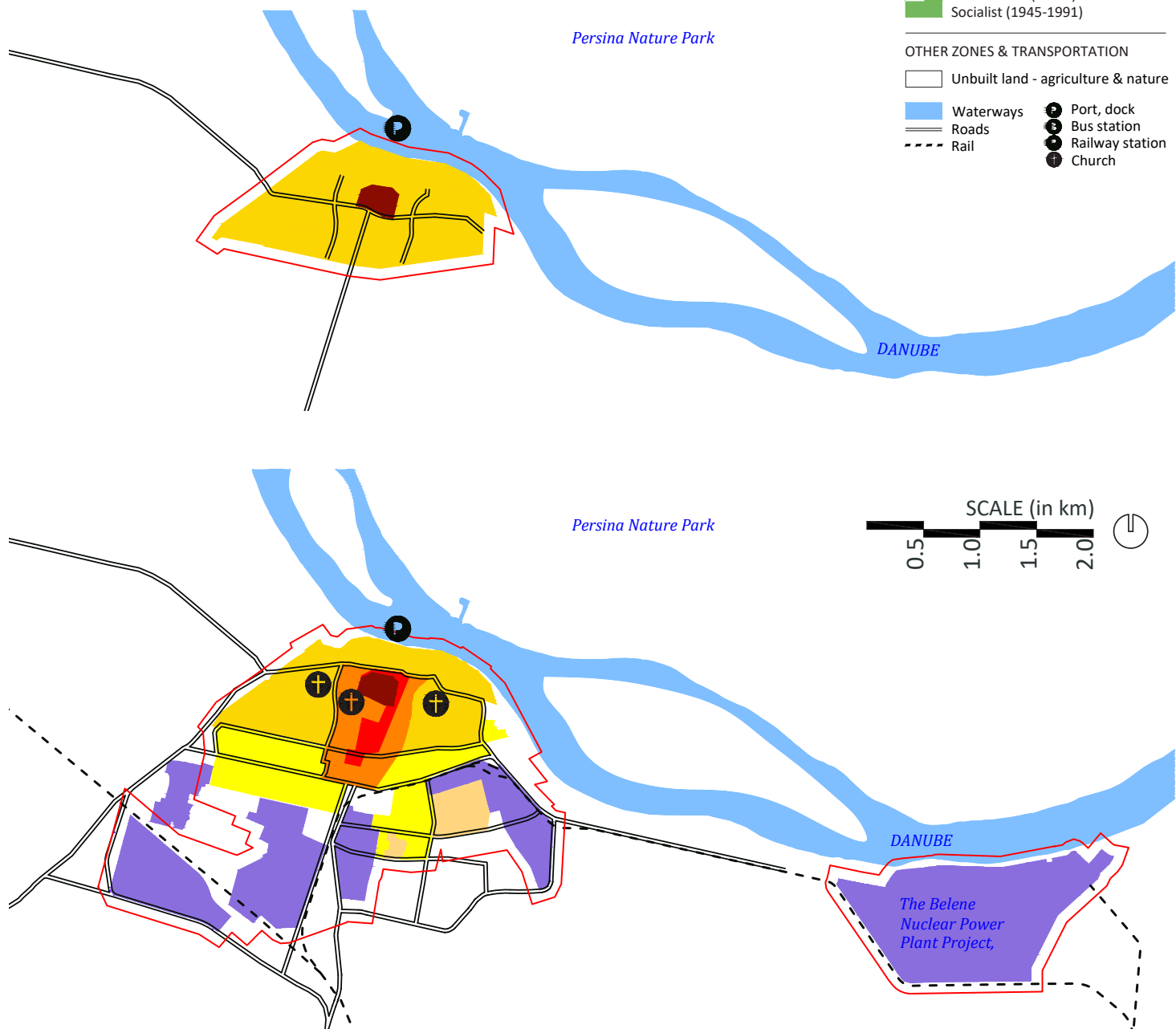


Fig. 148 / The ensemble of the administrative building of unfinished nuclear power plant, a hotel and a restaurant (Author: M. Iordanova, 2021).

During the 1990s, the municipality of Belene, just like the rest of the country, faced the challenges of an economic crisis. Due to the lack of funds, 40% of the construction work completed and 80% of the equipment delivered, the “Belene Project” was frozen. Some elements are planned for the future (Fig. 149). During the recent period, The Persin Island Memorial

Park and the 20th Century Martyrs Museum was erected. The park is related to a grim fact in Bulgarian history – the socialist regime set up a labour camp on the nearby island of Persin. The memorial park and local Rome Catholic sanctuary dedicated to Monsignor Bosilkov, Belene martyr, have become the major landmarks of the town.

Fig. 149 / Belene Urban Area before and at the end of the socialist period: Situation in 1945 (left) and Situation in 1991 (right) (Author: M. Iordanova, 2021).



R

- Dzhordheta, A. (2006). Край брега на Дунава. Начало на католическите общности в България (Along the banks of the Danube. Beginning of the Catholic communities in Bulgaria). San Gabriele, IT: Editoriale Eco.
- Skochev, B. (2017). Концлагерът Белене (Belene Concentration Camp 1949-1987). Sofia: Siela.
- Йорданова М., Мотев, С. & Димитров, Д. (2012). Общ устройствен план на град (General Development Plan of the Town of Belene). Retrieved from <https://belene.bg/%D0%BE%D0%B1%D1%89-%D1%83%D1%81%D1%82%D0%BE%D0%B9%D1%81%D1%82%D0%B2%D0%B5%D0%BD-%D0%BF%D0%BB%D0%B0%D0%BD/>

chapter 03 – POTENTIALS AND CHALLENGES OF THE PRESENT

Potentials and Challenges of the Present

D+ Atlas

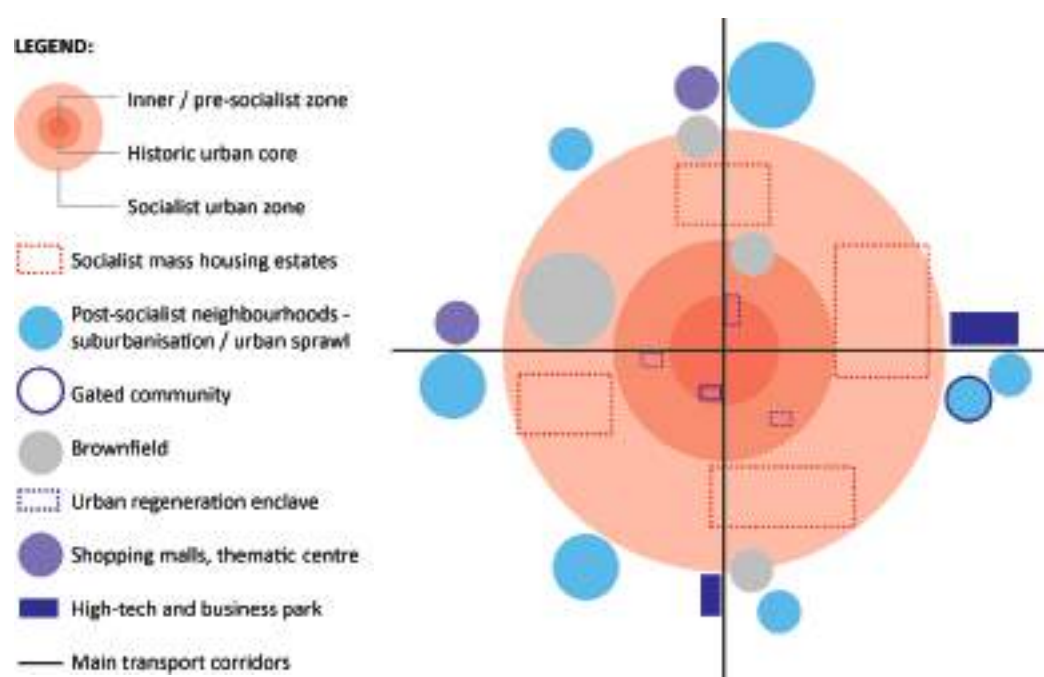
3.1

DANUBIAN CITY IN POST-SOCIALIST TRANSFORMATION // INTRODUCTION

Georgi Georgiev

The overall transition of post-socialist countries has been one of major contemporary processes in Europe (Stanilov, 2007). This transition has been comprehensive and multilayer; from planned to market economy; from industrial era to post-industrial era, from one-party to multi-party system, from self-dependence to globalisation (Petrović, 2005). This process has been sudden and loosely controlled in many ways, so it has the elements of a “shock therapy” (Stryjakiewicz et al, 2012).

Fig. 150 / Model of the structure of post-socialist city (Author: B. Antić, 2022)



Cities in the post-socialist countries have carried the reflections of these huge changes, with a new order in urban development, characterised by new socio-economic features, such as the rise of service sector, privatisation, deindustrialisation, commercialisation, social and spatial polarisation and fragmentation (Fig. 150). These changes strongly affected regional urban development, with the new urban tools and processes: planning

deregulation, boom of property market, polycentrism, mixed-use, brownfields and urban regeneration, urban sprawl, suburbanisation, etc (Fig. 151-153).

One of the widespread urban processes in this consideration is urban shrinkage. 82% of bigger post-socialist cities (>200,000 inhabitants) were shrinking in the early post-socialism, during the 1990s (Turok & Mykhnenko, 2007).

Fig. 151 / The new “look” of mass-housing estate to prevent its deprivation in Nova Gorica, Slovenia (Author: B. AntoniĆ, 2015)



The recent research of Restrepo Cadavid et al (2017) confirms that urban shrinkage is still the prevalent model of urban development across post-socialist region, whereas in Romania and Bulgaria affects more than 90% of all urban settlements. The same research also points out that small, spatially isolated and single cities are more prone to urban shrinkage. Knowing that the Danube flows through many post-socialist countries, where it is a significant physical obstacle and a national border in many cases, shrinking cities and towns dominates along its riverbanks. However, as well as many other global and regional processes, both post-socialist urban transformation and urban shrinkage have many local peculiarities (Richardson & Woon Nam, 2014), which are explained in the following case studies.



Fig. 152 / Empty and derelict building in central Kaunas, Lithuania (Author: B. AntoniĆ, 2016)

Fig. 153 / Suburbanisation as a “population flight” from central city, Gdynia, Poland (Author: B. AntoniĆ, 2018)

R

- Restrepo Cadavid, P., Cineas, G., Quintero, L. & Zhukova, S. (2017). Cities in Eastern Europe and Central Asia: A Story of Urban Growth and Decline. Washington, DC: World Bank.
- Richardson H. & Woon Nam C. (Eds.) (2014), Shrinking Cities: A Global Perspective. London: Routledge.
- Stanilov, K. (Ed.) (2007). The Post-Socialist City. Dordrecht: Springer.
- Strykiewicz, T., Jaroszevska, E. & Ciesiółka, P. (2012). Urban Shrinkage and the Post-Socialist Transformation: The Case of Wałbrzych (Poland). In C. Martinez-Fernandez, N. Kubo, A. Noya & T. Weyman (Eds.), Demographic Change and Local Development: Shrinkage, Regeneration and Social Dynamics (pp. 79-84). Paris: OECD.
- Turok, I. & Mykhnenko, V. (2007). The trajectories of European cities, 1960–2005. Cities, 24(3), 165–182, DOI: 10.1016/j.cities.2007.01.007.

3.1.1

CASE STUDY 1 // GABČÍKOV, SLOVAKIA

L'ubica Vitková

POPULATION:

1990: 4,910

2001: 5,084

2011: 5,361

2021: 5,232

Gabčíkovo is connected with the Danube and the Danube Plain, the most fertile agricultural area in Slovakia. That determined its character. Gabčíkovo developed as an agricultural village with market law, with agriculture homesteads, breweries, distilleries, sugar factory, and several water mills on the Danube (Dudášová, 2012). However, the construction of the Gabčíkovo Waterworks (Fig. 154) fundamentally changed its rural appearance and surroundings. During the construction of the waterworks, the emphasis was placed mainly on technical parameters and the impacts on the environment and the landscape were not sufficiently taken into account. The waterworks consists of several buildings, a hydroelectric power plant, locks, a collection facility, an observation tower and a network of canals. The period of socialism was marked also by the construction of service facilities related to Gabčíkovo waterworks, such as: former construction site, blocks of flats or large-capacity accommodation facilities (Fig. 155), which currently serve as specialised facilities of the Slovak University of Technology. The mentioned buildings and facilities represent a contrast to the traditional, mostly single-storey development of family houses and service facilities.



Fig. 154 / Gabčíkovo Waterworks – a dam and locks (author: L. Vitková, 2021).



Fig. 155 / Gabčíkovo Large-capacity accommodation facilities from the socialist period (author: L. Vitková, 2021).

The current challenge for Gabčíkovo is to strengthen its importance as a centre of tourism (Fig. 156). It has all the prerequisites for that - proximity to the Danube, floodplain forest, water recreation areas, thermal springs, cultural landscape and cultural heritage (the manor houses, churches). Last, but not least, Gabčíkovo is a small landscaped town with a pleasant atmosphere, an ideal place for week-

end and short-term recreation based on sustainable tourism. The insufficiently used buildings from the period of construction of the dam also represent a potential. The challenge is their transformation into educational, creative, research or social facilities.

LEGEND:

— Urban zone - boundaries

URBAN ZONES

Centres & Commercial zones

Pre-socialist (-1945)

Post-socialist (1991-)

Residential zones - Single-family

Pre-socialist (-1945)

Post-socialist (1991-)

Industrial and working zones

Pre-socialist (-1945)

Post-socialist (1991-)

OTHER ZONES & TRANSPORTATION

Unbuilt land - agriculture & nature

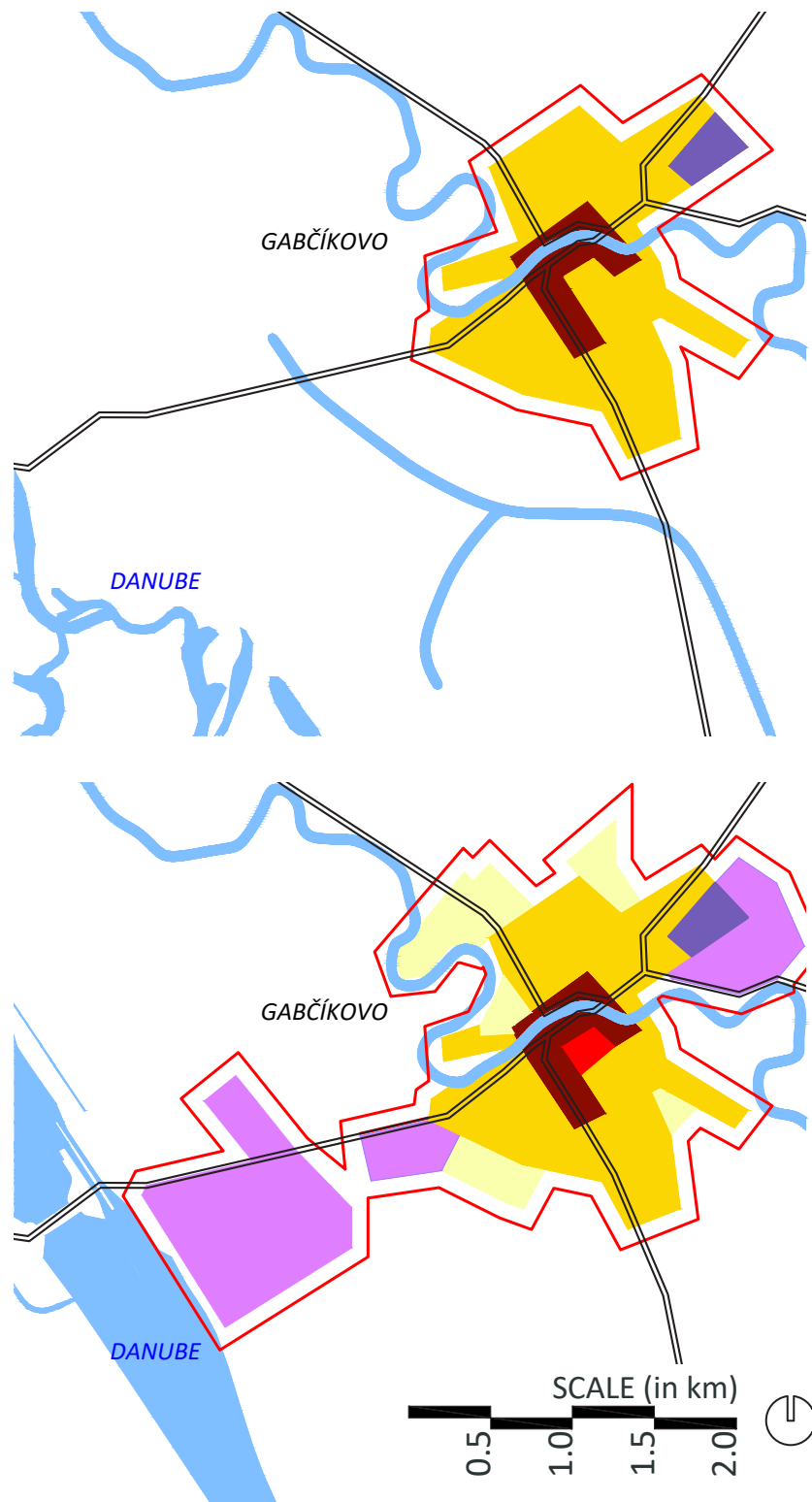
Waterways

Railway station

Roads

Rail

Fig. 156 / Gabčíkovo Urban Area: Situation in 1941 (left) and Situation in 2021. (right) (author: L. Vitková, 2021).



- Dudášová, M. (2012), Územný plán obce Gabčíkovo: návrh / Territorial Plan of Gabčíkovo Municipality: Draft. Gabčíkovo. Retrieved from <https://www.gabcikovo.sk/sk/samosprava/dolezite-dokumenty>.

3.1.2

CASE STUDY 2 // KOMÁROM, HUNGARY

Daniel Balizs

POPULATION:

1990: 19,532

2001: 19,616

2011: 19,284

2019: 19,126

By 1989, the population of Komárom grew to 20,000, but its demographic and functional characteristics still gave it a small-town character (Fig. 157) – a town whose positional energy is much more due to its location next to the Budapest-Vienna transport axis, not the Danube or the cooperation with its twin city on the opposite riverbank. The originally weak advocacy capacity of the town did not improve during the decades of socialism, while its everyday life was characterised by a kind of “psychic stress” due to the internal malfunctions and its almost impossible connection with Komárno in nearby Slovakia. The impact of this can still be felt today, despite the obvious improvement after the change of regime (Bottoni, 2011; Vajda, 2011).

Fig. 157 / The Danube Store, built in the 1980s, with the stylised view of Komárom (author: D. Balizs, 2019)



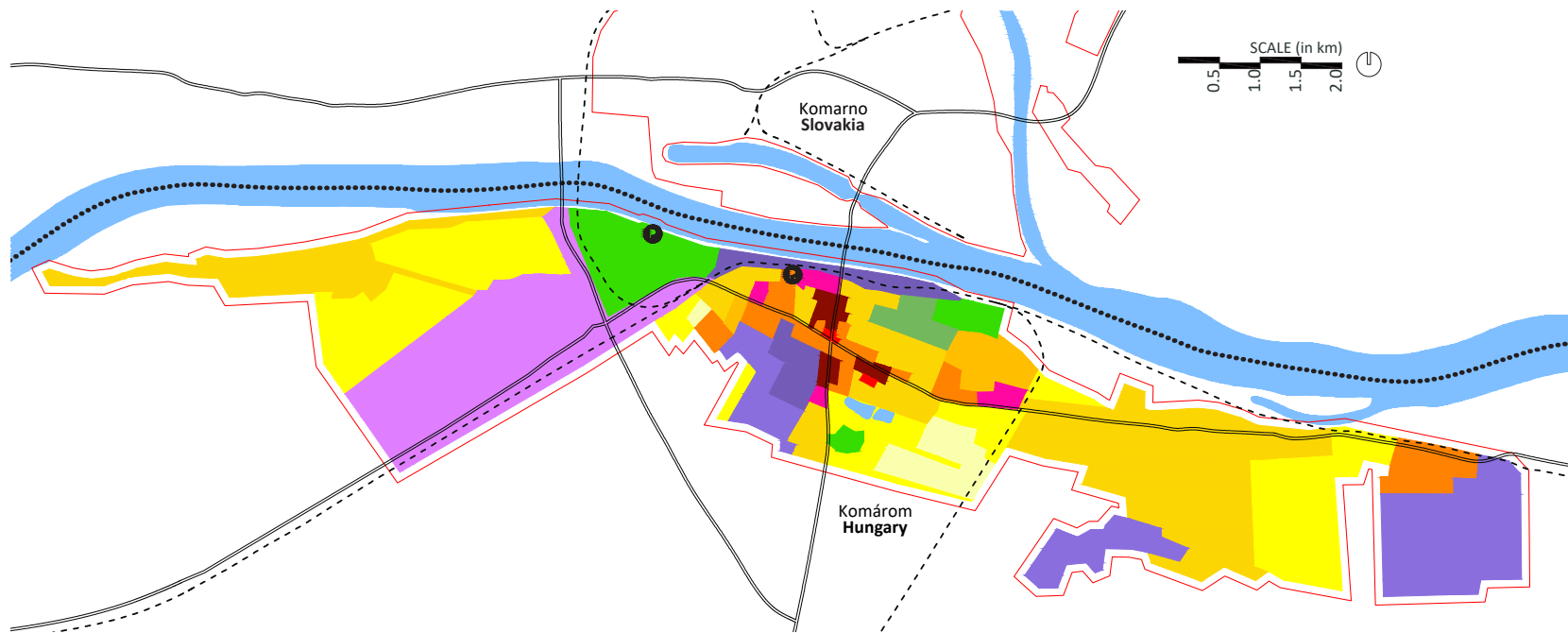


Fig. 158 / The spatial development of Komárom during three decades of post-socialism (1991-2021) (author: D. Balizs).

After 1989, several large companies settled in the industrial park on the south-western edge of the city. This park brought new employment opportunities, even for the people of Slovakian side. However, this is mostly an individual strategy and not due to the close relationship between the Komárom and Komárno (Kovács, 2008).

As a result of the continuous expansion of the built-up area of Komárom in the east-west direction the quarters with completely different characters merged into one administrative unit, even though they were located at a relatively large distance from each other (Fig. 158). In the “downtown” the bridgehead, the dam and the railway closed the settlement from its river, while in its eastern and western edges – the Szőnyi Islands and Koppánymonostor – the Danube riverbanks have preserved their natural character. The latter ones became destinations for those moving out of the town centre (Ádám & Malatinszky, 2012). Monostor and Csillag fortresses, located next to the Danube and between these three town parts, are partly refurbished and open to the public as museums (Fig. 159).



Fig. 159 / Monostor Fortress as a museum today (Author: J. Marić, 2019).

LEGEND:

- National border
- Urban zone - boundaries

URBAN ZONES

- Centres & Commercial zones**
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
 - Post-socialist (1991-)
- Residential zones - Single-family**
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
 - Post-socialist (1991-)
- Residential zones- Multi-family**
 - Socialist (1945-1991)
 - Post-socialist (1991-)
- Industrial and working zones**
 - Pre-socialist (-1945)
 - Socialist (1945-1991)
 - Post-socialist (1991-)
- Urban green zones**
 - Pre-socialist (-1945)
 - Socialist (1945-1991)

OTHER ZONES & TRANSPORTATION

- Unbuilt land - agriculture & nature
- Waterways
- Roads
- Rail
- Port, dock
- Railway station

R

- Ádám, Sz. & Malatinszky, Á. (2012). A Szőnyi-szigetcsoport tájtörténete és vegetációja / Protection and Vegetation of Island Groups of Szőnyi. Természetvédelmi Közlemények 18, 15-23.
- Bottoni, S. (2011): Komárom–Komárno. Határmenti mindennapok és párhuzamos életek a szocializmus korszakában / Komárom Komárno. The Social Principles of Socialism are at Stake. In: Vajda, B. (Ed.) (2011). Államhatás és identitás – Komárom/Komárno / State influence and identity –
- Komárom/Komárno. Komárom: Selye János Egyetem Tanárképző Kara.
- Kovács, A. (2008). Nemzetközi tőkebefektetések munkaerő-piaci hatásai Komárom és Komárno térségében / Cross-border Effects on Labour Market in Komárom and Komárno. Földrajzi Értesítő, 57(1-2), 229-241.

3.1.3

CASE STUDY 3 // SMEDEREVO, SERBIA

Aleksandar Grujić

POPULATION:

1990: 19,532

2001: 19,616

2011: 19,284

2019: 19,126

Urban development of Smederevo was decisively determined by its strategic geo-position – the course of the Danube and the Pannonia Plain in the north, the valley of the Velika Morava to the east, and the Šumadija hills to the southwest.

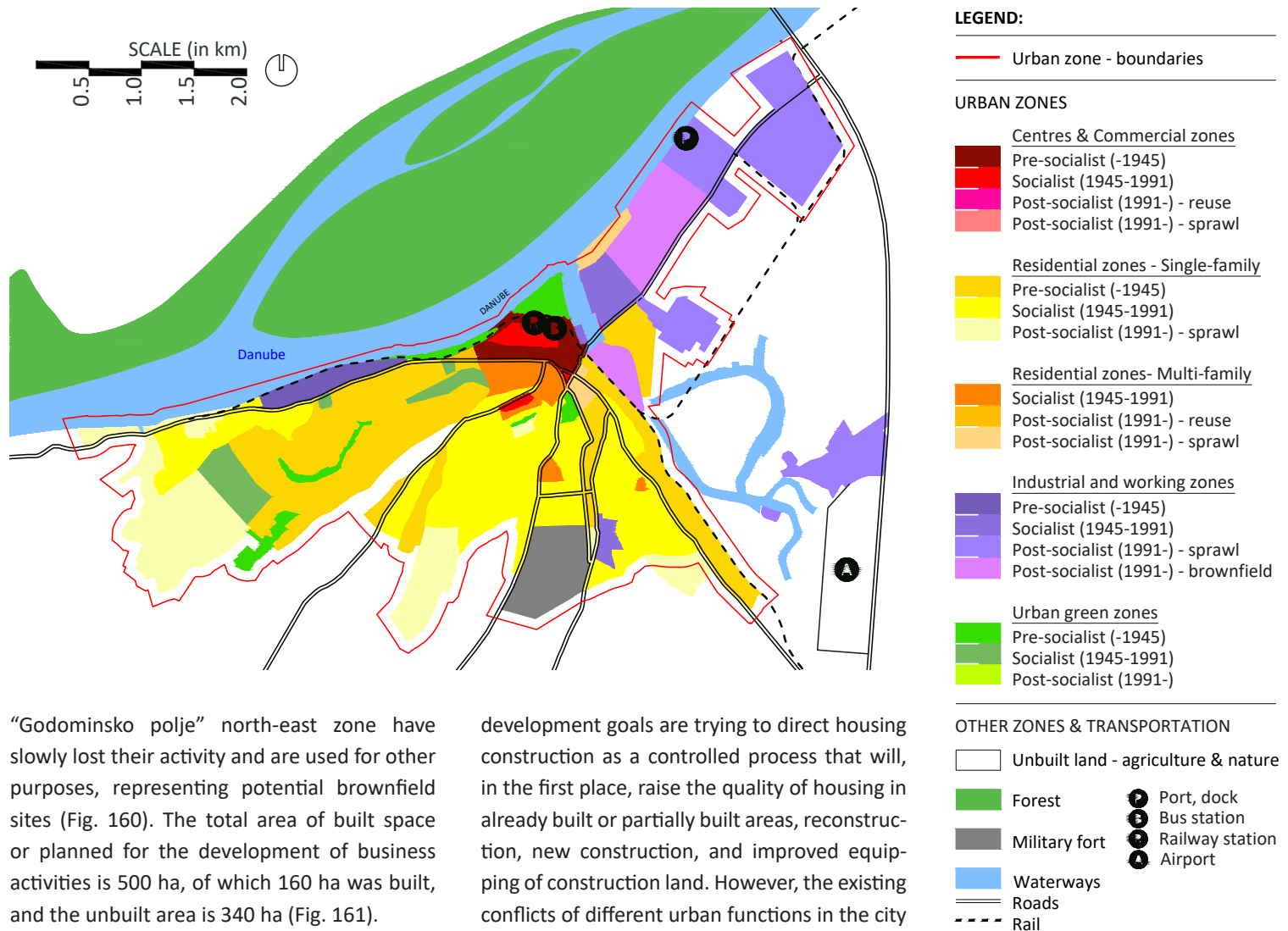
Even though the late socialist period envisioned its continual development, mainly based on industrial drive, Smederevo, like most of the Serbian cities during the 1990s, faced economic decline and regression. The Yugoslavian Crisis in the 1990s resulted in new migration flows. Population increase during this period is consequential to the political situation, where refugees from former Yugoslav republics and Kosovo and Metohija immigrated intensively to Smederevo. The first decades of the 21st century show relative stagnation, but statistically presume the continued trend of the decline in natural increase.



Fig. 161 / The most of the old steelworks in the centre of Smederevo are brownfield site today (Author: B. AntoniĆ, 2018).

In the early socialist period, the industrial development in Smederevo has been formed in the north-eastern part, “Godominsko polje” next to the Danube. Later, with the construc-

tion of additional facilities of the “Železara” steelworks in the 1970s, industrial facilities dispersed to the city south-eastern outskirts. However, factories built in the centre and in



“Godominsko polje” north-east zone have slowly lost their activity and are used for other purposes, representing potential brownfield sites (Fig. 160). The total area of built space or planned for the development of business activities is 500 ha, of which 160 ha was built, and the unbuilt area is 340 ha (Fig. 161).

Economic decline and transition period resulted in uncontrolled housing construction, not only on the periphery but in the city centre, where single-family housing is intensively being replaced with multi-family housing. Main housing

development goals are trying to direct housing construction as a controlled process that will, in the first place, raise the quality of housing in already built or partially built areas, reconstruction, new construction, and improved equipping of construction land. However, the existing conflicts of different urban functions in the city centre, such as the proximity of industrial areas (including port and railway) to the Smederevo Fortress, uneven and unplanned housing construction, the unused potential of the Danube River waterfront, require systematic regeneration which is still a challenge (Fig. 162).

Fig. 160 / Current spatial development of Smederevo (Author: A. Grujić & N. Mitrović).



Fig. 162 / The Danube waterfront of Smederevo: industry and old port in close proximity to Smederevo Fortress (background), as a cultural-heritage site of an exceptional importance (Author: K. Dankov, 2020).

R

- City of Smederevo (2005). Генерални план “Смедерево 2020” / General Plan “Smederevo 2020. Smederevo: City Agency for Built Environment.
- City of Smederevo (2011). Просторни план града Смедерева 2010-2015-2020. / Spatial Plan of the City of Smederevo 2010-2015-2020. Smederevo: City Agency for Built Environment.
- Tošić, D. & Obradović, D. (2003). Modern Tendencies in Developing Net of Settlements of Municipality Smederevo. Bulletin of the Serbian Geographical Society, 83(2), 31-44. Retrieved from <https://gery.gef.bg.ac.rs/handle/123456789/62>.

3.1.4

CASE STUDY 4 // CĂLĂRAȘI, ROMANIA

Sorin Manea
Mihaela Hărmănescu
Angelica Stan

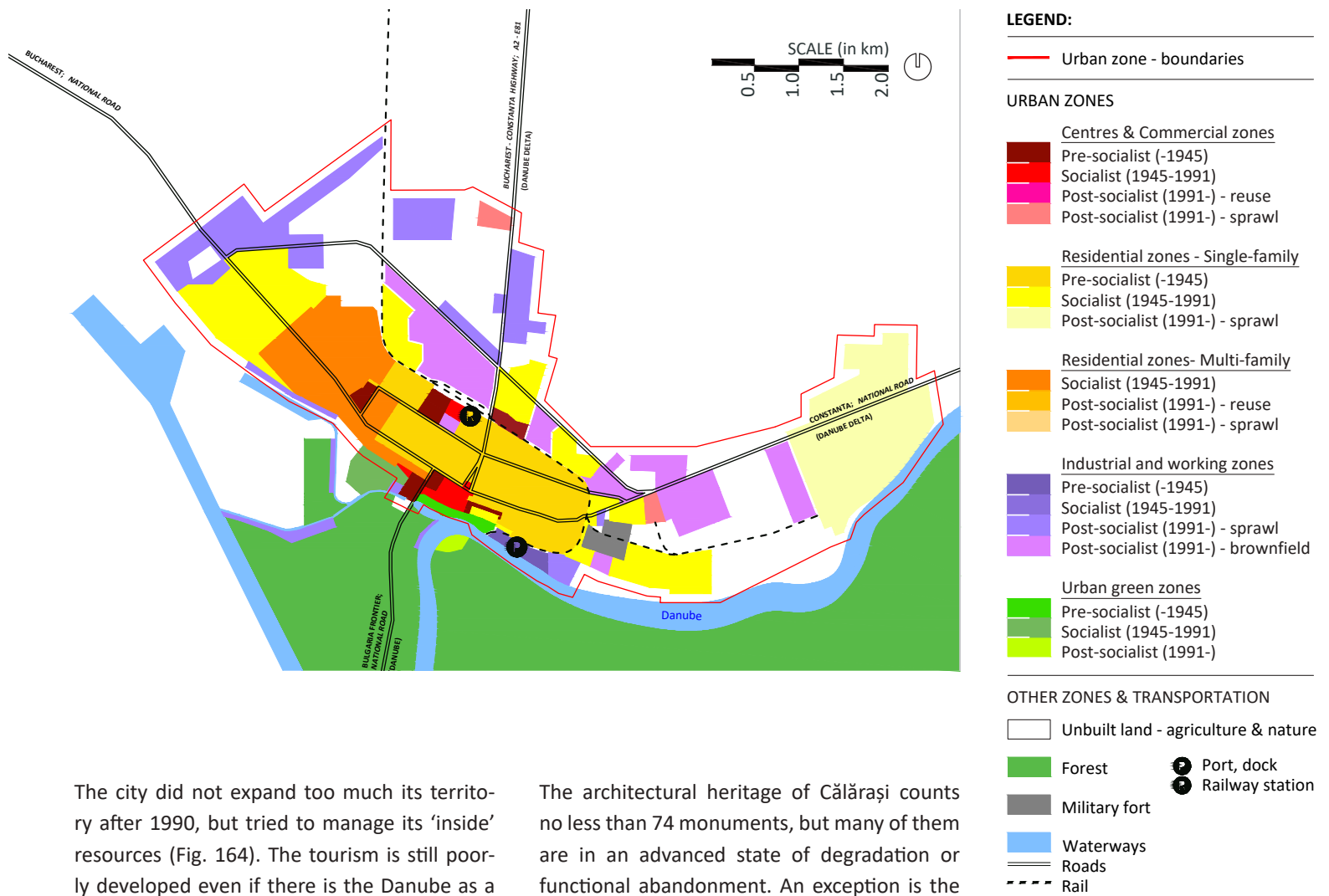
POPULATION:
1990: 76,952
2002: 70,039
2011: 65,181

The fall of socialism and the transition to free market economy meant also a painful restructuring process of the industry of Călărași (Fig. 163). The city has lost almost all the steel and the construction industry. “Siderca”, big steelworks located in the north western part of Călărași, was closed and abandoned. Similarly, the old port lost its role in regional trade and rapidly degraded, along with other constructions of the city industrial heritage: docks, the river station, the railway station and lines. Some of preserved industrial and port buildings have been eventually privatised and renamed during the 1990s.



After 2000, several new factories have been established in Călărași: for glass production, processing agricultural products, for paper production, located near the old port. The industrial profile of the city seems to be continued and preserved, but on a much smaller scale. With the construction of the Bucharest-Constanta highway, the accessibility of Călărași increased and the commercial activities intensified.

Fig. 165 / The ‘metamorphosis’ of the Old Post Office Building, before and after refurbishment into a cultural centre (Author: F. Rădulescu)



The city did not expand too much its territory after 1990, but tried to manage its 'inside' resources (Fig. 164). The tourism is still poorly developed even if there is the Danube as a natural potential, but Călărași is perceived as a transit city for the most of the Romanians. Several beach facilities on the Danube riverside have been formed in last decades, to attract local tourists.

The architectural heritage of Călărași counts no less than 74 monuments, but many of them are in an advanced state of degradation or functional abandonment. An exception is the case of The Old Post Office Building (Fig. 165) situated in the city centre, a historic monument that has been restored and functionally remodelled, becoming a public hub for young people and local community.

Fig. 164 / Map: the spatial development of Călărași – the actual situation (S. Manea, M. Hărmănescu Mihaela & A. Stan, 2021).



Fig. 163 / The abandoned Grape Unit Factory from socialist era (Author: F. Rădulescu).

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- Tudor, C. (2008). Istoria orașului Călărași / History of the City of Călărași. Călărași: Agora.
- ARHIGAMA (2008). Plan Urbanistic General / General Urban Plan, Mun. Călărași. Retrieved from <https://primariacalarasi.ro/index.php/despre-calarasi/istorie>.

3.1.5

CASE STUDY 5 //
SILISTRA, BULGARIAGeorgi Georgiev
Miriana Yordanova

POPULATION:

1985: 53,522
1992: 48,360
2001: 41,952
2011: 35,607
2019: 30,983

Silistra occupies the far North-East part of Bulgaria, limited by Danube and the ground border with Romania (Fig. 166). Following the establishment of the socialist Bulgaria with centralised economy, Silistra developed fast as a regional centre of industry and agriculture. This led to a major population increase. With the start of the post-socialist 1990s, the city started to demographically decline due to intensive outmigration to the biggest cities in Bulgaria or abroad. The shrinking population influence that the density indicators in Silistra are constantly decreasing, the city territory is not increasing and uninhabited dwellings appearing. Moreover, most residential neighbourhoods retain the poor conditions of the street network and pedestrian areas (Fig. 167).

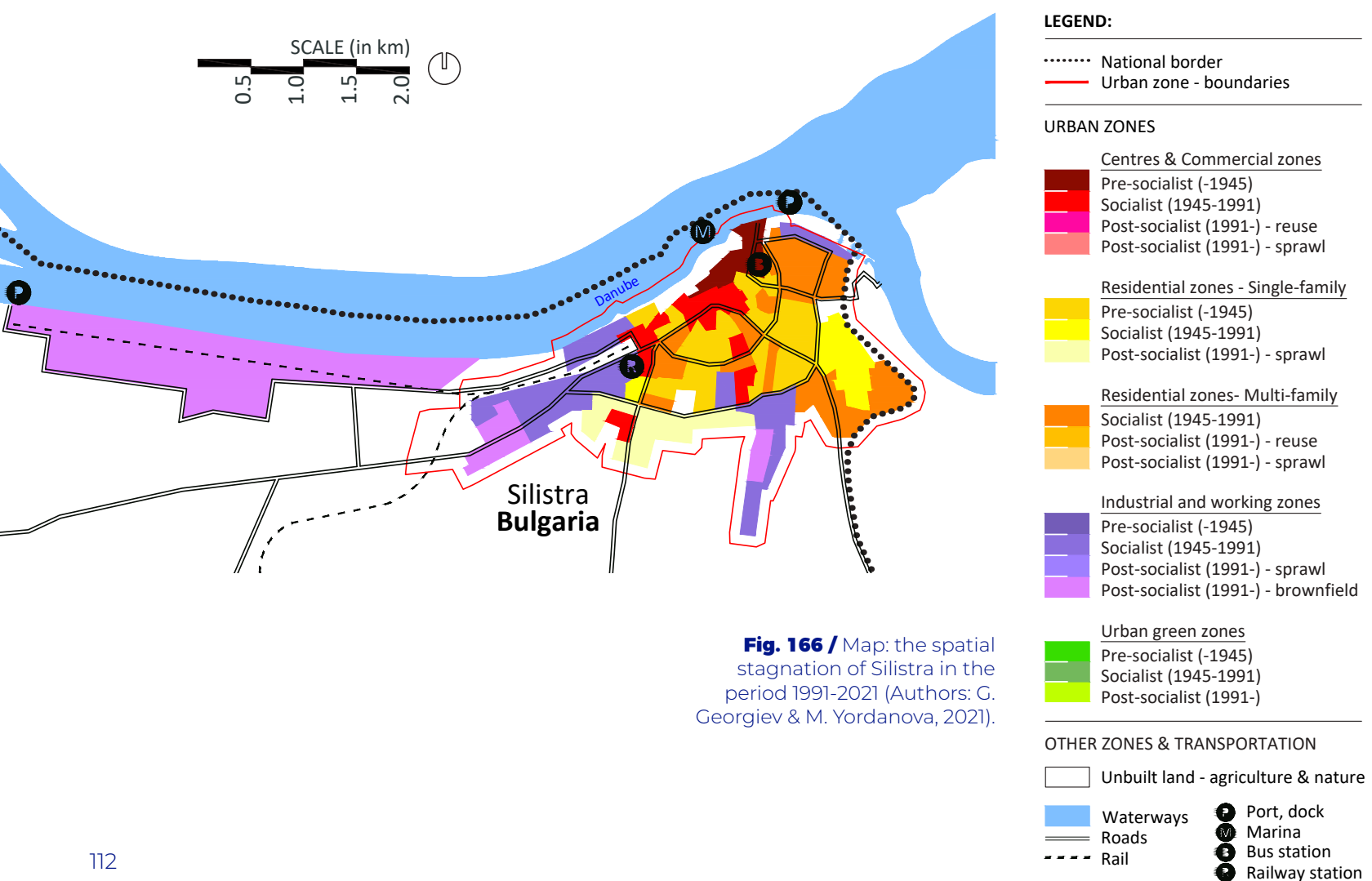


Fig. 166 / Map: the spatial stagnation of Silistra in the period 1991-2021 (Authors: G. Georgiev & M. Yordanova, 2021).



Fig. 167 / The eastern residential outskirts of Silistra from socialist era seen from Ostrov, Romania (Author: A. Radulescu, 2022).

According to the Strategy for Development of Silistra District 2014-2020 (City of Silistra, 2013), the construction of the Danube Bridge III west of the city is crucial for the revival of the city and its region. After the construction of the bridge, territories west of Silistra, as more attractive, will be urbanised. The construction of the bridge will also stimulate transport and economic cooperation across the river. In the long run, with the construction of the Danube Bridge and the modernisation of the city port, the land use had to be restructured in order to take passenger and cargo traffic. In this way, Silistra will become a transport and logistics node of an international importance (City of Silistra, 2021). Side by side with this economic development, the old core of Silistra with legacy from different historic epochs has been slowly refurbished (Fig. 168).



Fig. 168 / Silistra: conserved archaeological remains with refurbished protection elements (Author: A. Radulescu, 2022).



- City of Silistra (2013). Стратегия за развитие на област Силистра за периода 2014-2020 / Development Strategy for Silistra District for the Period 2014-2020. Retrieved from <https://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=842>.
- City of Silistra (2021). План за интегрирано развитие на Община Силистра 2021-2027 / Plan for Integrated Development of Silistra Municipality 2021-2027. Retrieved from <http://www.silistra.bg/files/2020/24.10.2020-e869c7222ee80506fc89a915c8a748b31.pdf>.

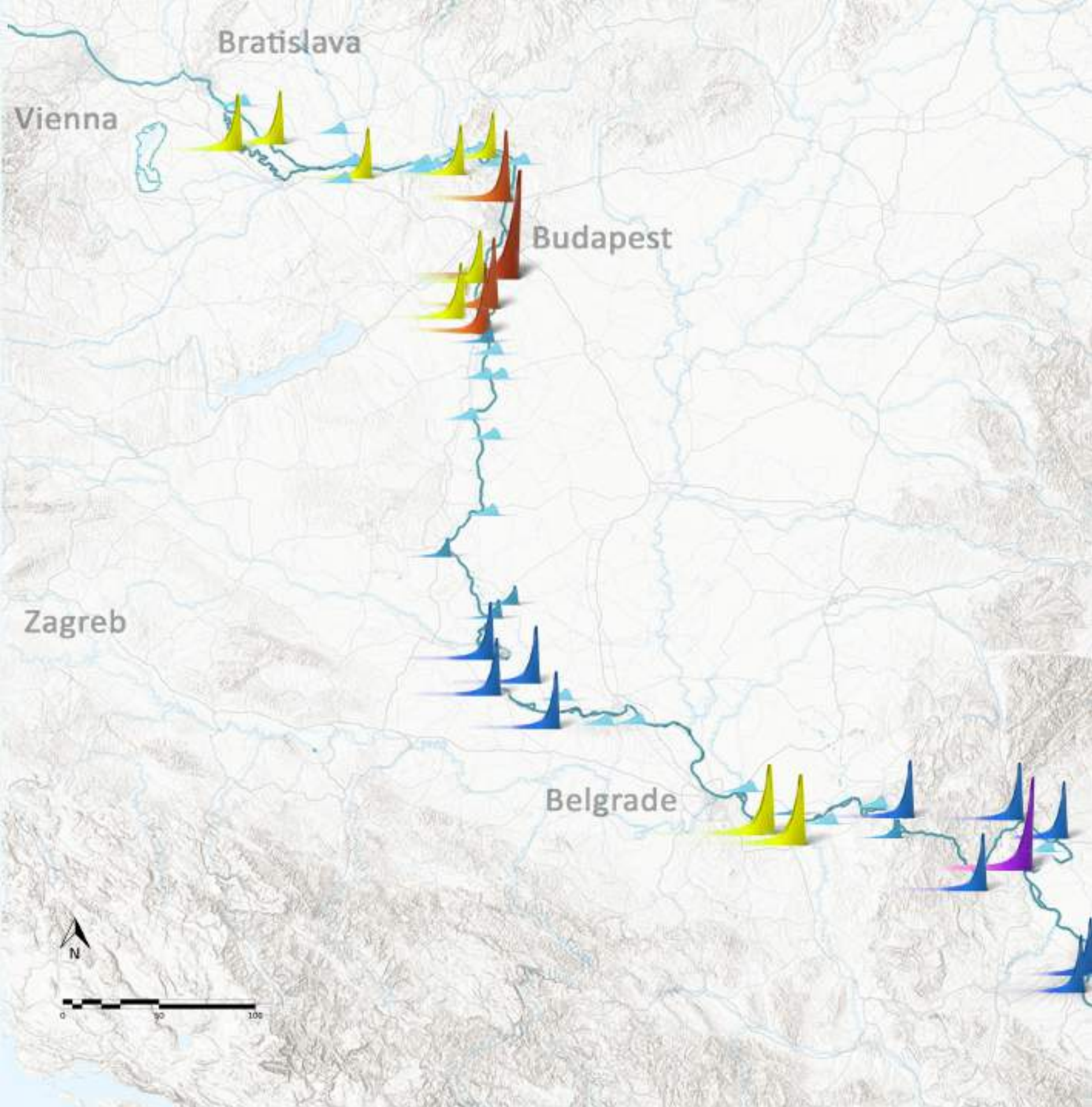


Fig. 320_01: "Xbionic" leisure centre in Šamorín: Being a small urban settlement near Bratislava, Šamorín has experienced the recent suburbanisation in both demographic and economic sense (Author: A. Radulescu)



Fig. 320_02: Dunaujvaros has been the most shrinking city in the Hungarian part of the Danube Region due to challenging socio-economic legacy of socialism (Author: P. Wolf)

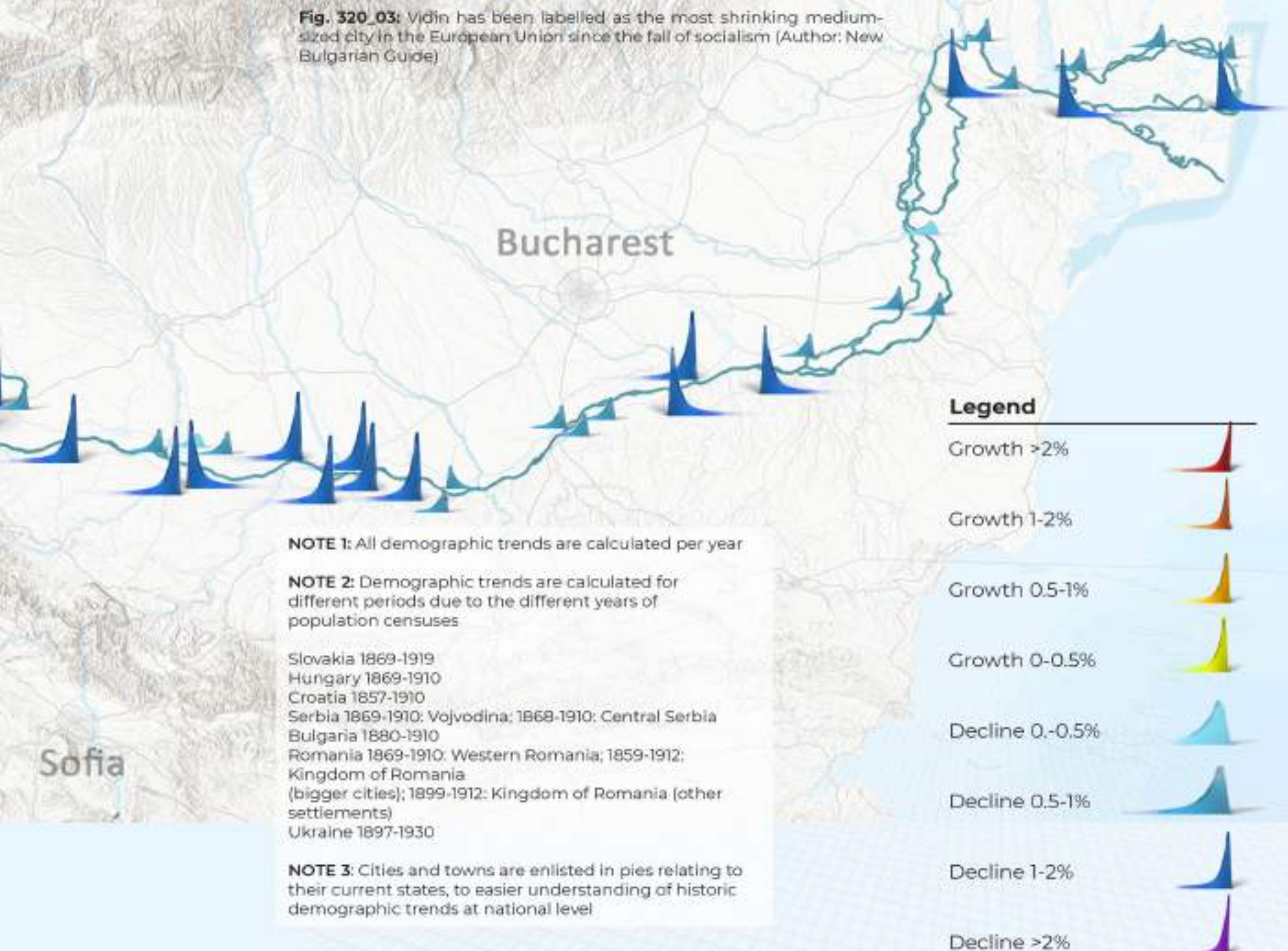
DEMOGRAPHIC TRENDS DURING THE POST-SOCIALIST TRANSITION, 1991 - CURRENT

The "golden age" of railway was the period of the late 19th and early 20th Century when 2/3 of the analysed small and medium-sized cities and towns along the Danube got their connection to European railway system. Consequently, the railway replaced waterways - the Danube and its main tributaries (Sava and Tisa) - as the key transportation corridors in this region.

The railway capacities are currently oversized and are not fully utilised, including railway stations, obsolete railway lines, and other infrastructure facilities. However, recent development in the European railway sector, with modernisation of the entire system (high-speed rail), indicates the future increase of the potential of this type of transport.



Fig. 320_03: Vidin has been labelled as the most shrinking medium-sized city in the European Union since the fall of socialism (Author: New Bulgarian Guide)



3.3

POST-SOCIALIST SHRINKING CITY IN THE BORDERLAND DANUBE REGION // INTRODUCTION

Ana-Maria Branea

Border cities are particularly susceptible to urban shrinkage. The EU territorial documents consider borderland cities and regions as more vulnerable ones (EC, 1999). The border effect manifests itself in a two-fold manner, on the one hand, cities can be affected by accessibility issues, having few connections to their own country or be under the pull of larger nearby cities. On the other hand, they might experience an economic boom due to the border proximity, but once the connection is disrupted the effects are acute (Fig. 169).

Fig. 169 / Silistra in Bulgaria seen from nearby Romania: the negative effects of the city border position on local urban fabric (Author: A. Radulescu, 2022).



Demographic evolution

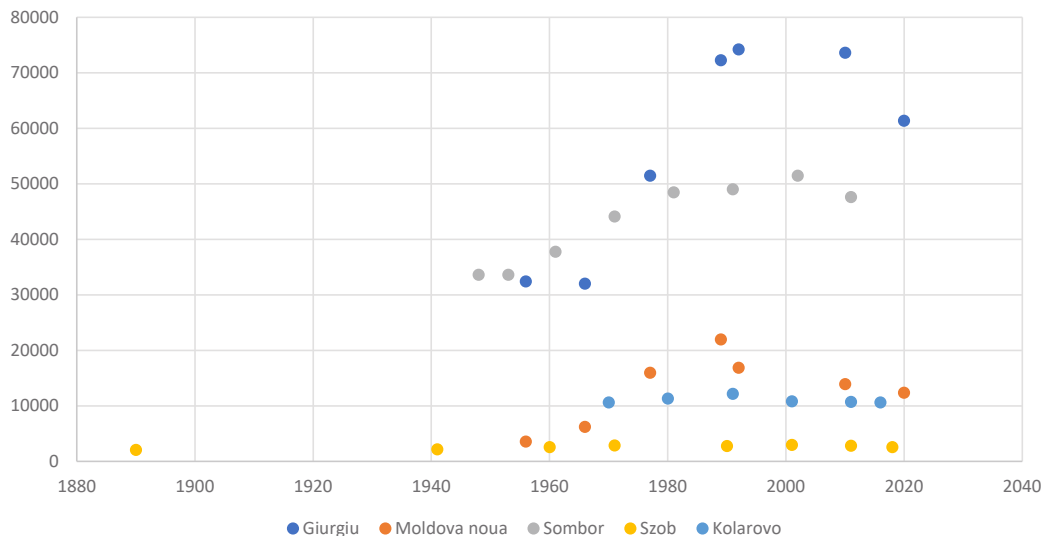


Fig. 170 / Comparative demographic overview of five selected cities-case studies (Author: A-M. Branea, 2022).

Fig. 171 / Gulyantsi, Bulgaria: Agro- and gastronomical tourism (Author: BlueLink, 2022).

All five case studies presented below have experienced a worsening of their economical and demographical situations after the year 2000 (Fig. 170) - due to lost connectivity, damaged bridge by flooding in the case of Szob, mine closure in Moldova Noua, a “hard border” effect in the case of Sombor, emigration or the pull of larger cities. While some may be on their (slow) way to redress, others are visibly scarred by urban shrinkage, easily noticeable in their built environment, abandoned buildings and industrial areas or the poor condition of residential and commercial ones.

For all, a solution can be found in cross-border cooperation. In the case of the Danube, sustainable tourism is promising, taking advantage of natural environment and local heritage. Agro-, velo-, ethno- and gastronomical tourism represent the untapped potential of these areas, although difficult to establish (Fig. 171-172). Reorienting towards tourism and services is a challenge for many Danubian towns and their citizens. Their tourism occupancy rates, the type and price range of offered accommodation and services clearly demonstrate this problem. The COVID-19 pandemic has not made thing easier, closing borders and businesses, but it has created an opportunity to discover local tourism destinations.

Fig. 172 / Multi-ethnic Busójárás Celebration, protected by UNESCO, in Mohacs, the southernmost Danubian city in Hungary, as a potential accelerator for cross-border ethno-tourism (Author: D. Siljanović Kozoderović, 2022).



3.3.1

CASE STUDY 1 // KOLÁROVO, SLOVAKIA

L'ubica Vitková

POPULATION:

1991: 12,146

2001: 10,823

2011: 10,696

2016: 10,591

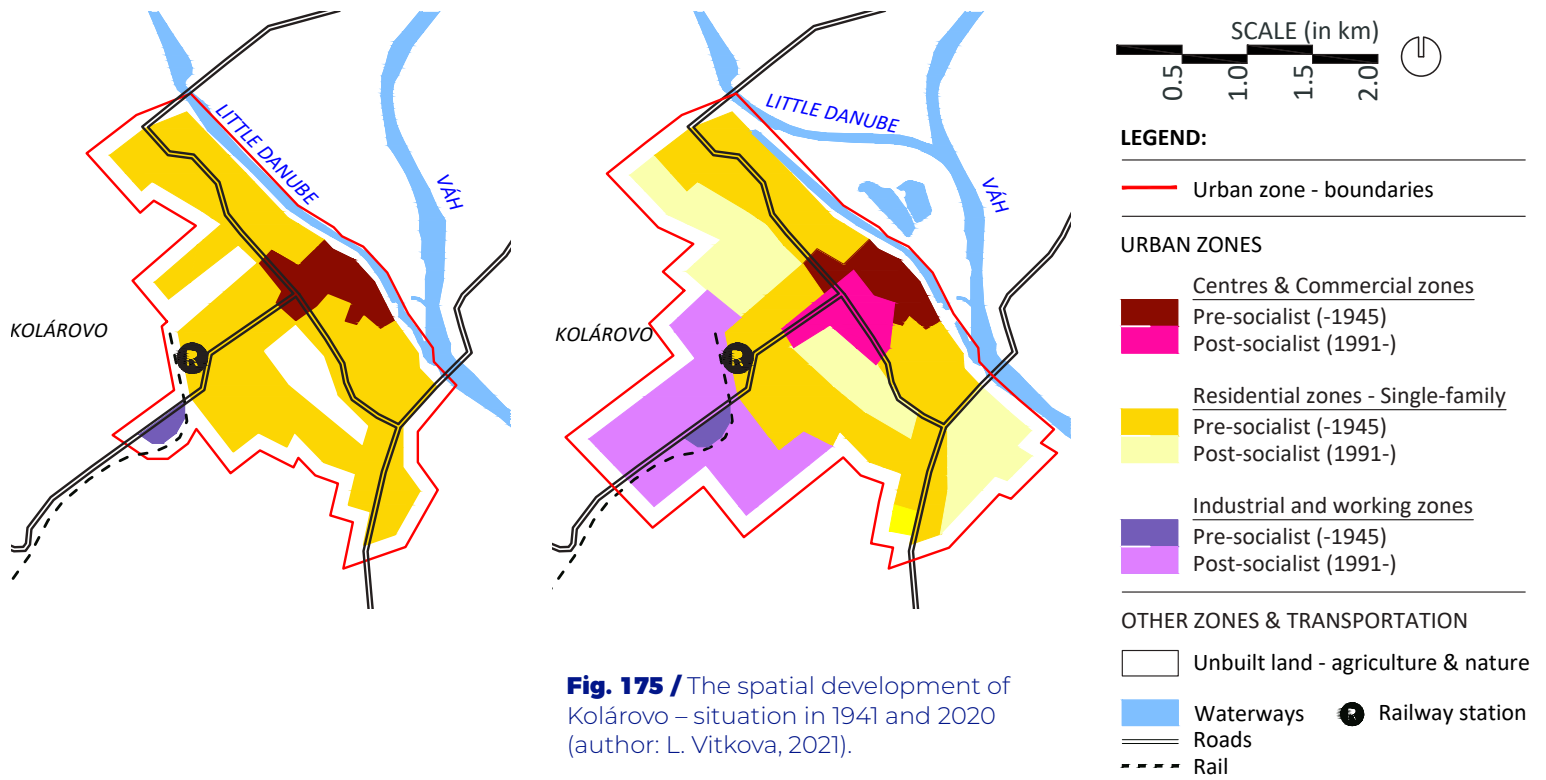
Kolárovo is one of the largest urban settlements in the lower part of Žitný ostrov in Slovakia. From the middle of the 16th century Kolárovo, or previously Guta, developed as a market town with a right of fair. Local economy was strongly connected to the Little Danube – the peculiarity of the area is the floating water mill on this river that resembles this period (Fig. 173). At the beginning of the 20th century, the railway connection, as well as the bridge over the Little Danube, helped the town development. However, the character of Kolárovo, as a local agricultural hub, was preserved even in socialism. A rarity is the construction of a “youth village” in the 1950s, based on collective land management. Kolárovo gained the status of a town only in 1967 (Fig. 174).

Fig. 173 / Kolárovo – old water mill on the Small Danube (author: L. Vitkova, 2021).



Fig. 174 / Central square in Kolárovo, formed during socialist era (author: L. Vitkova, 2021).





Kolárovo represents the town with the lowest degree of centripetence in the hierarchy of the towns in Slovakia. It is without connection to major transport routes, only with a connection to Komárno (STAPRING, 2004). The population decline of the town is not dramatic, but rather gradual. However, it does not reflect the degradation of the urban structure (Fig. 175-176). Local economy is based on several companies, which are mainly operating in the town industrial zone, formed during socialist period.

The potential of Kolárovo lies in the development of sustainable tourism, given the unique natural environment – around the Little Danube and Váh, with accompanying floodplain forests, water areas and characteristic canals, which drain swamps or provide irrigation. The added value and hitherto untapped potential, especially for the development of agro-tourism, have “scattered farmsteads”, tied in the past to agriculture and livestock, which was suppressed during the period of collectivisation. The surroundings of Kolárovo provide excellent opportunities for hunting and fishing.



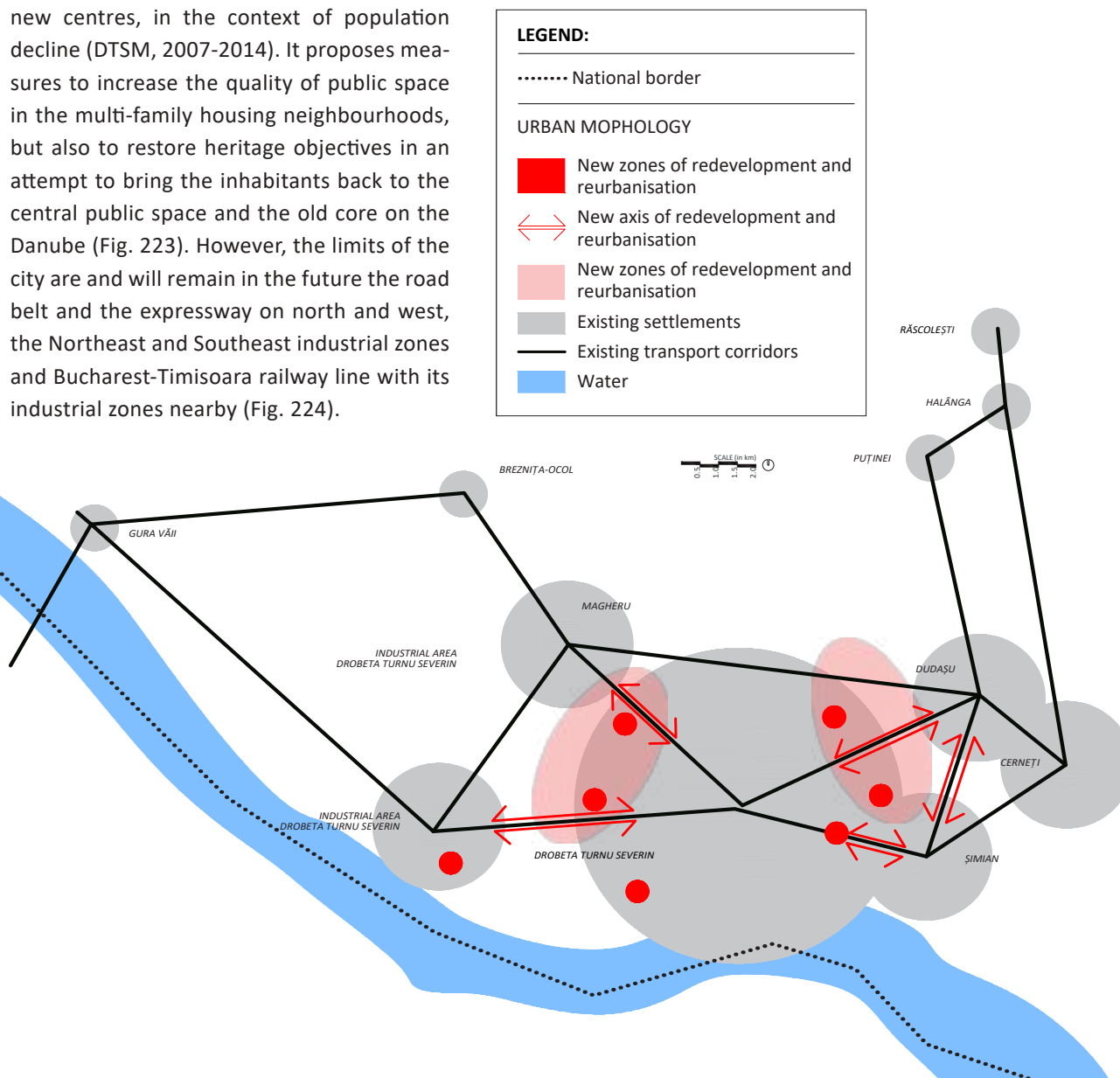
Fig. 176 / The morphological map of Kolárovo (author: L. Vitkova, 2021).



STAPRING (2004). Územný plan mesta Kolárovo / Territorial plan of the Town of Kolárovo. Kolárovo. Retrieved from <https://www.uzemneplany.sk/upn/kolarovo>.

The sustainable development strategies of Drobeta Turnu Severin, drawn up after 2007, highlight this paradox of expansion without new centres, in the context of population decline (DTSM, 2007-2014). It proposes measures to increase the quality of public space in the multi-family housing neighbourhoods, but also to restore heritage objectives in an attempt to bring the inhabitants back to the central public space and the old core on the Danube (Fig. 223). However, the limits of the city are and will remain in the future the road belt and the expressway on north and west, the Northeast and Southeast industrial zones and Bucharest-Timisoara railway line with its industrial zones nearby (Fig. 224).

Fig. 224 / Drobeta Turnu Severin:
polycentric development today
(Author: M. Danciu, 2022).



- R**
- Drobeta Turnu Severin Municipality – DTSM (2007-2014). Integrated Strategy for the Municipal Urban Development between 2007-2013, 2014-2020. Retrieved from <https://docplayer.fr/86707796-Strategia-integrata-de-dezvoltare-urbana-a-municipiului-pentru-perioada-municipiul-drobeta-turnu-severin.html>.
 - Ministry of Transport – MT (2016). General Transport Master Plan. Available at: <http://www.mt.gov.ro/web14/strategia-in-transporturi/master-plan-general-transport/documente-master-plan/1379-master-planul-general-de-transport>.
 - Gheorghiu, T.O. (2001). Drobeta-Turnu Severin. Ipoteză de evoluție urbanistică / Drobeta-Turnu Severin. Hypothesis about Urban Evolution. *Historia Urbana*, 10(1+2): 145-154. Retrieved from <https://www.ceeol.com/search/article-detail?id=216268>.

3.7.5

CASE STUDY 5 // GIURGIU, ROMANIA

Angelica Stan & Sorin Manea

1992: 74,191
2002: 69,345
2011: 61,353
2021: 55,700

The post-socialist development of Giurgiu is not based on major restructuring or revitalisation projects, but has followed a gradual evolution through small interventions within the urban fabric and few new insertions related to local industry, retail and small residential areas. After 1990, the rapid process of economic restructuring begins with the emergence of private sector, by decreasing the heavy industry and increasing of services and small production. The service economy is dominant today, supplanting production sector – heavy industries which are depleted and the large industrial areas in the city west and south outskirts remains abandoned.

Most part of new constructions are the private ones. Public investments from local or external funds are rare and oriented on some key city issues: infrastructure, public facilities, green and leisure spaces. Furthermore, not all of the designed public projects have been implemented. The interventions that stand out to be the most necessary from the point of view of population and urban planners are those related to the historic heritage under the threat to be lost. The large part of central Giurgiu is listed as a protected architectural-heritage site with monuments of different degree of importance, archaeological areas, including Mircea cel Batran Fortress (Fig. 225).



Fig. 227 / North railway station in Giurgiu – abandoned heritage (Author: C. Vărzaru)



Fig. 228 / Interior of North railway station in Giurgiu – abandoned heritage (Author: C. Vărzaru)

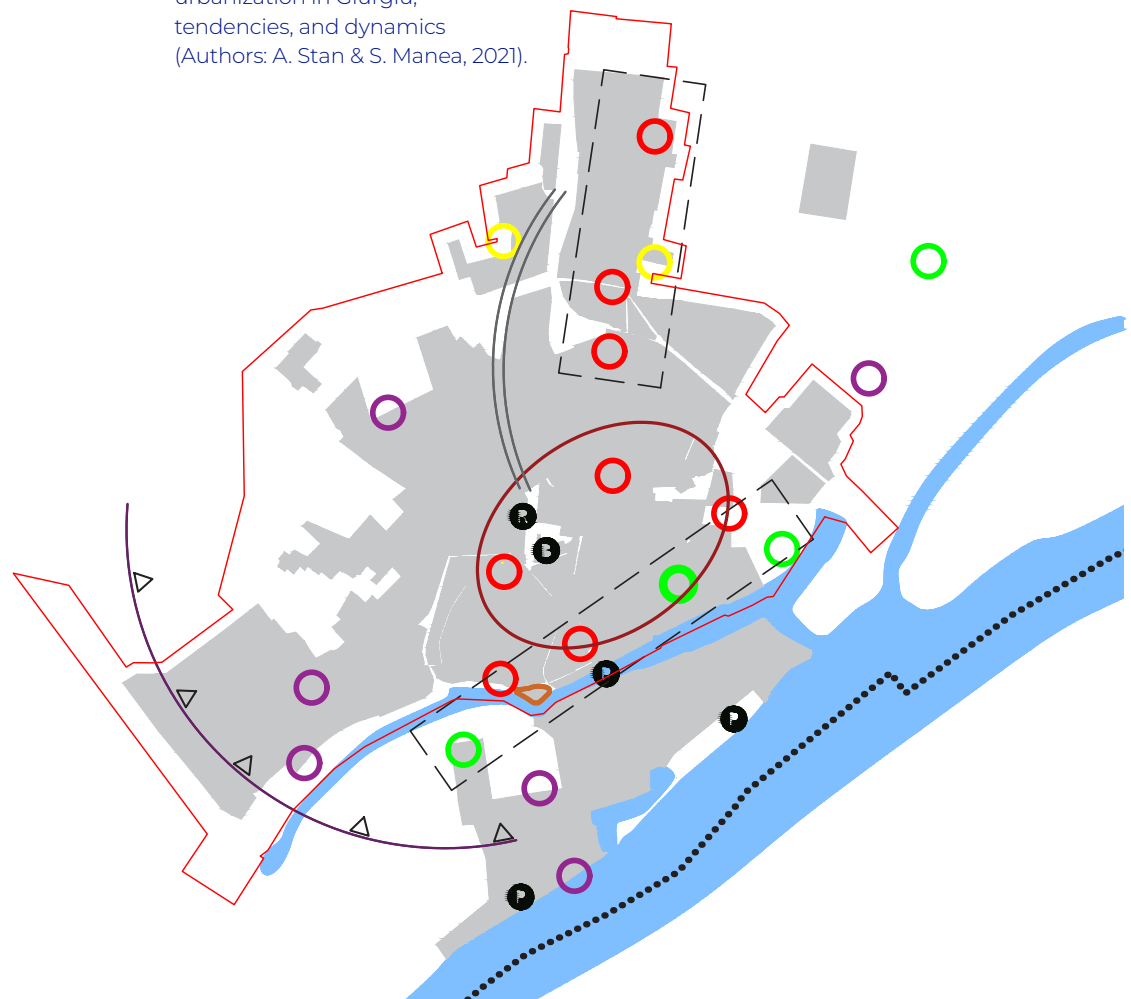
Fig. 225 / Archaeological site of Mircea cel Batran Fortress in Giurgiu
(Author: C. Vărzaru)



Another aspect reported by the population and put on the agenda of the local authorities is the development for leisure, walking, sports of riverfront area, especially in the south and east part of the city, related to Danube Ostroves and Cama canals (Fig. 226). Besides disaffected industrial sites and unused railroads and railway stations (Fig. 227-228) with a real conversion/regeneration potential, there are also sites which are susceptible to new developments, with real-estate potential: places where the community develops specific local activities, such as fishing, spontaneous leisure or fairs, then, unused private land inside of some big former industrial estates, as well as not finished or abandoned built structures.



Fig. 226 / New poles of urbanization in Giurgiu, tendencies, and dynamics
(Authors: A. Stan & S. Manea, 2021).



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- MINA-M-COM (2009). Plan Urbanistic General Municipiul Giurgiu / General Urban Plan of Giurgiu Municipality. Retrieved from [http://www.primariagiurgiu.ro/portal/giurgiu/primarie/portal.nsf/0/A1AB333C3D93A81A42257AB600332F0E/\\$FILE/RLU%20final.pdf](http://www.primariagiurgiu.ro/portal/giurgiu/primarie/portal.nsf/0/A1AB333C3D93A81A42257AB600332F0E/$FILE/RLU%20final.pdf).
- Ionescu, G. (1994). Comunismul în România / Communism in Romania. Bucharest: Litera.
- Șarîi, A. (2017). Dunărea. Fluviul imperiilor / Danube. The River of Empires. Iași: Polirom.

3.8

RE-EVALUATING URBAN MORPHOLOGY OF DANUBIAN CITIES AS A DIRECTION FOR THE URBAN FUTURE

Angelica Stan

MACRO-MORPHOLOGICAL TRAITS OF THE DANUBE URBAN TERRITORY. The Danube's space seems inextricably linked to the diversity of the communities that define it, as result of a remarkable historical evolution and other subsequent factors, as the economic changes, the demographic dynamics, the political aspects and social transformations. Each of the cities involved in this study had distilled in its singular way the conditions imposed by the different regimes, the rise and fall of Roman, Austro-Hungarian, Ottoman, Slavic empires, or the Iron Curtain.

The periphery is linked to a disruptive limit in relation to a context of a certain homogeneity. In the case of the Danube Region, the periphery is understood especially in terms of the relationship with the spatial and geo-political structure of the EU, the centrality of the Danube as territory being assimilated to the European centrality (Fig. 229). Regarding the Lower, Central and Western Danube there are clear differences between cities of similar size, regarding the quality of spaces and facilities, and at the overall economic and societal level. A primary cause of these disparities is the infrastructure density, and the presence of borders between geo-political systems (Smę-

kowski, 2018). From a spatial point of view, it is important to understand the mechanisms of shrinking and peripheries in Danube cities and towns. Based on various criteria we declined the following typologies for the entire range of the Danubian small and medium cities. We propose the following three scale levels with specific criteria of evaluation for each of them: (1) The regional (macro-) scale level; (2) The city (mezzo-) scale level; and (3) The local urban fabric (micro-) scale level. In this chapter, we will talk about the first two scales levels of morphological approach to the cities from the Danube area – the macro-level and the intermediate one.

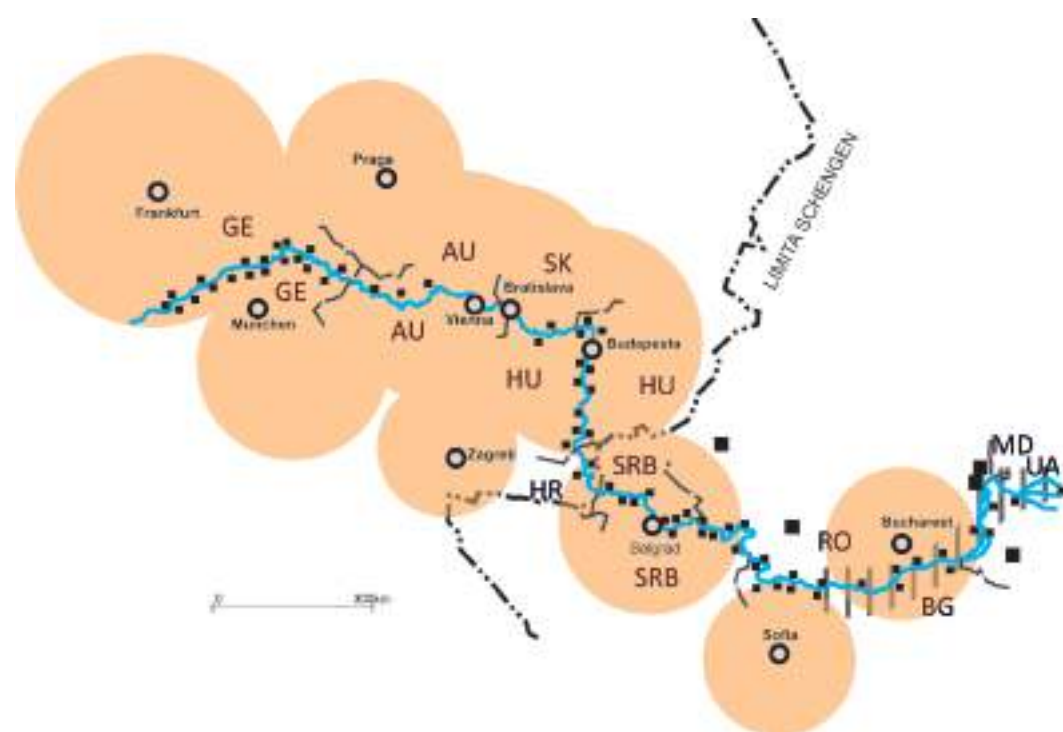


Fig. 229 / The macro-morphological map of the Danube Region indicating the presence of main centralities and peripheral areas due to strong and disruptive limits (Author: A. Stan).



Fig. 230 / Three main type of cities on Danube: planned, regulated and irregular, from the point of view of the main urban structure historically defined (Source: A. Stan).

URBAN GROWTH PATTERNS AND EVOLUTIVE TYPOLOGIES OF DANUBE CITIES

The growth patterns of Danubian cities are influenced by several elements: (1) the river geo-morphological features, (2) landscape and hydrography, (3) the state borders, (4) the settlements system density, and (5) the accessibility of the main European and Eurasian transport corridors. The first division in cities and towns is related to difference between planned, regulated and irregular urban settlements, regarding the morphological elements: streets and block matrix, width of streets, shape of main squares, urban front etc. (Fig. 230). Many planned cities from the socialist era are suffering a peripheralisation from the inside centre to the outskirts, because of the abandonment of land and equipment.

Among the cities studied, there are cities whose growth is insignificant or none, as they were designed to respond to a certain function, i.e., industrial cities such as Drobeta Turnu Severin in Romania. The morphology of the Danube cities highlights the relationship between the diversity of spatial patterns and the creativity of communities and local resources (Oliveira, 2016). The resilience of these cities is connected to the vitality and translated into the energetic and imaginative way of processing the spatial identity (Stan & Ionita, 2014). Therefore, to reveal the urban morphology often means to reveal the quality of space – “a sense of wholeness, spirit, or grace, that while of varying form, is precise and empirically verifiable” (Alexander et al, 1977). Looking at the urban tissues of urban and rural communities, we can observe strong common ‘genetic’ traits based on collective cultural patterns.

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- Alexander, C., Ishikawa, S. & Silverstein, M. (1977). *A Pattern Language: Towns, Buildings, Construction*. New York: Oxford University Press.
- Oliveira, V. (2016). *Urban Morphology. An Introduction to the Study of the Physical Form of Cities*. Cham, UK: Springer.
- Smętkowski, M. (2018). The role of exogenous and endogenous factors in the growth of regions in central and eastern Europe: The metropolitan/non-metropolitan divide in the pre- and post-crisis era. *European Planning Studies*, 26(2), 256-278. DOI: 10.1080/09654313.2017.1361585.
- Stan, A. & Ionița, C. (2014). *Morfologie urbană / Urban Morphology*, Bucharest: Editura Ion Mincu.

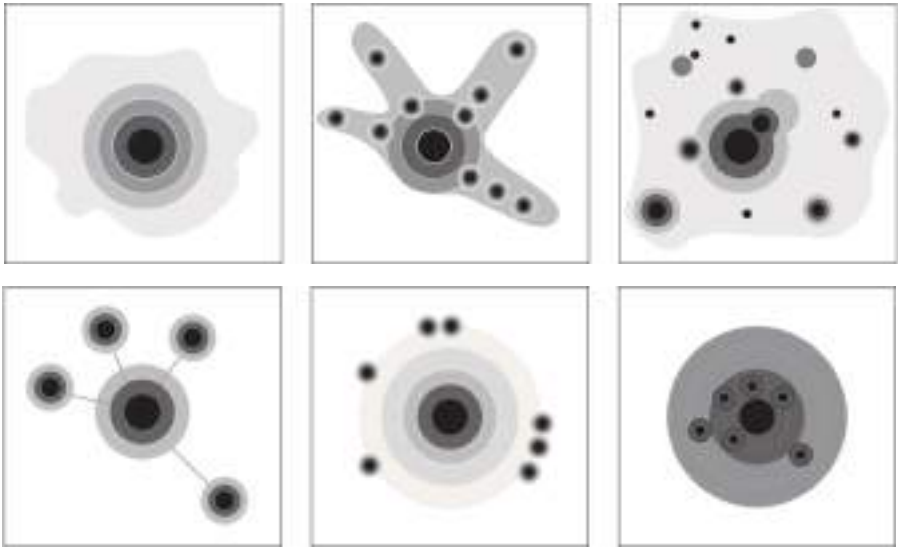


Fig. 231 / Growth patterns – extensive or intensive, taking in consideration changes of urban form in relation to hinterland and peripheries, and the urban fabric densities and specialization in centres of different ranges. 1- Extensive- semiradial pattern; 2- extensive – tentacular pattern; 3- urban sprawl; 4- extensive growth pattern – satellite; 5- extensive growth pattern- edge developments; 6- intensive growth pattern-densification (central/semi-central) (Author: A. Stan).

Comparing the process of urban growth of Western and Eastern Europe between 1950 and 1990 (Cattan, 1993) the urban growth was two to three times higher in Eastern Europe than in Western Europe; while Western cities grew significantly until 1970, urban growth in Eastern Europe lasted until the early 1980s. In Eastern Europe, the growth of large cities was politically controlled and remained lower than that of medium-sized and small towns.

Analysing the growth macro-patterns of small and medium-sized cities on the Danube in the period of the last 30-50 years, we notice the prevalence of several types visible especially at the level of street networks, centre position, relation to hinterland and to the Danube (Fig. 231):

a) The (semi-)radial growth pattern: Adony, Bačka Palanka, Braila, Dunaföldvár, Dunaújváros, Giurgiu, Mosonmagyaróvár, Paks, Ráckeve, Veliko Gradište, Vidin;

b) The tentacular growth pattern: Golubac, Sombor;

c) The satellite growth pattern: Belgrade, Giurgiu, Komarno, Komarom, Krems; and

d) The extensive sprawl pattern, especially appeared after the 1990 in the cities of the former socialist countries.

Among small and medium-sized cities located on the Danube, the largest share is the cities with extensive tentacular growth, followed at a short distance by those on the concentric radial pattern that follow the plan in crowns or sectors, then there are the cities that have expanded through uncontrolled sprawl type formations, in a similar proportion to those that grew through the formation of an urban system consisting of centre and satellites.

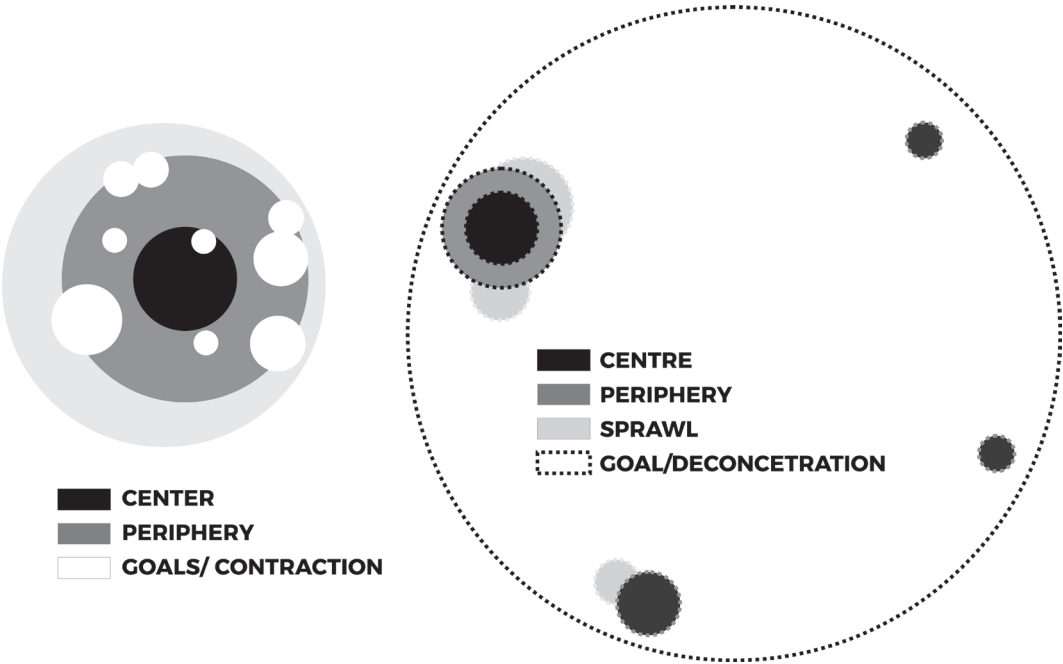


Fig. 232 / Two types of the way in which shrinking process impact the cities (Author: A. Stan, 2021).

SHRINKING PATTERNS OF DANUBIAN CITIES AND TOWNS

We can recognise the four main categories of shrinking cities in the Danubian region (Fig. 232):

1) **GROWTH-ORIENTED CITIES:** the Danube capital cities (Vienna, Budapest, Bratislava, Belgrade) + cities whose development in recent decades influences the Danube area, although they are not on the Danube (Bucharest);

2) **NATURAL SHRINKING CITIES:** cities which, following the boost of industrialisation, had an unnatural growth leap in the years of socialism and which, after 1990, began to depopulate. These cities still have enough resources for recovery and have a strong identity;

3) **RISKY SHRINKING CITIES:** former mono-industrial cities, or new cities created exclusively on the socialist logic of territorial development, cities without a historically validated identity and with the constant decrease in the overall population; and

4) **CITIES IN FALSE SHRINKING:** cities in socio-economic stagnation with small demographic decline, with an aging population strongly linked to a traditional way of life.

From another point of view, we differentiate two opposite types of shrinking cities: (1) by de-industrialisation for the former industrial cities in which shrinkage is mainly due to the loss of industry/loss of identity, demographic exodus; and (2) by disconnection, mostly in non-industrial cities and towns, when shrinkage is mainly due to the loss of gravitation zones or changing the centralities.

Another spatial typology which can be connected to the shrinkage processes uses specific criteria in the domain of planning policies, protected area regulation and legislative social measures (Fig. 233): (1) shrinkage by “doughnut effect”, based on depopulation and loss of economic strength of the inner city comparing to the suburbs (Wiechmann & Pallagst, 2012); (2) shrinkage by “peripheralization”, connected to the industrial development, or semi-rural marginal areas (Martinez-Fernandez et al, 2013); (3) shrinkage based on perforation (Hollander et al, 2009) both at centre and at peripheries, characterised by the presence of abandoned lands.



Fig. 233 / A - Shrinkage by “doughnut effect”; B - Shrinkage by “peripheralisation”; and C - Shrinkage by inner “perforation” (Author: A. Stan, 2021).

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- Cattán, N. (1993). Attractivity and Internationalisation of Major European Cities: The Example of Air Traffic. *Urban Studies*, 32(2), 303-312. DOI: 10.1080/0042098950013095.
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CENTRE-PERIPHERY MORPHOLOGICAL RELATIONSHIP WITHIN THE DANUBE CITIES

Beyond the main cause of the shrinkage itself, a region, city or a town can be considered peripheral due to several specific factors: relation to centres in big cities and capitals within the regional settlement matrix, the administrative aspects, the accessibility and connectivity in relation to the main European transport corridors, the socio-economic regional and local aspects, major changes in land use and activities and other socio-economic aspects: migration, scarcity, presence of ghetto, rising of violence, etc.

Usually, urban shrinkage is studied in well-organised, compact urban areas or metropolitan systems, and less so in marginal areas or outer suburbs, which is linked to an entire local and national context, as in the case of Serbia (Antonić & Djukić, 2018). From the territorial aspects, the periphery is correlated to configuration of urban networks, dominated by the presence of large centres. In the case of the Danube, there are two main territorial systems: (1) the strongly hierarchical one, dominated by a centre – large city or a capital; or (2) the hierarchical one, with a development field created between cities of similar size and importance (Fig. 234).

The centre-periphery relationship within the Danube cities is visible and understandable regarding the density in relation to the urban structures (Alexandru, 2020). The Danube acts as a barrier, while the marginal areas were developed on the border form the new clusters of urbanisation (Fig. 235) The landscapes of Danubian cities, their configuration of centres, port, industrial zone, bridge, and green spaces gradually emerged and overlapped with the natural landscape. However, in many cases, and especially in the case of cities industrialised during the communist period, the Danube was no longer a centre of the city, it was rather a periphery, judging by the abandoned lands, discontinuous and uncalibrated street network, lack of public spaces, lack of urban life etc (Fig. 236).

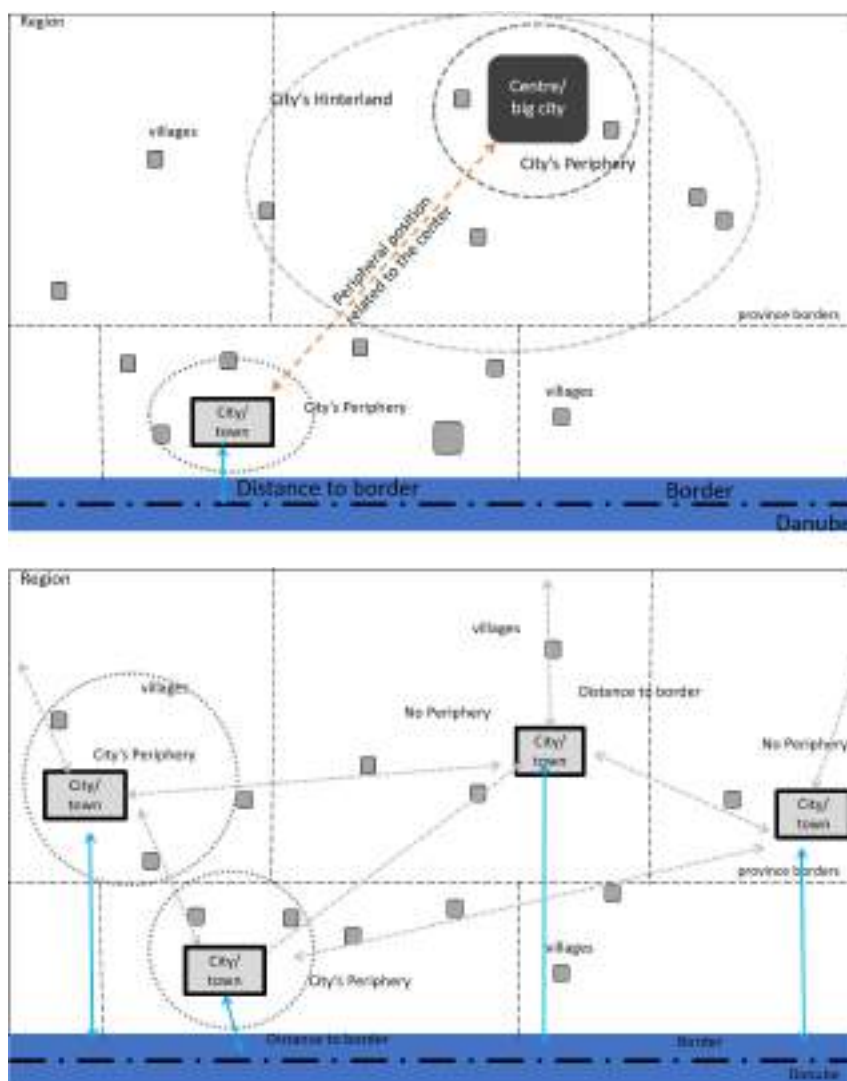


Fig. 234 / The two main urban territorial systems within Danube Region: (1) the strongly hierarchical one, dominated by a centre; (2) the hierarchical one, with a development field created between cities of similar size and importance (Author: A. Stan, 2021).

Fig. 236 / The different types of spatial-functional positioning of the centres in relation to the Danube. (Author: A. Stan, 2021; after: I. Păun Constantinescu, 2017).



Fig. 235 / The centre-periphery is a matter of built density distribution within the urban structure, attractors on Danube and on the main roads (Author: A. Stan, 2021).

BLUE INFRASTRUCTURE MORPHOLOGY IN RELATION TO CITIES AND TOWNS

The Danube blue infrastructure is approached from two major directions. First, it is a TRANSPORT CORRIDOR (Rhine-Main-Danube), which offers a wide fluvial route connecting central Europe and Black Sea Region (Fig. 237). Second, the river is also important in an ECOLOGICAL ASPECT, considering the biodiversity and ecological services (Fig. 238). It could be said that the infrastructure of the Danube is a matrix of both the harmony and the conflict: the cities positive development and progressive growth is proved by their heritage, but also by their resilience. However, it is not the antagonism that dominates the character of the Danube's blue infrastructure, but rather its vital force in relation to future development potential (Bašová et al, 2021).

There are two different conceptual models for the usage of the Danube floodplain (Stan & Harmanescu, 2021): (1) the non-submersible damming, proposed by Anghel Saligny, and (2) the submersible damming, supported by Grigore Antipa, both proposed in 1910, while only the first one is implemented by the communist regime. G. Antipa, the polymath biologist and ecologist proposed the natural flood regime and flood-plain features in order to protect the initial Danube's landscape. The other model of famous engineer A. Saligny, has been prevailed and implemented after 1960, through extensive embankments and drainage (Bondar, 2008).



Fig. 237 / The Danube is important transport corridor – a ship near Vidin, Bulgaria (Bulgarian Guide, 2021).



Fig. 238 / The Danube as an important ecological habitat – Zálesie natural area in the Little Danube Region in Slovakia (Author: K. Vandová, 2021).

For decades, these two models were perceived as antagonistic, one prevailing over the nature and the other over the economy. Today, we are at a level of maturity in which societies have realised that the two cannot function at opposite poles, each fighting for supremacy, but on the contrary, anthropic systems are obliged to reconcile economic and environmental objectives. Paradoxically, the small and medium-sized cities on the Danube are about to demonstrate exactly this principle of a mature reconciliation between nature and economy, an increasingly urgent need of our days (Fig. 239).



Fig. 239 / Reconciliation between nature and economy – the Danube between the built-up environment and local economy of Batina, Croatia, and the natural landscape of Beždan, Serbia, in background (Author: A. Radulescu, 2021).

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- Alexandru, M. (2020). Policentralitate și coerență metropolitană. / Polycentricity and metropolitan coherence. Bucharest: Asociația Arta în dialog.
- Antonić, B. & Djukić, A. (2018). The phenomenon of shrinking illegal suburbs in Serbia: Can the concept of shrinking cities be useful for their upgrading? *Habitat International*, 75, 161-170. DOI: 10.1016/j.habitatint.2018.03.010.
- Bašová, S., Sopirová, A. & Hajduková, R. (2021). Vital blue – green infrastructure for public spaces. In: O. Trofymchuk & B. Rivza (Eds.): *Proceedings of 21st International Multidisciplinary Scientific GeoConference: SGEM 2021* (pp. 233-240). DOI: 10.5593/sgem2021/6.2/s27.35.
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DISTINCT TYPOLOGIES: TWIN-CITIES AND BORDER CITIES

The twin cities located on both sides of the Danube are a special type of settlements arising from geographical, historic, political, and administrative conditions. The twin cities have the specific typologies that are influenced by their mutual cooperation. According to Clarke, “twin towns or sister cities are a form of legal or social agreement between towns, cities, counties, oblasts, prefectures, provinces, regions, states, and even countries in geographically and politically distinct areas to promote cultural and commercial ties” (Clarke, 2011). The essence of the twin cities takes into consideration only the cities which contain a common pattern of morphological co-evolution, and are historically related to the Danube.

The core of the ‘twining condition’ is having the similar genetic traits related to the Danube, as the main matrix element. Regarding the urban structures, there are the traces of common elements such as orientation of centres and axes, street patterns and visual landmarks. According to the previous studies (Stan et al, 2019), the criteria used for analysing the twin cities morphology were separated into two categories: (a) the historic and geo-morphological common conditions; and (b) the characteristics of urban tissue and the visual relationship of the city with the Danube. As for the aforementioned analysis of twin cities, taking into the consideration the overall context, there are several detailed criteria such as the presence of a bridge or a water crossing path connecting the banks, and the similarity of the size of the cities. An interesting relationship in twin cities systems is based on the urban structure orientation towards the Danube, the dialogue across the water and openness of the cities (Fig. 240).

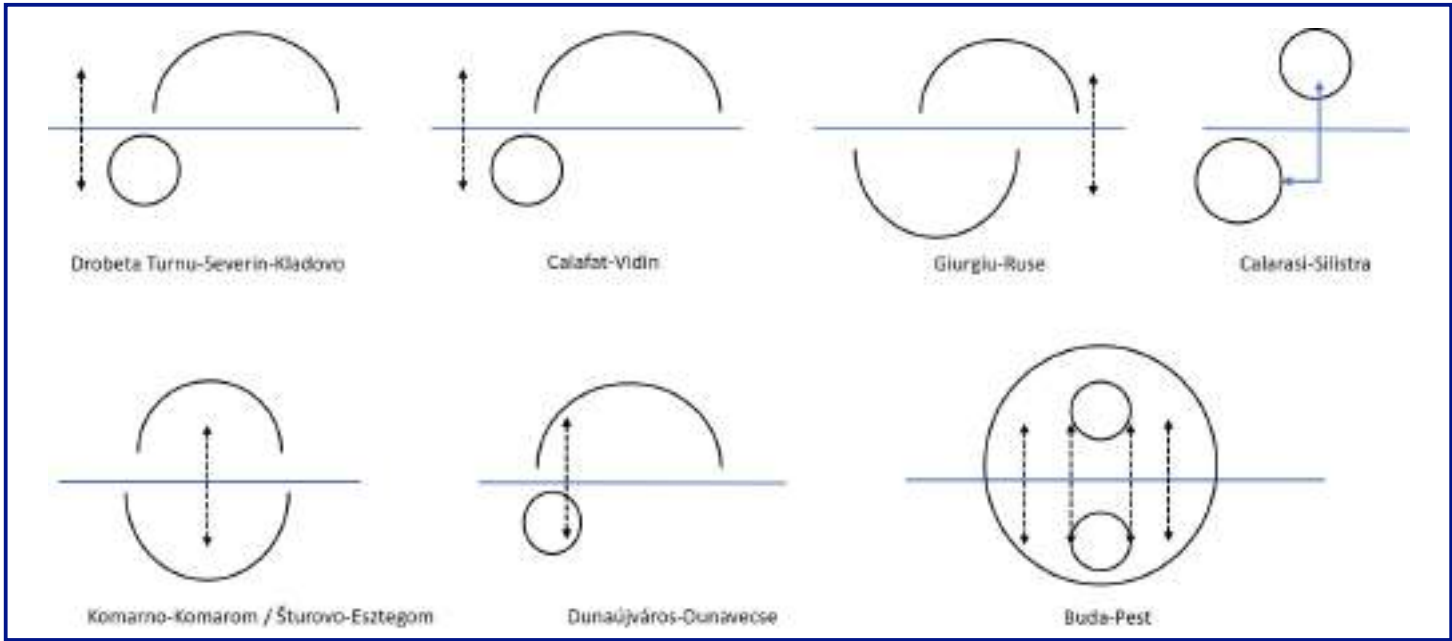


Fig. 240 / The size and openness of the urban structure, along with the presence of the bridge or ferry transport are elements which structure the twin cities systems along the Danube (Author: A. Stan, 2021).

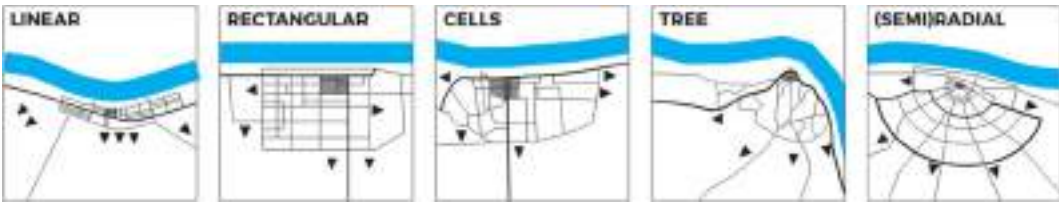


Fig. 242 / Five main types of street networks oriented to the Danube in the original frames of Danube cities (Author: A. Stan, 2021).

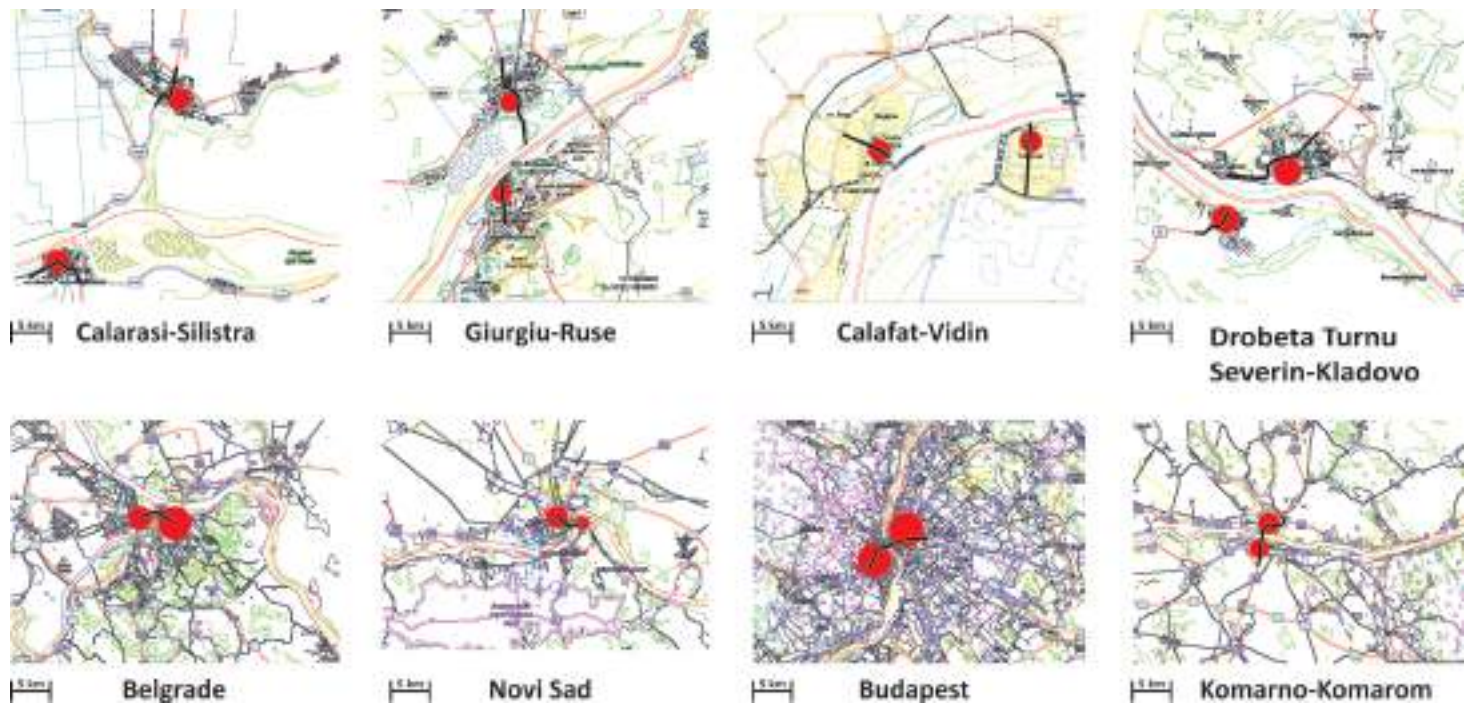


Fig. 241 / Călărași, Romania – the city clearly oriented towards water/the Danube (Author: F. Radulescu, 2022).

PATTERN TYPOLOGIES OF STREET NETWORKS

Considering the urban matrix of the Danube cities, there is a limited variety of patterns and street structures in the original paths, clearly oriented towards the water (Fig. 241). In many cases, these street networks are protected and represent significant historic value (Fig. 242). Both in the case of historic cities and the planned cities, the street network reflects the umbilical connection of city life with water. The socialist period in the industrialised cities partially distorted this connection, introducing the civic squares as centres of power, very rarely connected to the Danube. On the contrary, the cities beyond the re-configuration with built structures, have found their axial connection with water, such as pedestrian zones and leisure spaces (Fig. 243).

Peripheral areas have a peculiarity regarding the structure of street networks. In the shrinking phase, the peripheral spots can have both dispersion and a minimum concentration of urban activities. According to the position and shape of the peripheral developments in relation to the main urban area, we can identify a series of characteristic types of the historically established cities and modern ones in the Danube Region.

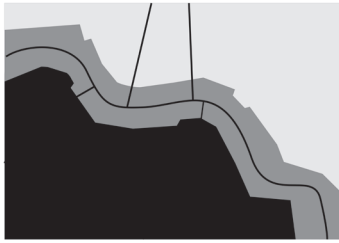


Fig. 243 / Historical centre and main street orientation toward the Danube waters (Author: A. Stan)

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- Clarke, N. (2011). Globalising care? Town twinning in Britain since 1945. *Geoforum*, 42(1), 115-125. DOI: 10.1016/j.geoforum.2010.10.006.
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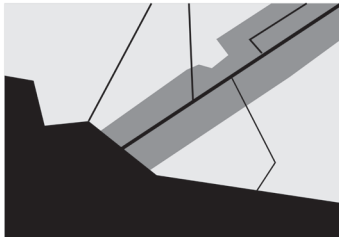
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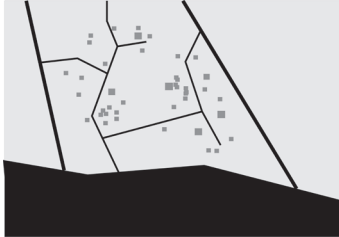
tentacles



fringes



diffuse/ in clusters



diffuse in strips

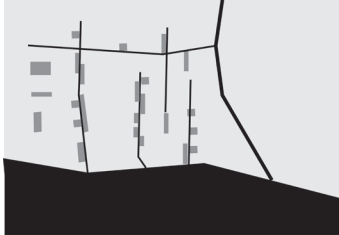


Fig. 245 / The position of peripheral zones/new developments in relation to city and street network (Author: A. Stan, 2021).

TPOLOGIES OF CITY-WATER RELATIONSHIP

The connection between the Danube cities and the water was made through a 'buffer zone', with the individual pace and form of development. The public promenade area seems to be a necessity for all cities with on the Danube. Regarding the typology, two large categories can be distinguished according to the slope of the land; (1) those with low or zero slope, easily connected with the quay area, and (2) those with medium or high slope, whose fabric-water connection required embankment works, stairs, ramps (Fig. 244).

Another differentiation criterion for the city-Danube relationship is the tissue's tangent to the water (Stan, 2014). There are cases of cities that are at a certain distance from the quay, so that the promenade area was developed on a tributary canal of the Danube. Călărași and Giurgiu are such examples. The other cases of cities directly connected to the Danube shore have developed public promenade areas, leisure spaces, trying to highlight the natural landscape and historic remains, such as Smederevo or Golubac (Fig. 245).



Fig. 246 / Tulcea, Romania: the Danube cliff, built during the communist period with a series of compact blocks of flats, stopping the visual relation between the hilly landscape of the city and the water (Author: A. Radulescu, 2022).

URBAN LANDSCAPES AS VISUAL ELEMENT OF URBAN MORPHOLOGY

Danubian cities form a complex system, fractally composed of multiple regional, sub-regional, counties, municipal, local and intra-local sub-systems. (Nagy, 2022). The Danube is dotted with thousands of local landmarks, places with strong images, which remain in people's memory and carry their identity throughout the generations. Many of the landmarks are associated with the cities themselves and topography, history or tourist offer, others come from older history or extensive infrastructure and others are

landmarks of the nature itself, impressive by its ecological vitality and specific way of life – for example, the Danube Delta. The morphology of the built environment should focus on the territory characteristics – topography, hydrography, biodiversity and respect the natural conditions. However, many of the Danubian cities have suffered severe transformations, due to the uninspired or abusive interventions that destroyed their original landscape character (Fig. 246).

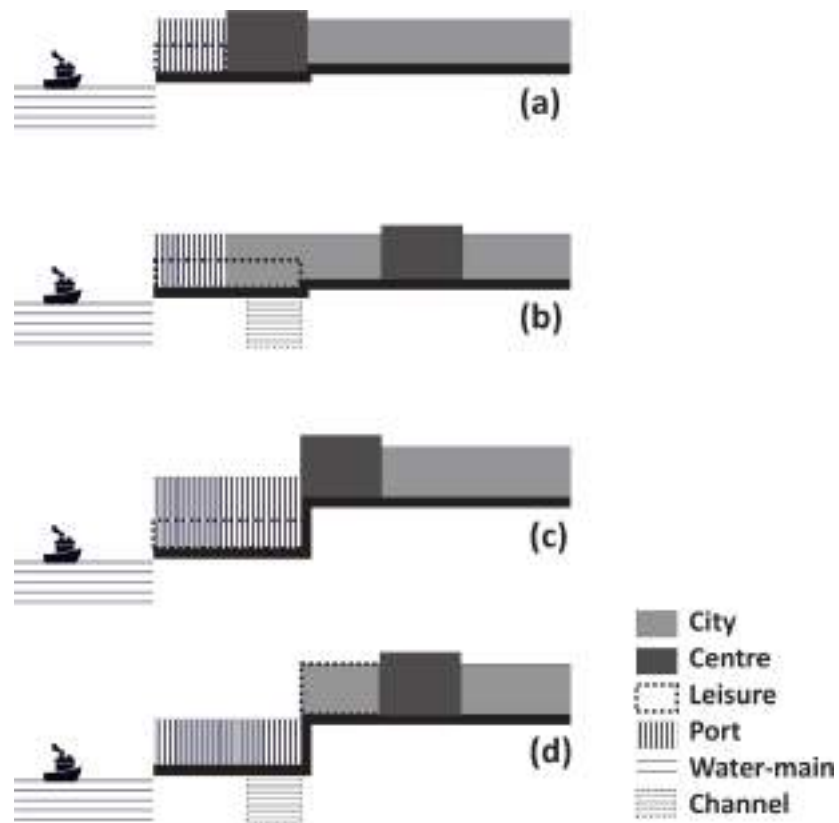


Fig. 244 / Typology starting from the two main cases: flat situation – low or zero slope (a, b), and with medium or high slope (c, d) (Author: A. Stan, 2021).

CONCLUSIONS

The morpho-typological approach of the urbanised region of the Danube helps to understand the evolutionary character of human settlements. More than a method, urban morphology is considered a means of commenting on urbanity itself, in the sense given by Françoise Choay, of the “mutual adjustment of a form of an urban fabric and/ with a form of conviviality”. In this chapter the relationship between cities and water in the context of both urban growth and shrinkage are carefully discussed, from a morphological perspective. In addition to the morphological elements at the macro-territorial

scale presented, the chapter also includes elements for understanding future configuration trends.

The current morphology studies actually seek to highlight this often-hidden value of cities: the heritage of the urban fabric in itself, with its coherent or less coherent parts. For the cities of the Danube, morphology is a level of authenticity, not used often in their promotion. The future of the form of the Danube cities is encapsulated in the very forms of their present and past, all found in the fabric of the city; they just have to be (re)discovered.

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- Nagy, D. (2022). Challenges of sustainable transport in Danube navigation. In: E. Stojić Karanović & K. Ristić (Eds.), Perspectives of sustainable development and security: globally and locally: Thematic compendium (pp. 39-55). Belgrade: Danube – River of Cooperation.
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Visions for Tomorrow

D+ Atlas

4.1

CONCEPTUALISING THE NETWORKS OF SHRINKING CITIES IN THE DANUBE REGION

Branislav AntoniĆ
Aleksandra Djukić

THE PROSPECTS of small and medium-sized cities and towns in the Danube Region is not just related to their internal potential, such as their socio-economic capital, preserved cultural diversity, cultural and natural heritage, urban fabric and rising tourism. Their development is also related to their networking, clustering, transport connectivity, relation to the nearest bigger cities and the permeability of nearby national borders settled on the river. Only considering both groups of the mentioned factors – external and internal ones – the future of the region and its urban settlements can be adequately planned and directed for both local people and prospective visitors.



Fig. 247 / Hard borders along the Danube are especially problematic for twin cities, such as Bačka Palanka in Serbia (background) and Ilok in Croatia (a tower on the right) (Author: B. AntoniĆ, 2018).

Fig. 248 / Burgenland Region in the Upper-Middle Danube was politically divided between Austria, Slovakia and Hungary after the World War I. Its towns, including pictured Eisenstadt, have witnessed the redevelopment after the recent softening national borders. (Author: A. Szabo, 2021).

National borders have a significant impact on cities and towns in the Middle and Lower Danube Region, as 50% of the river flow is a national border at the same time. In the most of cases, these borders are so-called “hard” ones, with strict border control and slower permeability thereof. Such hard borders significantly fuel urban shrinkage (Haase et al, 2014; AntoniĆ et al, 2020), as affected cities usually have smaller gravitation zones and their connectivity is disrupted (Bruneckiene & Sinkiene, 2015). Perhaps, this is particularly evident in the case of twin cities, as they are even physically interconnected (Fig. 247). The change of border regime

from “hard” to “soft” one can significantly improve local urban conditions. A good example are recently revived towns in Burgenland Region, politically divided between Austria, Slovakia and Hungary (Fig. 248).

In these considerations, borderland and border cities/towns should be differentiated. The European Union uses 25-km distance to nearest national border as a threshold to define a borderland region and cities (ESO, 2018). Border-cities and towns are those ones which cadastral territories touch national borders. Such cities and towns are numerous in the Danube Region, as it was underlined that the river is often a national border, too (Fig. 249). Among 89 research cities and towns, more than half (45 or 51%) are border cities, while even more are located in borderland regions – 70 (79%).

In contrast to the aforementioned negative effects of the proximity to national borders, proximity to national capitals brings positive impact on small cities and towns. This is especially important in the countries which aspires to get for-



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- AntoniĆ, B., Djukić, A. & Marić, J. (2020). Borderland Shrinking Cities: “Uncharted Territory” in International Research of Urban Shrinkage. In: V. Georgiev & I. Stoyanova (Eds.), VSU’2020 Conference Proceedings – Volume II (pp. 29-34). Sofia: USEA “Lyuben Karavelov”.
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- European Statistical Office. Glossary: Border region. Eurostat, Brussels, 2018. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Border_region.
- Haase, A., Rink, D., Grossmann, K., Bernt, M. & Mykhenko, V. (2014). Conceptualizing urban shrinkage. *Environment and Planning A*, 46(7), 1519-1534. DOI: 10.1068/a46269.



eign investments, where many East-European countries belong. Simply speaking, proximity to the national capital cities enables better contacts and higher exchange regarding to knowledge and technology (Hutzschenreuter & Harhoff, 2019).

This can be applied to the Danube Region, too. The Danube flows through ten European countries, but only five national capitals can be labelled as “Danubian” ones: Vienna, Bratislava, Budapest, Belgrade and, with a less degree, Bucharest, which is not on the river, but is close enough to have mutual influences (Fig. 250). In the other side, Vienna and Bratislava are also specific, as they are the closest capitals in the continent, with just 50 km in between. Thus, they form a two-capital region (Fig. 251).

In line with the previous observations, middle-sized and small cities and towns in the Middle Danube Region are better positioned if more capital cities are located in their vicinity (Fig. 251). The Lower Danube Region is with one capital (Bucharest) only, which left a huge void in many parts of this region.



Fig. 250 / Although Bucharest is 60 km far away from the Danube, its strong influence is visible on many cities in the Lower Danube (Author: B. AntoniĆ, 2018)

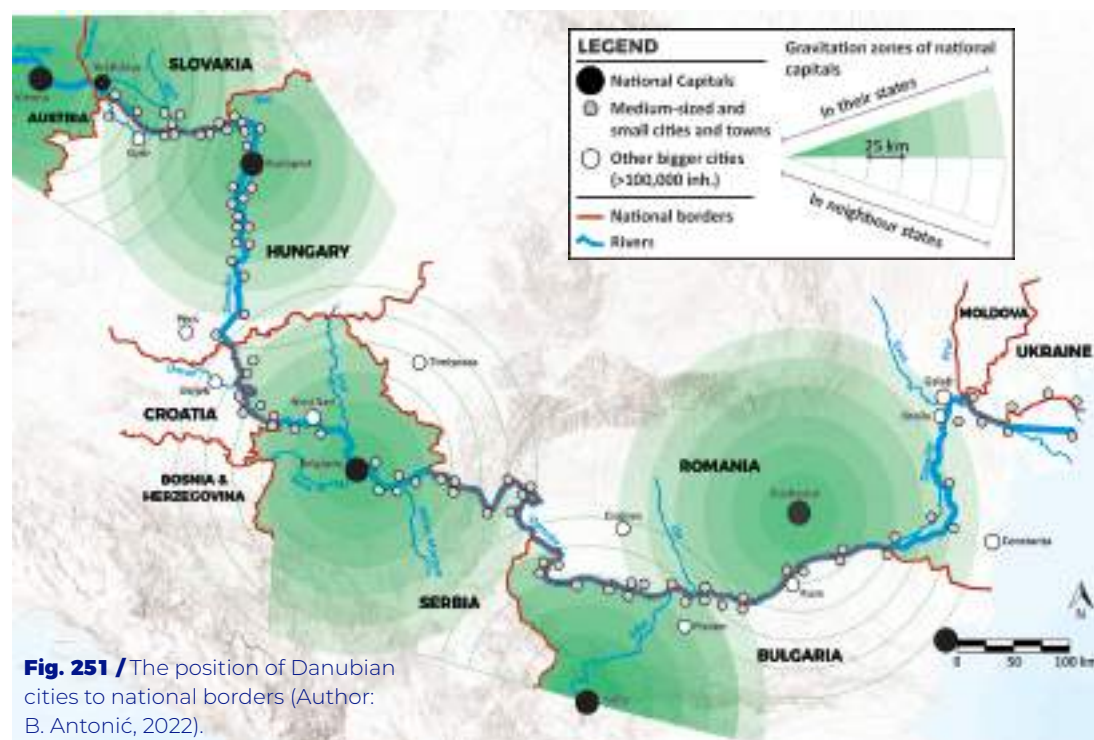


Fig. 252 / Timișoara is the main regional centre of Western Romania. Therefore, its influence can be identified in all towns in the western section of the Danube Region in this country despite the city is 150 km far away from the Danube (Author: A. Radulescu, 2022).



Apart from the contrasting effects of proximity to national capitals and national borders, medium-sized and small cities and towns are also under the strong influence of regional centres, especially in the regions far away from national capitals (Fig. 252). The role of a regional level has emerged as important recently across the European Union, where its territorial cohesion is actually equalised with regional policy, based on minimising regional disparities across the EU space. This is especially evident in the EU support to Euro-regions, i.e., cross-border region between sovereign EU states (EC, 2021).

The significance of regional centres is especially important in the cases where this is combined with the elements of regional autonomy, such as the case of the City of Novi Sad as the administrative seat of the Autonomous Province of Vojvodina in northern Serbia (Fig. 253). This city has had

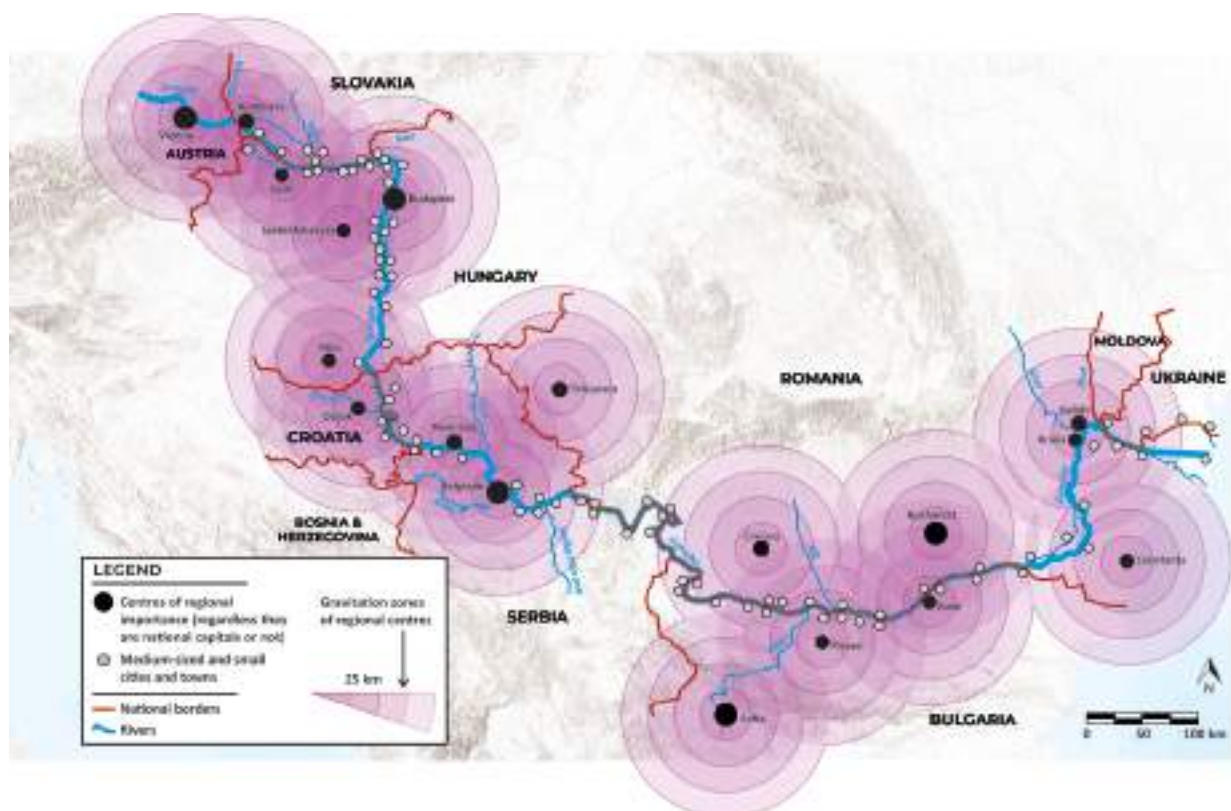


Fig. 253 / Petrovaradin Fortress above the Danube in Novi Sad, the regional centre of northern Serbia and the administrative seat of the Autonomous Province of Vojvodina (Author: P. Morgenstein, 2021).

the faster demographic growth than Belgrade as a national capital during the post-socialist transition (Djukić et al, 2017).

This means that proximity to the centres of regional importance, regardless they are national capitals or not, also plays a significant impact on the socio-economic prospects of Danubian medium-sized and small cities and towns (Fig. 254). Regional centres are considered all cities which are the main urban settlements in NUTS 2 regions. All of them have more than 100,000 inhabitants.

Fig. 254 / The accessibility of Danubian cities to regional centres (Author: B. AntoniĆ, 2022)



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- Djukić, A., AntoniĆ, B. & Vujić, T. (2017). Urban Shrinkage in a 'Shrinking' Serbia – The Approach to a Global Phenomenon in a Local Context. *Geodetski Vestnik*, 61(4), 614-629. DOI: 10.15292/geodetski-vestnik.2017.04.614-629.
- European Commission – EC (2021). Territorial Agenda 2030 - A future for all places. Brussels: EC. Retrieved from https://ec.europa.eu/regional_policy/sources/docgener/brochure/territorial_agenda_2030_en.pdf.

An important factor for the connectiveness and networking of medium-sized and small cities and towns in along the Danube is modern transport corridors. Poor transport connections, combined with a small size and distance from major cities, often led to the contested model of “single city”, i.e., a small and remote city especially prone to rapid urban shrinkage. Such examples are widespread among cities in post-socialist Europe (Restrepo Cadavid et al, 2017). Hence, advanced transport network is a prerequisite to establish developed urban network.

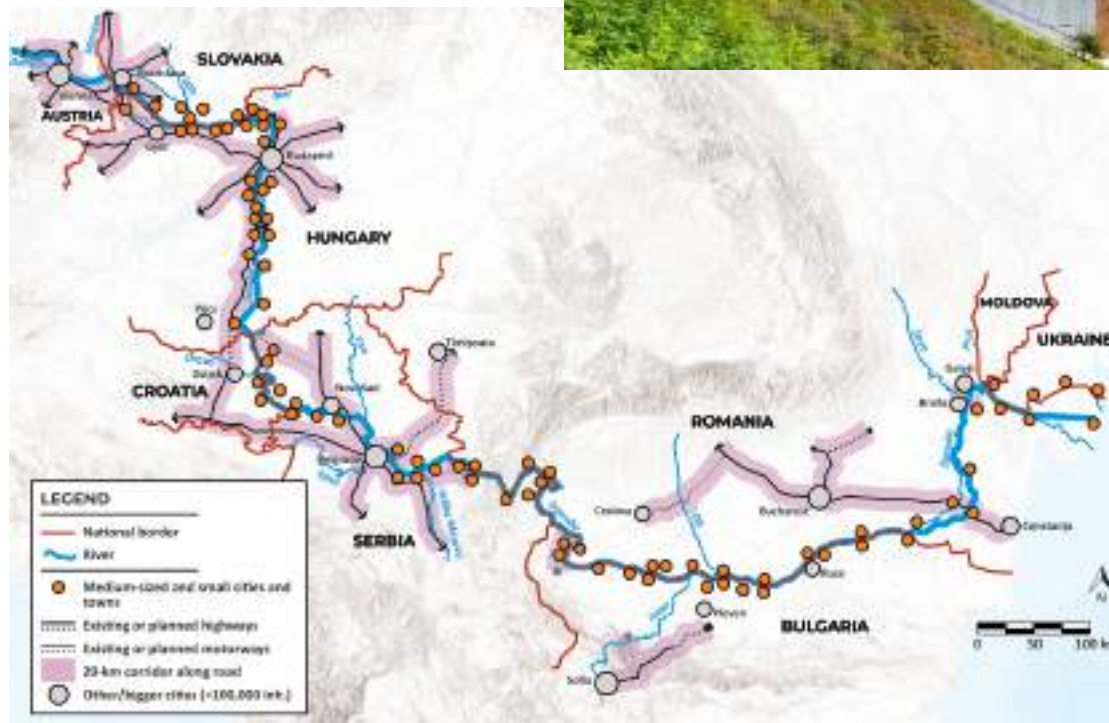
All states in the region of the Middle and Lower Danube have invested significant resources since the beginnings of post-socialist transition to improve their accessibility. This usually means the development of modern roads, highways and 4-line motorways, as road transport dominates in the region. Railway system lost their primate after the World War II, whereas waterways – the Danube and its tributaries and canals – at the end of 19th century. However, the recent projects have tried to make a balance between the different modes of transport. A good example is a “New Europe” Bridge across the Danube between Vidin, Bulgaria, and Calafat, Romania, which combines road and railway (Fig. 255).



Fig. 255 / “New Europe” Bridge across the Danube bridge between Vidin, Bulgaria, and Calafat, Romania, combines road and railway (Author: Bulgarian Guide, 2022).

Speaking about transport connections, both connections that are parallel to or pass the Danube are important for the future development. The second type is more challenging for development, as it implies the construction of a link across the Danube, which is a pretty wide river in most sections downstream Vienna. These links are long bridges or dams with road connection, such as Gabčíkovo Dam in Slovakia (Fig. 256) or two Iron Gates dams between Romania and Serbia. In this study, both types of road connections are analysed (Fig. 257).

Fig. 256 / Gabčíkovo Dam in Slovakia is also an important transport link across the Danube (Author: A. Radulescu, 2021).



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Restrepo Cadavid, P., Zhukova, S., Cineas, G. & Quintero, L. (2017). Cities in Europe and Central Asia: A Shifting Story of Urban Growth and Decline. Washington, DC: World Bank.

Fig. 257 / The accessibility of Danubian cities to modern roads (Author: B. AntoniĆ, 2022)

Fig. 259 / The rectorate building of “Selye János” University in Hungarian language in Komarno, Slovakia. Komarno is the smallest city in the state with a public university as the city is the centre of Hungarian minority in Slovakia (Author: A. Radulescu, 2021).



Fig. 260 / Dunaujvaros was modelled as a socialist city with heavy industry during socialist era. The city dependence to industry, without significant administrative status, has caused severe urban shrinkage after the fall of socialism (Author: P. Wolf, 2022).

The next factor which can significantly enhance the potentials of cities and towns in the Danube Region is their (higher) position in national political-administrative hierarchy (Fig. 258). It is already mentioned that the regional centres that are the seats of regional government at the same time have better conditions for the overall development and external completeness. This can be applied to smaller cities and towns, too. The status of an administrative seat brings higher urban functions (Servillo et al, 2017). For instance, for larger administrative system, such cities usually have additional institutions, such as a district hospital, theatre, the variety of secondary schools, one or two research and development institutes or faculties or even a small university (Fig. 259). The afore mentioned facilities belong to the tertiary and quaternary sectors of the economy, which bring the significant number of high-educated jobs in smaller cities, which is becoming a prerequisite for their urban development in the present-day globalised world.

However, the most of smaller cities and towns are in an opposite situation in the Danube Region, as they face the lack of these economic fields and high-quality jobs, shrinking as a consequence. The example of Dunaujvaros (Fig. 260), a model-socialist city with heavy industry and one of the largest cities in Hungary without a country seat; the city has been among the fastest shrinking medium-sized Hungarian cities. This is not a new problem. After the collapse of the former Habsburg Empire in 1918, several cities with higher administrative functions, such as Komarno in Slovakia, Esztergom in Hungary and Sombor in Serbia (Fig. 261), lost this status and stalled during interwar years.



Fig. 261 / “Županijska” (District Court) in Sombor is one of the largest historic administrative buildings in Serbia. It shows the former glory of Sombor as the seat of large Bacs-Bodrog County in the Kingdom of Hungary. With its abolishment after the World War I, Sombor stagnated for several decades (Author: M. Đurđević, 2022).

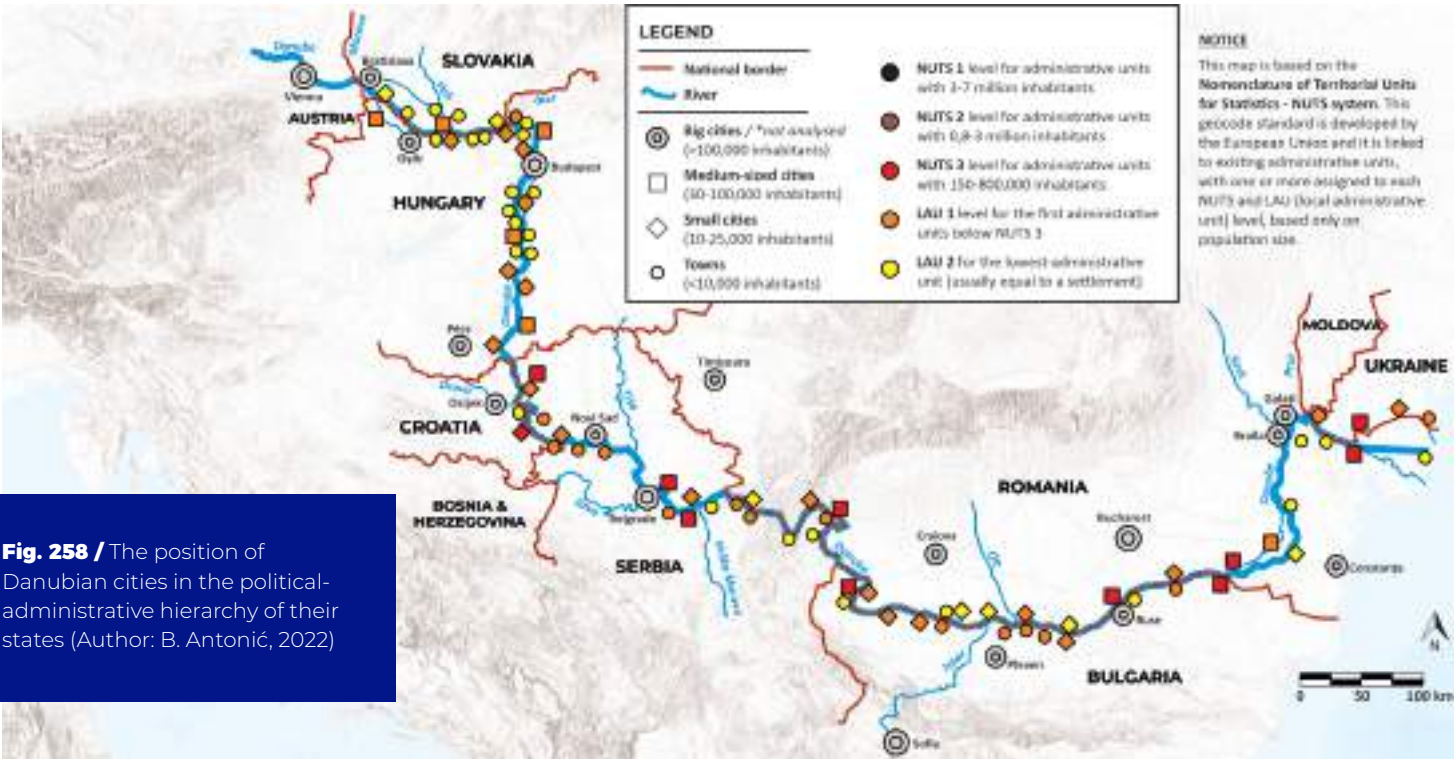


Fig. 258 / The position of Danubian cities in the political-administrative hierarchy of their states (Author: B. AntoniĆ, 2022)

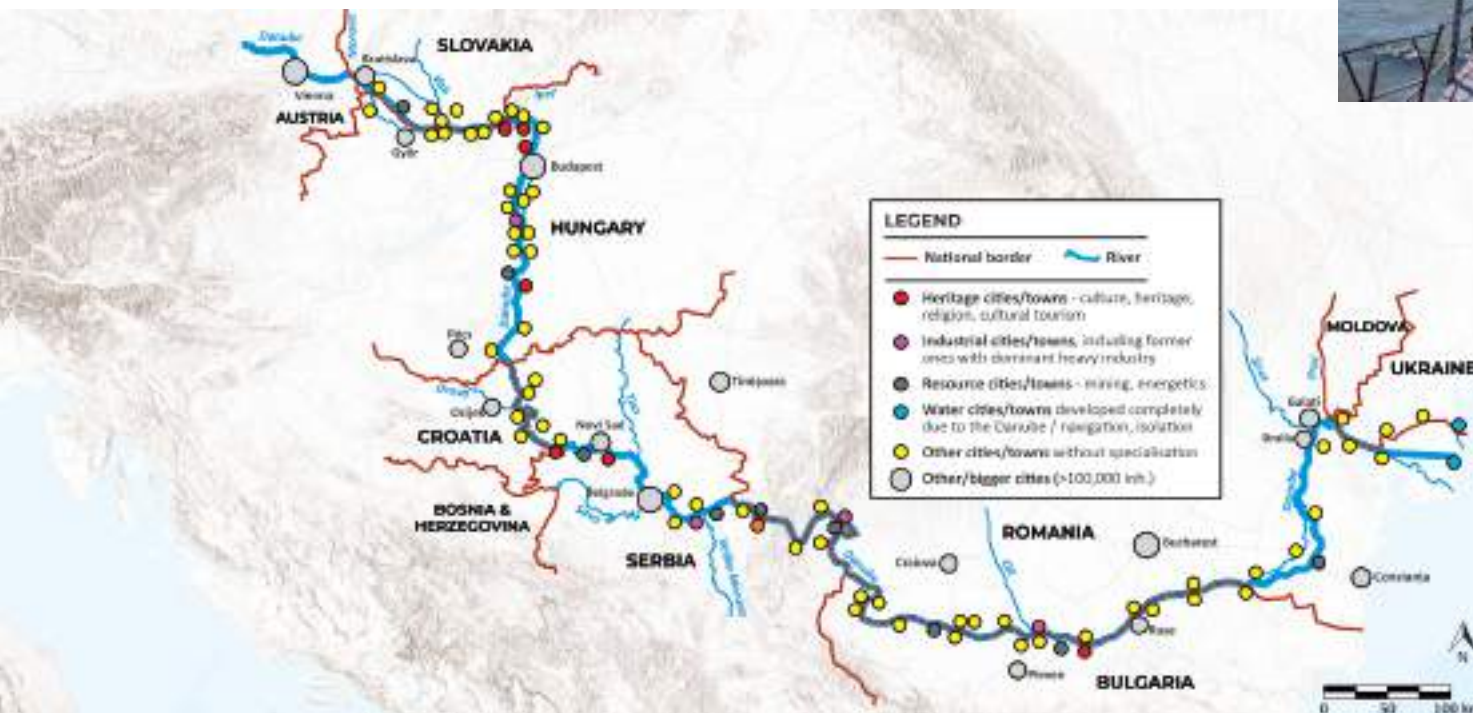
The last factor to be included into consideration on how medium-sized and small cities and towns along the Danube can cooperate and network is their specialisation and thematisation, i.e., having special characteristics which has influenced their uniqueness comparing to the other Danubian cities (Fig. 262). It is already identified that cities and towns with the higher degree of specialisation are more prone to be extremes from economic and productivity perspective, both in positive or negative way (Wolff & Wiechmann, 2018). Basically, the “special” character of a city or town is very important for shrinking urban communities as it is related to their attractiveness and showing a ‘positive image’, which is a precondition to attract external interest and investments (Wang et al, 2021).

The regions of the Middle and Lower Danube belong to less developed ones in Europe, so intensive industrialisation has omitted many small cities and towns in these regions. Consequently, many of them have retained many historic and traditional features, both tangible and intangible. The recent rise of cultural tourism along the Danube has been a driving force of the revitalisation of these cities, such as Esztergom in Hungary, Ilok in Croatia or Golubac in Serbia (Fig. 263). The other specialised cities and towns have more challenging situation. This is especially visible in new settlements developed during socialism, which industrial base has collapsed

with the post-socialist transition – for instance, Moldova Noua in West Romania (Fig. 264). At the end, there are a few very specific cases of specialised towns, established completely due to the Danube, such as Romanian Sulina as the lowest town on the river, developed to control always difficult navigation through the Danube Delta (Fig. 265).

Fig. 263-264 / Danubian twin towns in the Iron Gates Region with specialisation, but with opposite development trajectories, too; Golubac in Serbia (up) is a historic town recently revived by cultural tourism along the Danube (Author: D. Miletić, 2022), while Moldova Noua in Romania (down) is a new, socialist town with development problems due to the post-socialist collapse of key mining activities (Author: A. Szabo, 2022).

Fig. 265 / Sulina in Romania, the lowest town on the Danube, is a special urban settlement developed to control navigation through the Danube Delta (author: A. Radulescu, 2021).



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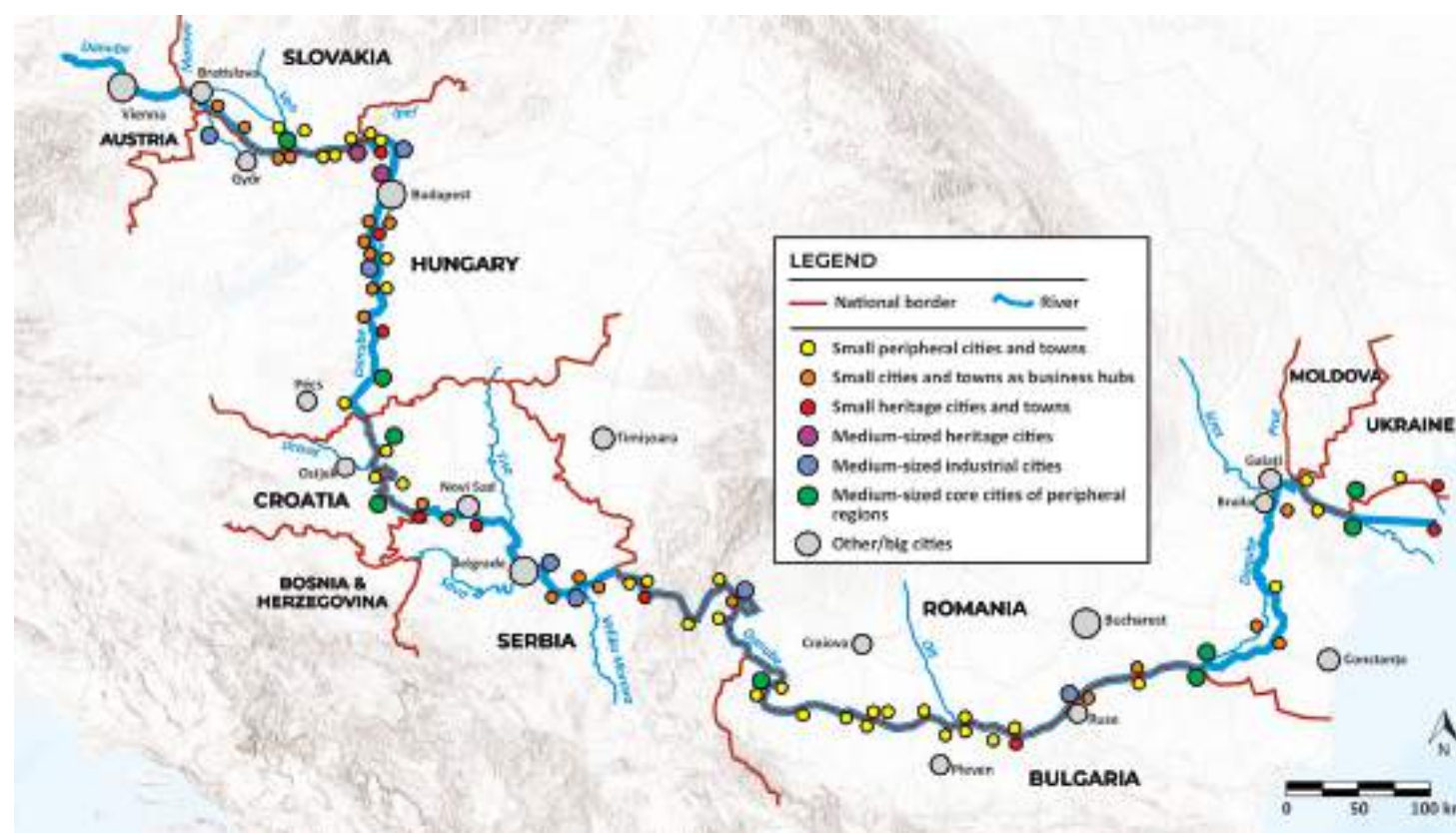
- Wang Y., Lin, M., Gao, J. & Zhou, Z. (2021). Fading Attraction of the Shrinking City: An Empirical Study from an Urban Resource Perspective. *Sustainability*, 13, 11550. DOI: 10.3390/su132011550.
- Wolff, M. & Wiechmann, T. (2018). Urban growth and decline: Europe's shrinking cities in a comparative perspective 1990-2010. *European Urban and Regional Studies*, 25(2), 122-139, DOI: 10.1177/0969776417694680.

Fig. 262 / Map: Danubian medium-sized and small cities and towns with special characteristics (Author: B. Antić, 2022)

The Danube as the second longest European river and the most international river passing through ten European states, has been both a huge potential and huge obstacle for cooperation during history. With transition in transport from waterways to rail and then roads in the late 19th and 20th centuries the importance of Danube was noticeably reduced (Dávid & Madudová, 2019). This was just jeopardised by many new national borders and frequent political disturbances in the Danube Region during the 20th century.

Since the 2010, urban population has prevailed across the World. Hence, forming urban clusters and networks is a critical element in a general socio-economic development. This can be applied for cities and towns in the Danube Region, especially smaller ones, which cannot independently function in present-day globalised society. Their mutual cooperation and partnership through the creation of clusters and networking within them is a key potential to prevent their overshadow by major cities and national capitals today (Fig. 266).

Fig. 266 / Map: Clusters and networks of Danubian medium-sized and small cities and towns (Author: B. AntoniĆ, 2022)



CLUSTER 1: SMALL PERIPHERAL CITIES AND TOWNS (Fig. 267)

This is the cluster where the largest number of Danubian small cities and towns belongs (43%). They are on the Danube sections which are national borders, too. However, some of them are located in “internal peripheries”. Their future development is related to a balance between their rural-natural hinterlands and better connectivity through nearby border and/or to nearest major cities.



Fig. 267 / Example of Cluster 1: Orșova, Romania (Author: A. Radulescu, 2022)

CLUSTER 2: SMALL CITIES AND TOWNS AS BUSINESS HUBS (Fig. 268)

The most of small cities and towns along the Danube that are located along highways and in proximity to the largest cities in the region are in this cluster (25%). Many of them have relatively strong economic base: light industry, energetics, logistics and transportation. Their future is more pertained to the development of central and leisure-related activities, to improve local urban life.



Fig. 268 / Example of Cluster 2: Šamorin, Slovakia (Author: M. Danciu, 2022)

CLUSTER 3: SMALL HERITAGE CITIES AND TOWNS (Fig. 269)

The cities and towns that belong to this smaller cluster (11%) are those ones recognisable by already present rich cultural and natural heritage, preserved traditional urban elements and religious legacy. Therefore, these cities and towns are usually unique at regional level. Their future is the sustainable tourism development regarding to the prevalent heritage activities and facilities, with a special respect to local population and their needs.



Fig. 269 / Example of Cluster 3: Ilok, Croatia
(Source: Tourist Office of Ilok, 2022)

CLUSTER 5: MEDIUM-SIZED INDUSTRIAL CITIES (Fig. 271)

Several Danubian cities (8%) fits to this cluster. All these cities have had an advanced (heavy) industrial capital, they are located on the main international roads, which reduced their peripherality. These characteristics had to be preserved in the further development of these cities, adding the quality of local life and better service sector as necessity in their future prospects.

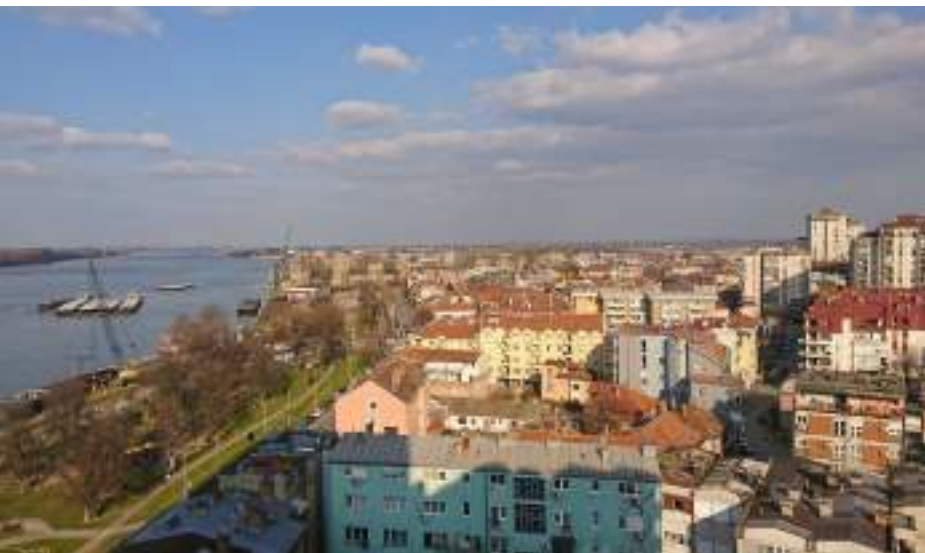


Fig. 271 / Example of Cluster 3: Ilok, Croatia
(Source: Tourist Office of Ilok, 2022)



· Dávid, A. & Madudová, E. (2019). The Danube River and its importance on the Danube countries in cargo transport. In J. Bujňák & M. Guagliano (Eds.), *Transportation Research Procedia* 40 (pp. 1010-1016). DOI: 10.1016/j.trpro.2019.07.141.



Fig. 270 / Example of Cluster 4: Esztergom, Hungary
(Author: B. AntoniĆ, 2019)

CLUSTER 4: MEDIUM-SIZED HERITAGE CITIES (Fig. 270)

Just two cities – Esztergom and Szentendre in the vicinity of Budapest – make this ‘rarest’ cluster (2%). These cities are in the shadow of a national capital, but their cultural and religious significance has secured their important role in national urban system. The future of these cities is the similar to the small heritage cities and towns – the sustainable development of cultural tourism – but linked with the development of other urban functions, such light industry, service economy and local administration.

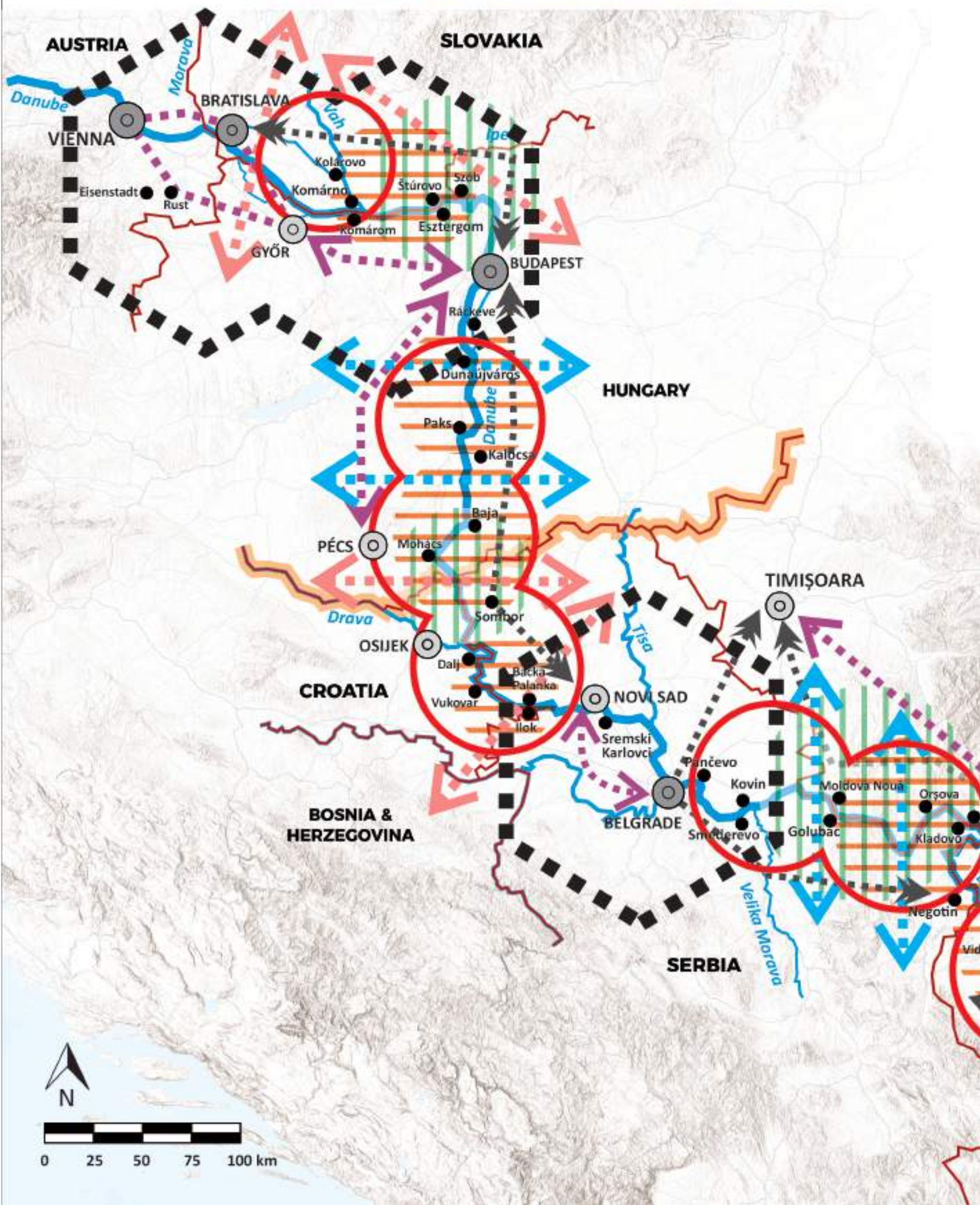


Fig. 272 / Example of Cluster 3: Ilok, Croatia
(Source: Tourist Office of Ilok, 2022)

CLUSTER 6: MEDIUM-SIZED CORE CITIES OF PERIPHERAL REGIONS (Fig. 272)

The cities in this cluster (11%) are typical medium-sized European cities which district seats with the even share of light industry, services, culture, administration, and education. Their location in peripheral regions brings both pros and cons, as they are not under the strong influence of major cities, but far away from the transport corridors and capital investments, too. Their future is connected to the support of upper levels (national, European, regional) to enhance their position. This includes the formation business and technology hubs and the improvements of local education sector.

CENTRE-PERIPHERY-BORDERLAND RELATIONS ALL ALONG THE DANUBE _ POINTS OF INTERVENTIONS _ For a More Balanced Danubian Spatial System _



LEGEND

— STATE BORDERS

— LIMITS OF SHENGHEN AREA

CITIES & TOWNS



Capital cities



Big cities (>100,000 inh.) -
Regional development poles



Small and medium-sized cities
and towns (<100,000 inh.) -
Focus cities & associated
strategic partners in DANUrB+
Project



RIVERS:

Danube + tributaries



Intervention prior to cross-border multiple
connectivity (car/train/velo)



Interventions prior to regional connectivity



Interventions prior to longitudinal connectivity



Interventions prior to economic boost /
re-functionalisation



Interventions prior to cultural concentration
(tourist hubs)



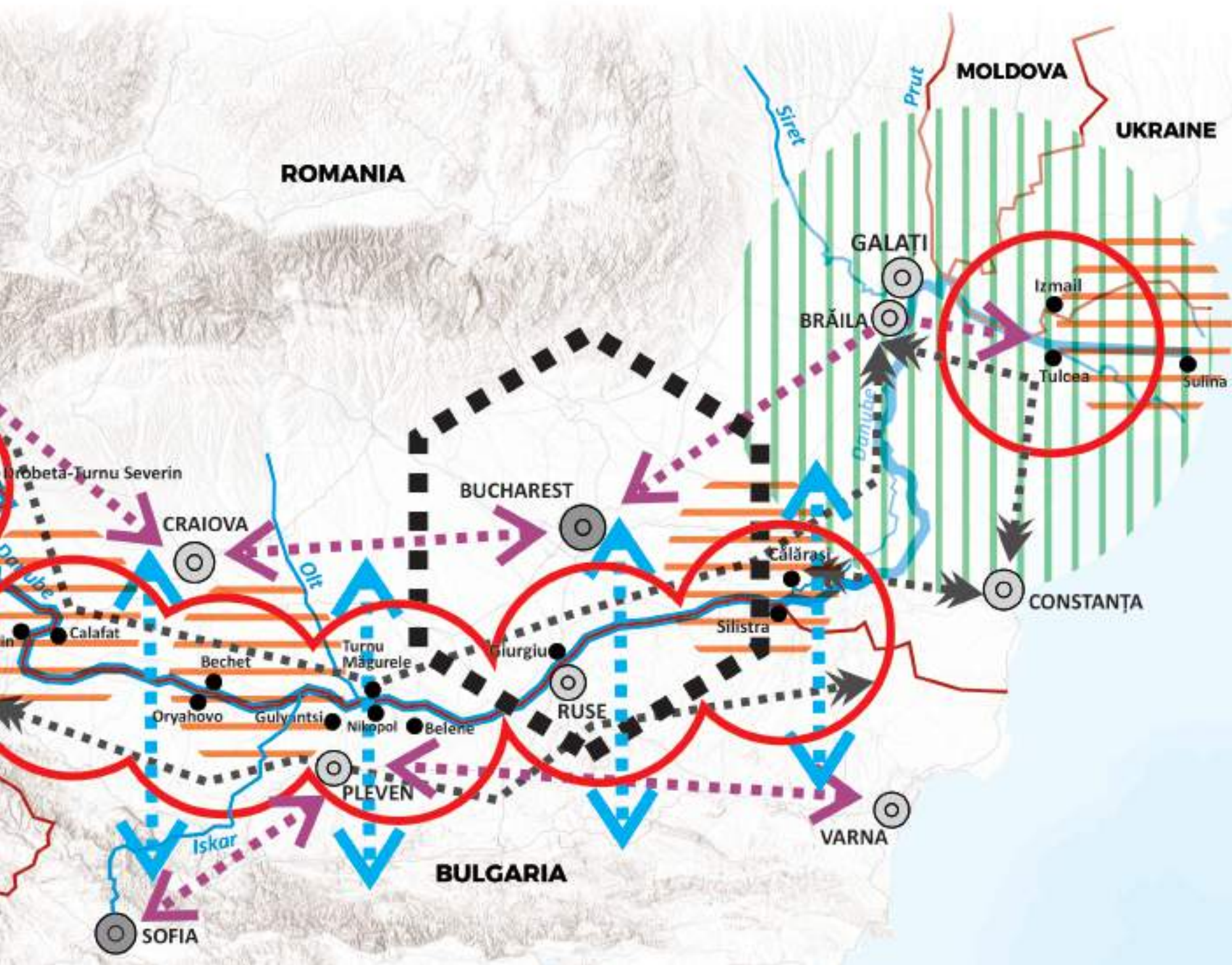
Interventions prior to social design / demographic
measures



Interventions prior to ecological and biodiversity
enhancement



Interventions prior to inter-cultural and inclusivity
enhancement



4.3

NEW POSSIBILITIES IN THE VISITOR ECONOMY FOR SHRINKING CITIES BY THE DANUBE

Bálint Kádár

NO EUROPEAN STRATEGY foresees the fast integration of the peripheral regions along the Danube into the major transport networks, like TEN-T or highway corridors, therefore the small and medium cities along the river have no promise to become central industrial and business hubs in medium term. The Danube River as a major transport corridor has little relevance for industries, except for the tourism industry, the only sector that promises relevant growth in revenues and employment.

Today, only cruise ships have international relevance in tourism passing all peripheral regions by the Danube, but these do not stop in smaller destinations and generate no spendings to the local entrepreneurs. The visitor economy has to be managed in a much more diversified and inclusive way in order to be beneficial for these communities. A variety of offers are available for domestic tourism, but projects like DANURB identified potentials for a more diverse tourism infrastructure, which can be able to give attractive lifestyle and business opportunities to locals, helping to stop the population shrinkage.

Fig. 273 / A new cycling-pedestrian path along the Danube riverfront in Golubac, Serbia, developed as a part of Eurovelo 6 Route (Author: Tourist Organisation of Golubac, 2021).



Fig. 275 / Cultural heritage directly on the Danube – a water mill in Baja, Hungary (Author: P. Wolf, 2022).



Fig. 274 / A ritual bread, honey, and spices performed the Katsa Matsa ritual "Katsa Matsa" ritual in Milkovitsa Village, Gulyantsi Municipality in north Bulgaria (Author: BlueLink, 2022).

- **BICYCLE TOURISM.** The development of the Eurovelo 6 transnational bicycle route has the potential to upscale local tourism offers to an international audience (Fig. 273). Regions in Germany or Austria like Wachau could build around half of their tourism revenues on cyclists by developing an adequate infrastructure. This form of tourism is sustainable in every aspect and generates income for local products, local service providers and accommodations.

- **LOCAL GASTRONOMIC OFFER.** The peripheral rural regions along the Danube have still a stabile reputation for authentic gastronomical offers, some tied to the Danube (fish soup), some to the specific agricultural regions and diverse nationalities along the river (Fig. 274). Moreover, wine production and local fruit spirits also have a strong culture in every section of the river, and many emerging wineries have developed quality hospitality services for visitors.

- **DIVERSE WATERSIDE EXPERIENCES.** The Danube, its flood lands and tributaries offer a very diverse way to enjoy natural waters. Ample



beaches, rowing and motor-boating, fishing and birdwatching opportunities are completed with a rich cultural heritage (watermills) (Fig. 275).

- **SLOW TOURISM.** The Danube offers excellent opportunities for a slowing down for vacationers, all previous tourism forms fit into a series of relaxing experiences. The relative isolation, natural settings and small towns and villages in the regions have a great opportunity to build on contrasting with the urbanized life in large cities (Fig. 276).

- **SECOND HOMES.** Tourism statistics does not count with the large number of second homes and weekend houses along the Danube, while the economic and cultural potential is immense. After the Covid-19 pandemics the role of such second homes increased, the urban population spends

more time in rural locations, especially if they can afford to own a suitable house. The depopulation of Danube's settlements does not mean most homes became abandoned, instead a seasonal usage became the norm (Fig. 277). Local economies should build on these temporary inhabitants, offering better digital connectivity for prolonged stay and better services for gastronomy and shopping, but also for cultural sights to visit.

- **LOCAL EVENTS AND ACTIVE LOCAL CITIZENS.** Tourism can only be developed in a sustainable way based on authentic and living local offers, traditions and entrepreneurship (Fig. 278). If locals are proud to their living traditions, festivals and gastronomy, they are ready to build a visitor economy. Tourists will only be interested in long term to places and services already valorised by locals.

Fig. 276 / Eibenthal Village in the Iron Gates Region as one of "pioneers" for slow tourism in west Romania (Author: A. Radulescu, 2022).

Fig. 278 / Local events based on tradition and authenticity – a wine festival in Komárno, Slovakia (Pons Danubii, 2022).

Fig. 277 / Ilok in east Croatia targets visitors for their potential longer stay in the town (Tourist Board of Ilok, 2022).



4.4

PLANNING URBAN SHRINKAGE ALONG THE DANUBE – A PARADOX OR A NEW NORMALITY?

// INTRODUCTION

Jelena Marić &
Biserka Mitrović

COULD MACRO-LEVEL URBAN PLANNING be an effective solution to the issue of the shrinkage of many low-income cities in post-socialist countries in the eastern half of Europe? Although urban shrinkage is a rather complicated and often irreversible process, different global and local planning strategies are developed to overcome its consequences (Neill & Schlappa, 2016), which is often the subject of a “top-down” political regulation. These intentions have opened new perspective for traditional urban planning, embracing different novelties.



Fig. 279 / The new building of the Gallery of Lower Austria is the flagship project of the Danubian city of Krems an der Donau, in Austria. The building was built as the city entered reurbanisation phase in the late 2010s (Author: Bwag, 2019; Source: Wikipedia Commons).

In general, there are two basic approaches to the topic of urban shrinkage from the aspect of urban planning, which are developed on concrete goals and different perceptions of this phenomenon (Rink et al, 2011; Hospers, 2014). The first potential goal is to return the population to its pre-decline state, while the second approach is based on accepting the current state and adapting to it. A possible planning solution to retrieving the population is to increase the city’s attractiveness (Fig. 279), make them more appealing for new investments, and influence the quality of life through creative urban renewal and regeneration methods. The second approach is based on the understanding that a declining city must adapt in situ while focusing on preventing further urban decline and strengthening its socio-economic base (Fig. 280).

However, both approaches aim to increase urban densities as one of the major imperatives. While

the first approach particularly targets to increase “simple” population density through housing renewal, the other one is more focused on the increase of the use of underused urban space without implying housing densification, i.e., through the urban regeneration of open public space or cultural, retail and tourist places. In all shrinking towns, this means that urban-planning profession had to cope with and to create plans for abandoned places, forgotten cultural heritage, brownfield locations, unused infrastructure and the capacities of city public services.

In this section, the good practice of “macro solutions” to the issue of urban shrinkage are presented on the example of small and medium-sized cities along the Danube.



Fig. 280 / Ráckeve, Hungary: farmers’ markets are traditional outdoor gatherings, important for socialisation and community proud in many Danubian communities (Source: P. Wolf, 2022).

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- Hospers, G-J. (2014). Urban Shrinkage in the EU. In H. Richardson & C. Woon Nam (Eds.), *Shrinking Cities: A Global Perspective* (pp. 47-57). London: Routledge.
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4.4.1

CASE STUDY 1
DANUBE REGION IN SLOVAKIA

L'ubica Vitková & Katarína Smatanová

The actions aimed at raising shrinking cities and regions are heterogeneous in the Danube Region in Slovakia. Most of them are realised on a green meadow mainly as sports and recreational facilities, financed mainly by the private sector. Examples are: the Danubiana Gallery – the museum of modern art (Fig. 281), golf resorts in Báč and Sedín (Fig. 282), sports and recreational complex X-BIONIC® Sphere near Šamorín, Slovak Ring and MALKIA Park near Orechová Potôň. The existing areas of thermal swimming pools in Štúrovo, Patince, Komárno, Veľký Meder and Dunajská Streda are improved, or the sites of monument heritage (manors, water mills, fortresses) are being restored. These realisations are increasing the level of recreation and tourism in the region (Fig 283).

A generous investment is the sport and relax complex X-BIONIC® Sphere near Šamorín, which is a multifunctional resort (Fig. 284-285). It combines the top equipment of the professional sports centre with a wide range of facilities for sports and relaxation for the public, but offers also other services (conferences, workshops) or occasional cultural and social events. The complex consists of several parts and separate areas focused on various sports. It includes an athletic, a swimming, an equestrian complex, with both indoor and outdoor facilities. The complex of this size naturally has an extensive technical background and accommodation capacity. Its restaurant facilities are also the social point of the wider area. The complex presents also an entrance to the area of Danube, as the complex lies directly on the riverbanks. The sports complex is an exceptional achievement in Slovakia in terms of size, its complexity, operational and landscape solution. Olympians have already found the area



Fig. 283 / New significant recreation and tourism projects in the Danube Region in Slovakia (Author: L. Vitková & A. Šeligova, 2022).



Fig. 281 / Danubiana Gallery – an island of culture on the Danube (Author: L. Vitková).

Fig. 282 / Sedín Golf Resort by the Small Danube (Author: L. Vitková).



not only from Slovakia, but also from abroad, as well as ordinary visitors. It is an example of a combination of day and weekend recreation and facilities for professional athletes and a venue for domestic and international sport events.



Fig. 284-285 / New generous sports and recreation area X-Bionic Sphere – Central area (left); riding area (right) (Author: L. Vitková, 2021).

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- Kissfazekas, K., Krklješ M., Stan A. & Vitková, L. (2019). Changes in waterfront land use along the river Danube in the state-socialist era. In: M. Benko, P. Gregor & L. Vitková, (Eds), Book on the unexplored cultural heritage in communities by the Danube: DAN-URB 2017-2019 (pp. 70-77). Prague: Gasset.
- Lemak, O. & Vitková, L. (2021). Transformation of the Danube recreational areas. In M. Benko (Ed.), DOCONF 2021: Facing Post-Socialist Urban Heritage – Proceedings (pp. 228-239). Budapest: BME.

4.4.2

CASE STUDY 2 //
SMEDEREVO, SERBIA

Jelena Marić



Fig. 286 / “Godominsko polje” Industrial zone next to the famous Smederevo Fortress and the Danube – seen from the fortress (B. Antonić, 2018).



Fig. 287 / Newly-refurbished Danube promenade in central Smederevo, on the site of the former city port (K. Dankov, 2020).

Smederevo in central Serbia was a typical industrial city on the Danube in 20th century, spanning from all modern periods, from early industrialisation and port development before the World War I until the complete built-up of an important urban centre of heavy industry after the World War II, in the socialist Yugoslavia (Pavlović, 1980). At the end of this long-term urban transformation in the 1980s, the Danube Riverfront became a place of industrial estates and transport facilities (Fig. 286).

The post-socialist transition brought the collapse of many industries in Smederevo in the 1990s, but also gave a new impulse to city retail and service sector. Aware of new conditions, the city authorities have initiated a new cycle of urban plans, to address and direct the regeneration of the Danube Riverfront (Fig. 287). Two first “pilot-plans” from 2007 were detailed regulation plans for the improvements of sport facilities in central riverfront area (rowing and marina) and the development of a new industrial park on the eastern edge of the city zone, to ‘relax’ the inner industrial zones. It was followed by two major plans in 2011-2013, the spatial plan of the whole

city area and the urban area, which settled the main planning goals and measures for the riverfront, including (1) the gradual transformation of inner industrial zones into business and retail parks, the (2) formation of new urban riverfront next to Smederevo historic core by abolishing the industrial railway and relocating the port and railway station outside the city centre and (3) the regeneration of already existing green and recreation zones in the western riverfront (Fig. 288). These goals and measures have been the cornerstones for the recent urban plans for capital investments, designed for a new city marina, a new “Godominsko polje” business-retail brownfield zone, a new port-business zone and a “Jugovo” recreation area. The overall goal of urban-planning process in Smederevo is to bridge aspirations to make the city liveable for both locals and the tourists and to bring the further investments in local economy.

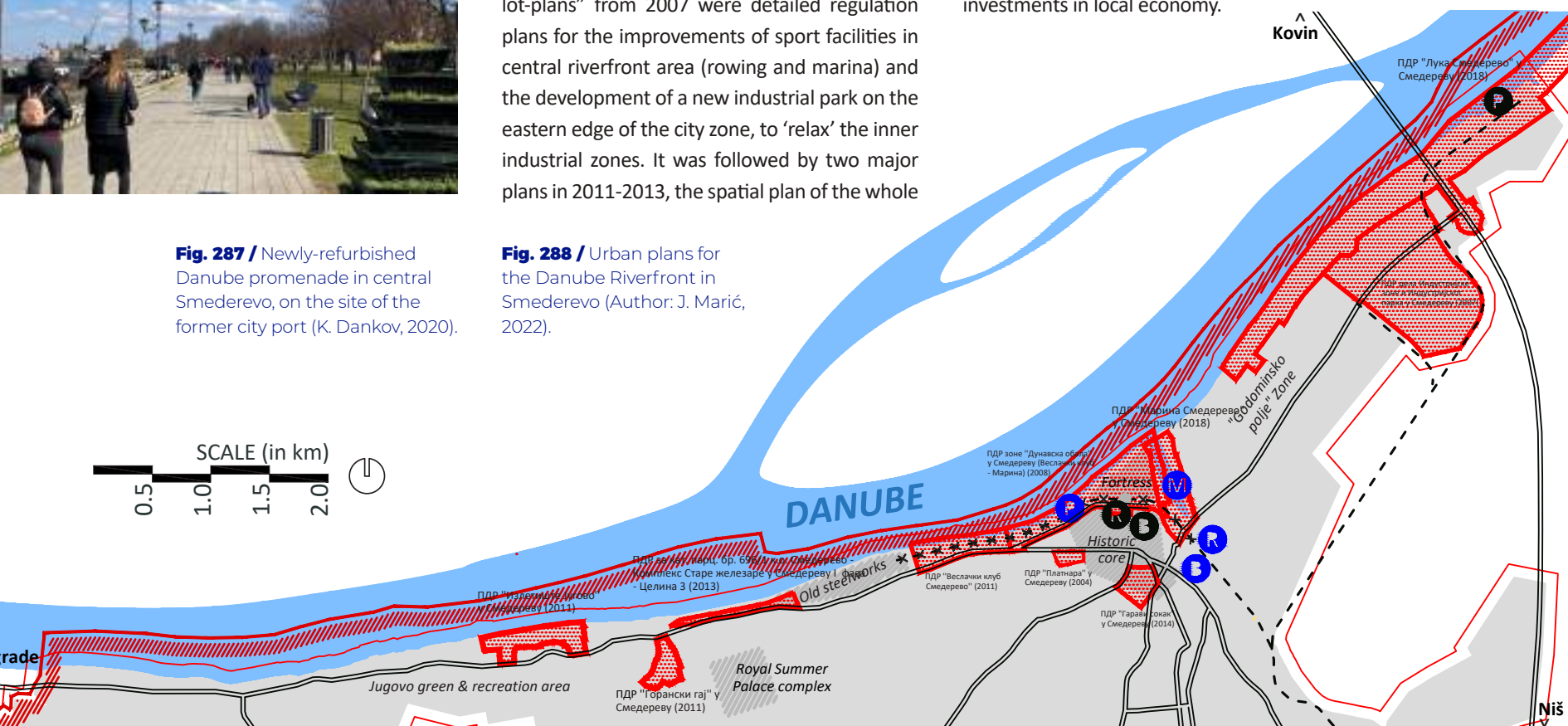


Fig. 288 / Urban plans for the Danube Riverfront in Smederevo (Author: J. Marić, 2022).

4.4.3

CASE STUDY 3 //
BERZASCA, ROMANIA

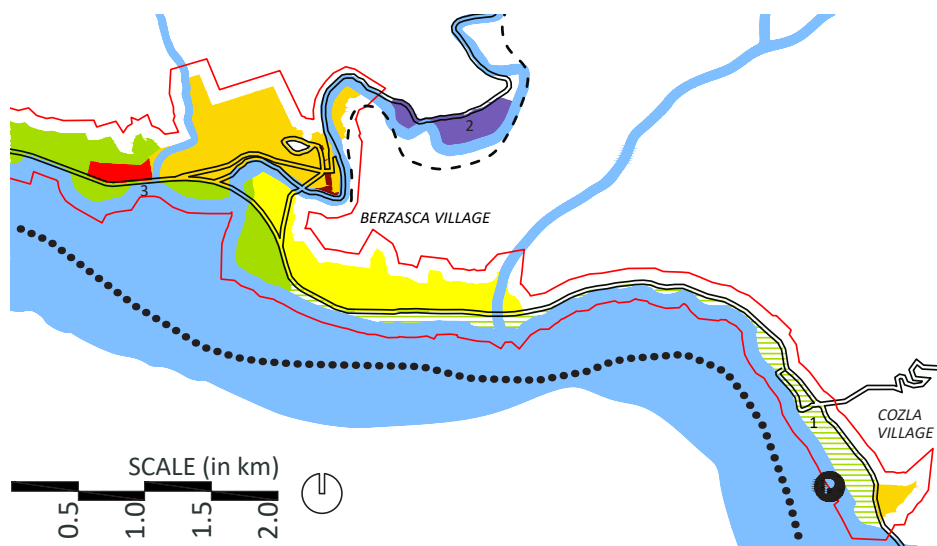
Mihai Danciu

Berzasca in Caraş-Severin County is the most active of all the municipalities located in the Romanian Iron Gates Gorge, being in a continuous process of revitalisation and post-industrial transformation. This process follows the natural course of the periodic reconfiguration of the socio-economic profile of the towns in 'Clisura Dunării', a local name for the Iron Gates. The most recent stage of unitary evolution for Berzasca took place between 1830 and 2004 and is characterised by the mining activities that left behind an ensemble of industrial buildings in the Cozla Area (Fig. 289).

Over time, the local administration has identified several revitalisation possibilities by establishing new functions in place of the former mine located on the banks of the Danube; first as an industrial and business park, then as a tourist destination. Therefore, the area was planned in the recent General Urban Plan as one of the green spaces, leisure, and sports, with the pos-

sibility of building lake houses in specific areas (Fig. 290). The plan has been applied up to the solution study level. At the same time, investors are being sought to enter into partnerships with the local authority to start investments in accommodation units, restaurants, and places for relaxation (Fig. 291-292).

Another process that deserves to be highlighted is the attention of local authorities to generate projects to increase the quality of life of residents and tourists by setting up public spaces in specific areas of the traditional fabric: in intersections or adjacent to secondary streets and green spaces (Fig. 293). All aforementioned steps were rewarded with the municipality's certification as a tourist resort of national interest, thus creating the possibility of applying for external financing to implement the projects listed above and, therefore, responsibly addressing the issue of shrinkage of built-up areas.



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- _ADNBA (2010). Rehabilitation of an industrial site, Cozla Village, Romania. Retrieved from <https://www.adnba.ro/project/unbuilt>.
- _ADNBA (2013). Public spaces Berzasca, Romania. Retrieved from <https://www.adnba.ro/project/unbuilt>.
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- _Lotreanu, I. (1935). Monografia Banatului / Banat Monograph. Timișoara: "Țara" Institute for Graphic Arts.



Fig. 289 / Former Cozla mine in Berzasca, nowadays a brownfield (Author: M. Danciu, 2022).

Fig. 290 / Planning for shrinkage in Berzasca. Public spaces in the centre and the former Cozla industrial site (Author: M. Danciu, 2022).

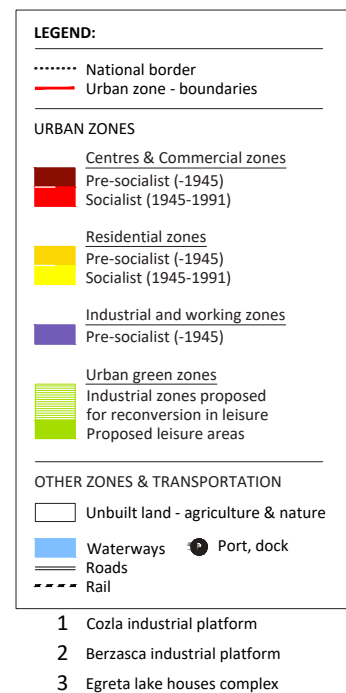


Fig. 291 / Former Cozla mine in Berzasca, planned as a green sports and recreation area in the General Urban Plan (Source: Capitel Proiect srl, 2007).

Fig. 292 / Former Cozla mine in Berzasca, rehabilitation and redevelopment of an industrial site for offices, hotels and leisure (Source: AND BA srl, 2010).

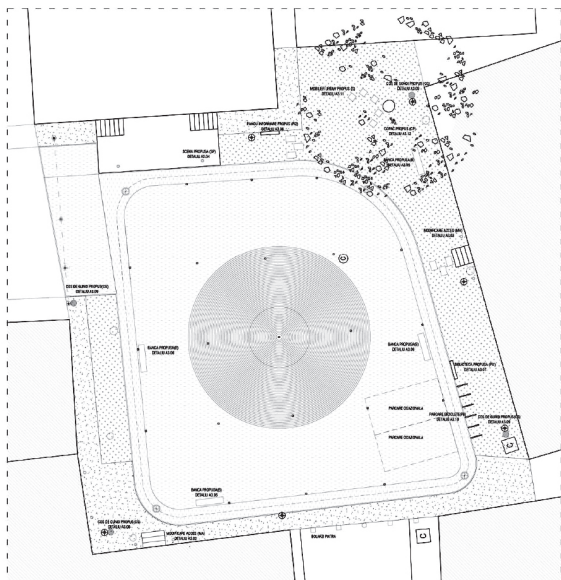
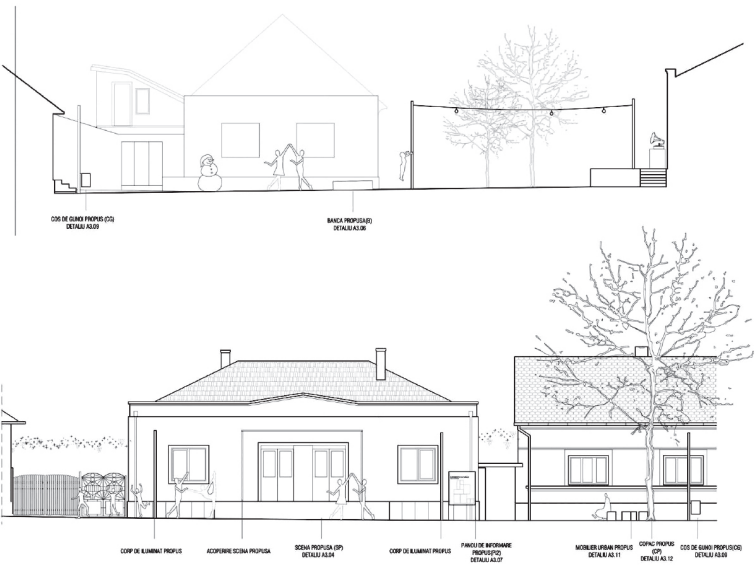
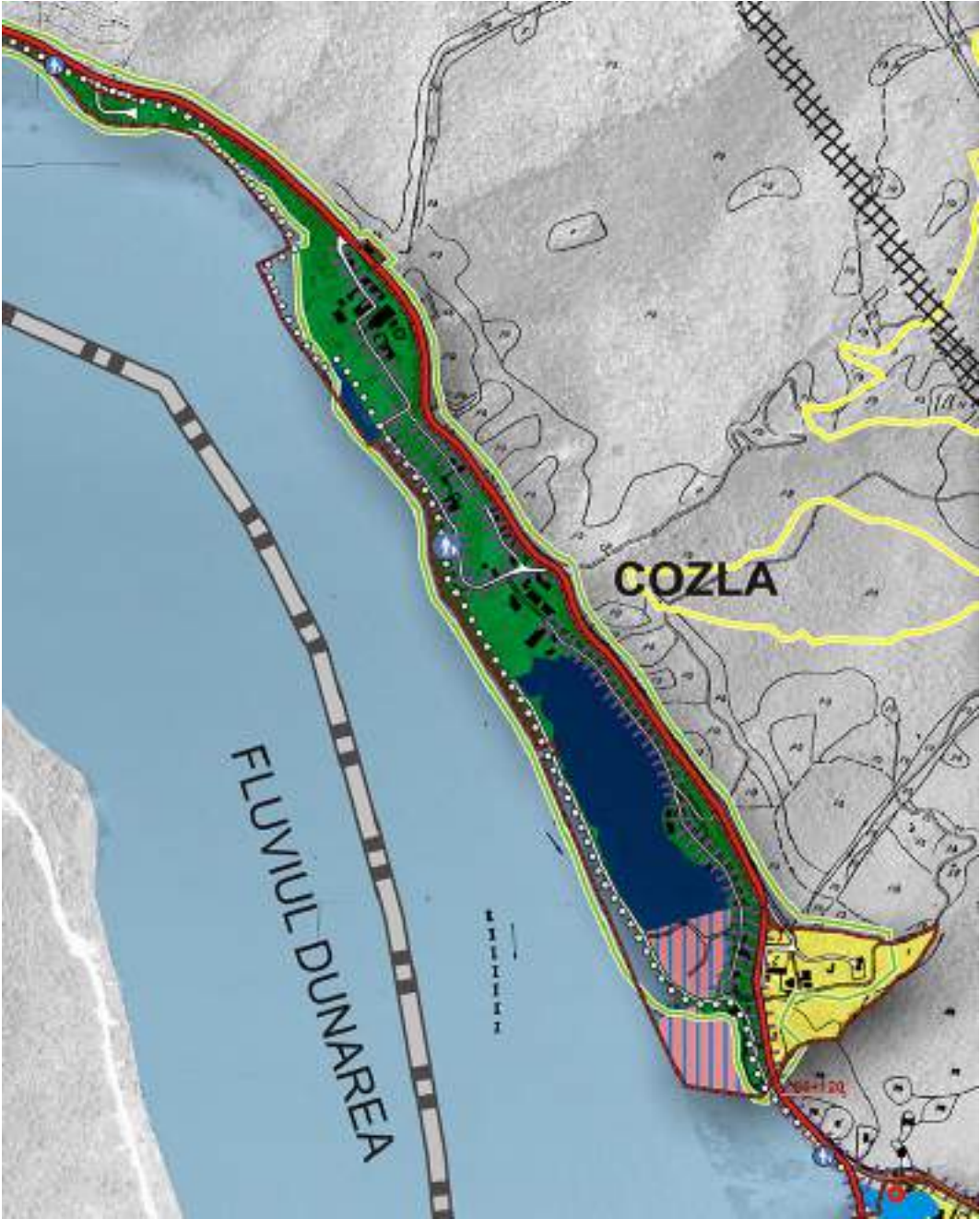


Fig. 293 / Public spaces in Berzasca. Park rehabilitation & public space for temporary market. Source: AND BA srl (2010)

4.4.4

CASE STUDY 4 //
VIDIN, BULGARIA

Georgi Georgiev

Vidin inherited a significant built stock during socialism – public service areas doubled by area, retail and regional trade sites tripled, while sports and leisure zones territorially increased nearly four times. However, since the beginning of the post-socialist transition, the population significantly contracted, from 63,000 inhabitants in 1992 to just 40,000 in 2021. Thus, the city infrastructure has become a problem for maintenance and revitalisation.

In this inevitable situation, the city authorities refocused from a traditional industrial city image to culture-driven tourism based on visitors along the Danube Route and rich cultural heritage – Vidin historic centre along the river and with an ancient Baba Vida fortress. The main problem in this approach has been the necessity of the proper renewal and resource-demanding regeneration of Vidin central spaces, both physically and functionally.

To address this gap, the Vidin government adopted an essential general urban plan in 2008, which determined the main objectives of further development. Two main development corridors were planned: along the beltroad of the city and the riverfront (LSP, 2008). The first corridor targets the aforementioned industrial-business (re)development (Fig. 294). The main objectives were revitalizing the city brownfields at the southern and western peripheries and a new free business zone at the north-eastern edge of the urban zone, towards the New Europe Bridge and Romania, completed in 2013.



Fig. 295 / The refurbishment of Vidin synagogue on the Danube riverfront historic promenade (Author: G. Georgiev)

The second development corridor is directly related to the renewal of the Vidin centre and riverfront area through culture, tourism, and supplement leisure services (Fig. 404_41). Aside from the main square as a traditional and the most vibrant urban node, three new nodes were proposed for this new development – the main node is the Fortress on the Danube Riverfront, plus two other ones related to the contact positions between the historic centre and the rest of the city. The main heritage sites in the zone between these four nodes have been refurbished last few years, such as the Vidin synagogue (Fig. 295) or old city walls with gates (Fig. 296). Aside from these key projects, the other smaller ones have been implemented: new pedestrian walkways, innovative urban furniture, lighting fixtures, etc.



Fig. 296 / The restored zone of the walls of Vidin medieval fortress (Author: G. Georgiev)

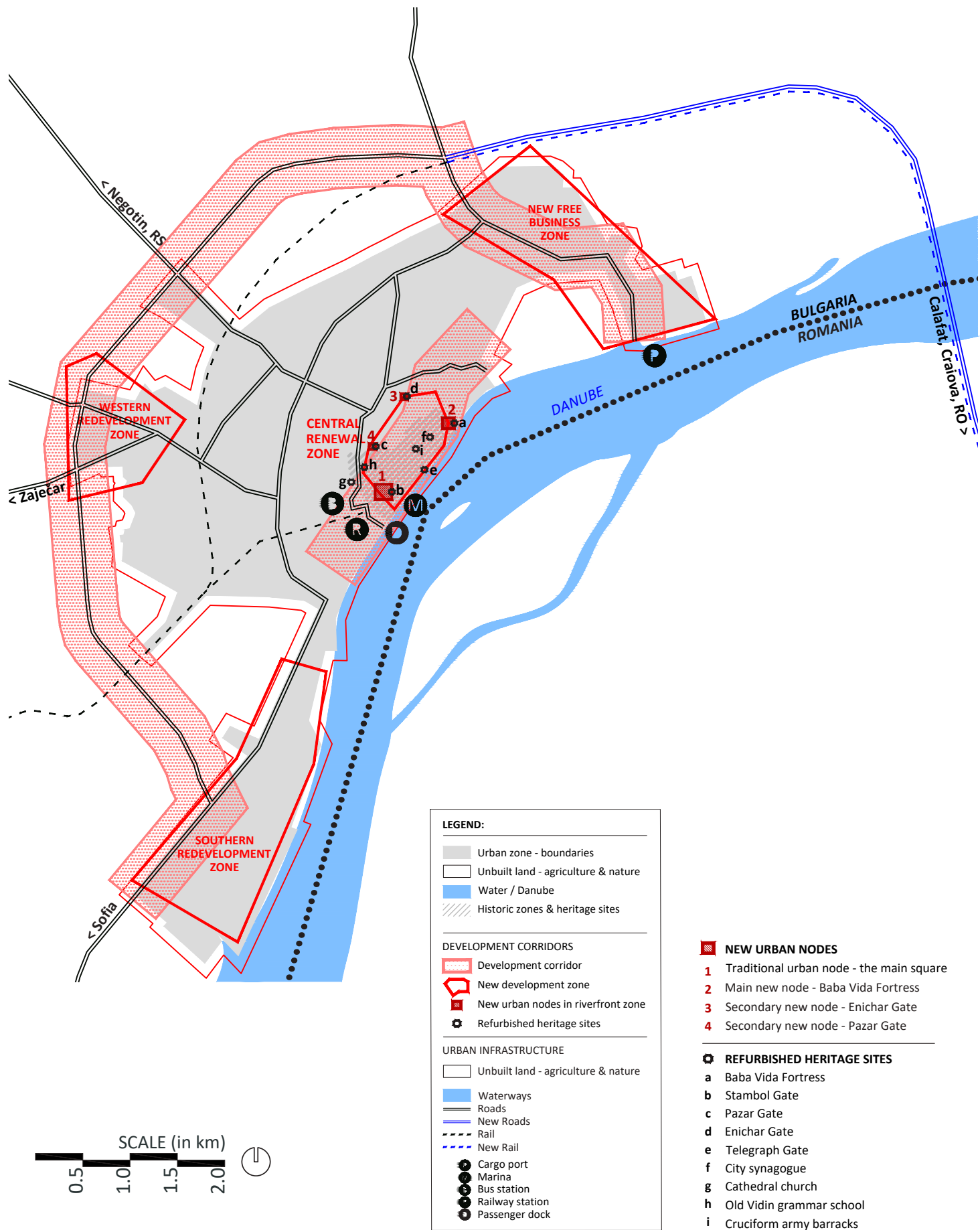


Fig. 294 / The development map of the City of Vidin (Author: G. Georgiev)

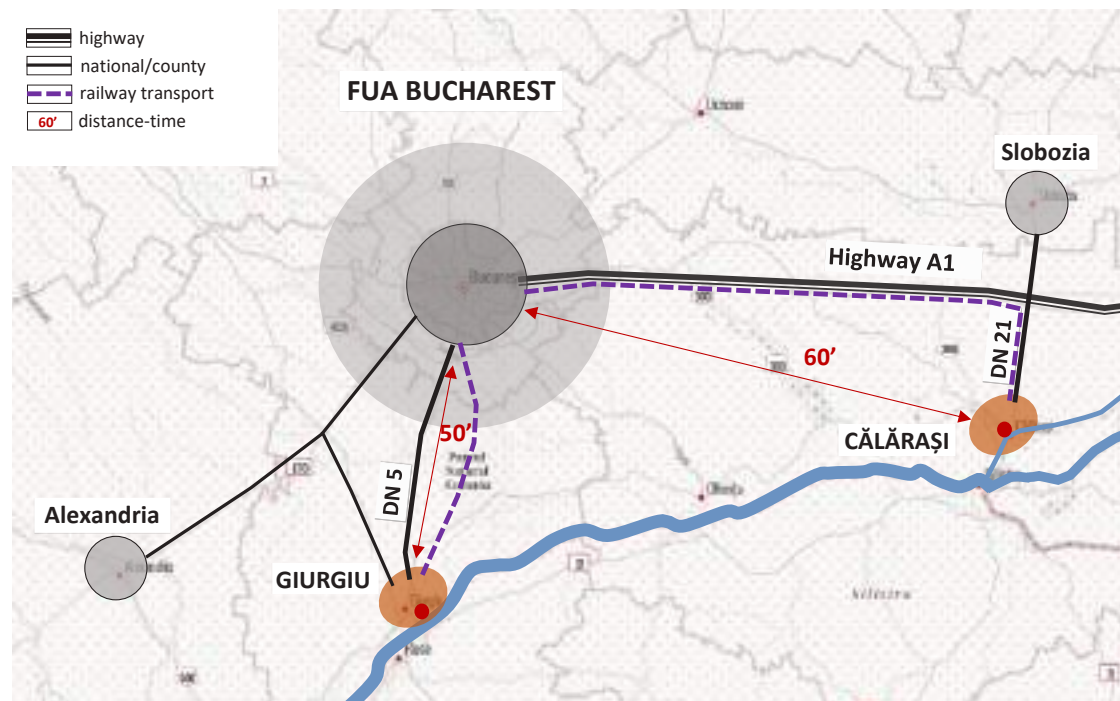
4.4.5

CASE STUDY 5 //
GIURGIU & CĂLĂRAȘI, ROMANIA

Mihaela Negulescu

One of the factors that triggered the shrinking process of many peripheral small cities is the poor quality of their connectivity within the regional and national territory. That made these cities less accessible than the bigger ones, polarizing their economic performance and migration patterns. Hence, better transportation connections are critical in stopping and reversing urban shrinkage in these cases.

The Danubian cities of Giurgiu and Călărași in south Romania are examples – they have the opportunity to improve their connectivity through the high-speed roads and railway transportation planned by the National General Transport Master Plan, adopted in 2016 (Fig. 295). As a result, these two cities will gain improved accessibility and attractivity in the region, within an average of one-hour distance-time from Bucharest, the Capital City and its area of influence with a population of about 2,7 million inhabitants (WB, 2017; Negulescu, 2018). This is a primary prerequisite for Giurgiu and Călărași to become “gate-cities” to the Danube. These attractive leisure destinations capitalise on both cultural heritage and on the unique landscape resource that is the green-blue corridor of the Danube (DANURB, 2019).



The opportunity and effectiveness of the strategic connectivity and accessibility improvement are already confirmed by the recent developments in Călărași, in which the contemporary arrangement of two beaches on the Borcea Branch of the Danube River – Samskara and Pod4 beaches – has led to growing leisure tourism, especially from Bucharest (Fig. 296).

Fig. 295 / Giurgiu and Călărași as “gate-to-Danube” cities, 0-60-minute distance from Bucharest (Author: M. Negulescu).



Fig. 296 / Samskara Beach on the Borcea Branch of the Danube, in Călărași, Romania (Author: F. Radulescu).



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4.5

DESIGNING SHRINKING DANUBIAN CITIES // INTRODUCTION

Marius Găman

MANY CITIES ALONG THE DANUBE RIVER are shrinking cities, which is also becoming a common pattern across Eastern and Central Europe. Of several possible reasons, e.g., low accessibility, the pull of nearby larger cities and low birth rates, the most important one is the deindustrialisation after the fall of communist systems, which led to the decrease of jobs and a mass migration (Hospers, 2014). The population decrease led to the degradation or disappearance of several public services and later the abandonment or underuse of buildings or large city areas (Păun Constantinescu, 2019).



Fig. 298 / Orșova, Romania: the Danube Riverfronts has been a location for many modernist regeneration projects (Author: UPT, 2022).



Fig. 297 / Zlín in East Czechia was developed as an industrial city. Today, many industrial-heritage buildings of the former “Bata” Factory has been reused for central urban functions, such as a government (Author: Ș. Badescu, 2022).

Considering the current condition of shrinking cities, it could be concluded that this method is no longer feasible, and it should be substituted with a ‘*tabula plena*’ approach (Roberts, 2016). Such an intervention implies the reuse of urban areas, re-building, recycling, regenerating brownfields and restoring local built heritage (Fig. 297). The local identity should be a cornerstone to all interventions, in most cases the Danube being a key feature.

The best way to recover this type of city can be done through medium-level urban interventions which can be achieved through public, private, or public-private partnerships invest-

ments. These types of developments can be a single intervention on a larger area of the city, or a series of small interventions coordinated under a unifying theme or forming a network. Either type of strategy recycles existing urban areas and buildings or is based on intangible heritage or valuable landscape features. The most common projects are urban regenerations of the historic urban tissue, usually on the Danube’s banks, rehabilitation of the riverfront or public spaces along the shore (Fig. 298), designing green areas, parks or leisure areas near the Danube and in some cases, big infrastructure projects or industrial developments (Fig. 299).



Fig. 299 / Shrinking Danubian Cities with larger urban developments (Author: M. Găman).

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- Hospers, G. J. (2014). Urban shrinkage in the EU. In: H. Richardson & C. W. Nam (Eds.), *Shrinking Cities: A Global Perspective* (pp. 47-57). London: Routledge.
- Păun Constantinescu, I. (2019). *Orașe românești în declin / Shrinking Cities in Romania*. Bucharest: DOM Publishers
- Roberts, B. (2016). *Tabula Plena – Forms of urban preservation*. Zurich: Lars Muller Publishers.

4.5.1

CASE STUDY 1 // KOMÁROM, HUNGARY

Daniel Balizs

Following the change of regime, the Komárom and Komárno approached each other slowly, and the accession of Hungary and Slovakia to the European Union in 2004 and to the Schengen Area in 2007 also facilitated co-operation. After lengthy preparations, the new Danube bridge connecting the two cities was handed over to traffic in the autumn of 2020. The other big-format projects have been also implemented in Komárom (Fig. 300).

In Komárom, the utilisation of the Danube bank is also characterised by a slow transformation. In order to connect the waterfront with the urban fabric, it is essential to invest in infrastructure, to reinterpret and develop the Danube bank as an attraction, and to make better use of the underutilised tourism potential located there. Progress has already been made on the latter, mainly through the renovation of the Csillag and Monostori fortresses (Fig. 301).

Fig. 300 / The built-up area of Komárom with the locations of recent big-format projects (Author: D. Balizs, 2021).

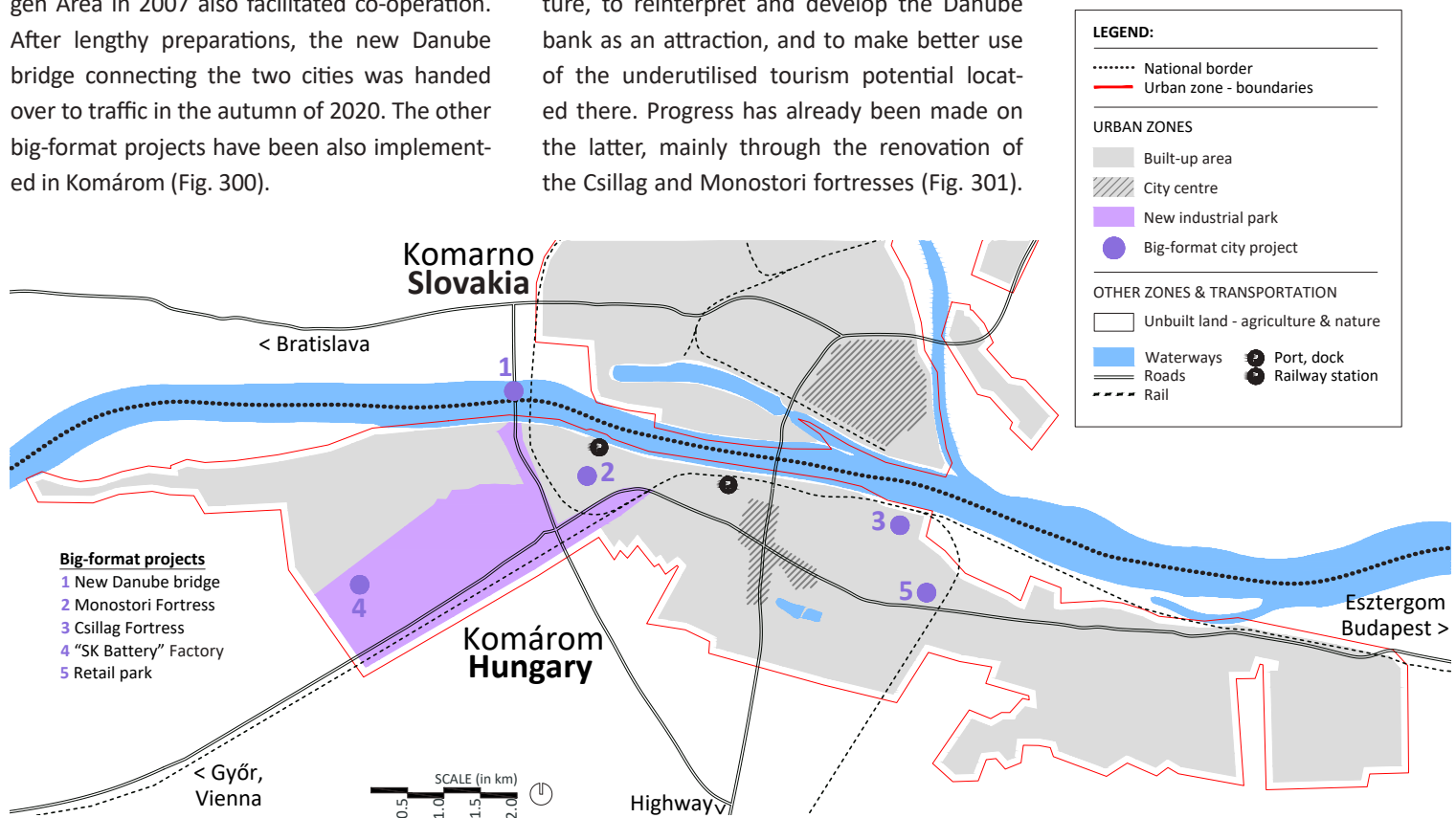


Fig. 301 / The Monostori Fortress, completed in 1877 and now home to many exhibitions and events, is included – along with other elements of the fortification system in Hungary and Slovakia – on the UNESCO World Heritage List (Author: D. Balizs).

However, these two attractions have not had a substantial Danube connection; although the Monostori Fortress has a harbour, it is used by very few ships. At the same time, we can consider the construction of the promenade to be contradictory: due to the unanimous design of the promenade running near the southern bridgehead of the downtown bridge and the poor placement of the rest areas, it does not live up to expectations.

Meanwhile, due to its favourable location and economic traditions, a strong (re)industrialisation process has started in Komárno started, first with "Nokia" and then, after its relocation, the South Korean "SK Battery", settled in the city industrial park, together with several other companies (Fig. 302).

Fig. 302 / South Korean-owned SK Battery, a company that began manufacturing batteries for electric cars in 2020 (Author: D. Balizs).



4.5.2

CASE STUDY 2 // VUKOVAR, CROATIA

Dina Stober

** Vukovar Urban Area includes four settlements:
Grabovo, Lipovača, Sotin and Vukovar*

Vukovar follows the topographical disposition of the Danube waterside, created of terraces, plateaus and lowlands. Morphologically, the settlement is divided into a historical area of organic roads and irregular shape formed until the middle of the 16th century (southeast), New Vukovar, spread by planned transport network (northwest), and new residential settlements at the outskirt of the city.

The recent spatial interventions in Vukovar, which is a shrinking city, include the recon-

struction of residential areas and the revitalisation of city historic and architectural symbols: the Museum of Vučedol Culture, Vukovar City Museum in the baroque classicist Eltz Castle, industrial brownfield reconstruction into Vukovar Water Tower Museum of Croatian Unity and “VukovArt” street murals that are spread all over the city. Punctual, but significant reconstructions, revitalisations and conversions in the functional and physical layers of the city have marked primarily the social life of its citizens and visitors (Fig. 303).

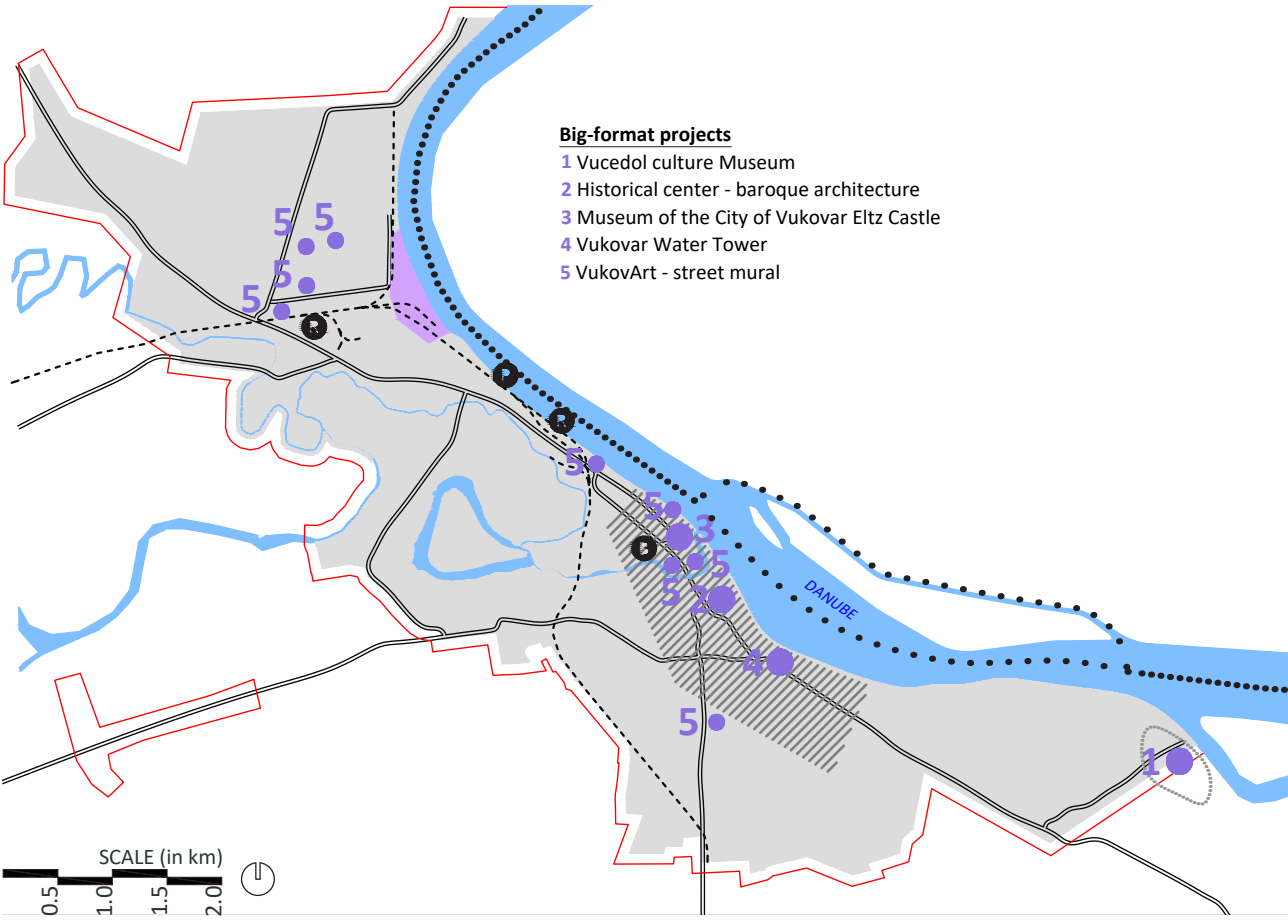
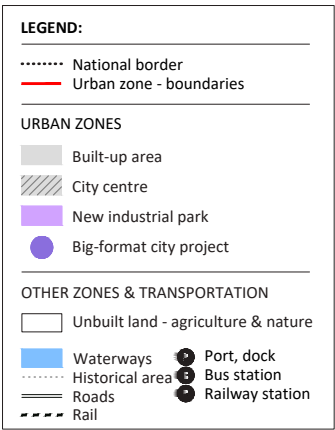


Fig. 303 / Vukovar urban area
– historical areas and renewed
punctual functions in the city
(Author: D. Stober, 2022).

The archaeological site of Vučedol is located on the right bank of the Danube, 4 km downstream from Vukovar and is one of the most important archaeological sites in Europe (Fig. 304). This attractive location was first inhabited around 6000 BC during the time of the first European farmers, and it lasted more or less intensively throughout prehistory. Since 1938, archaeologists have been collecting findings in a collection of 708 artefacts, all presented in a museum in situ that was built in 2015, equipped with contemporary architectural concept and design, buried in a loess vertical plane that uses topography in architecture (Fig. 305).

Since 2016, the “VukovART”, Vukovar Street Art festival, that take place each summer, is a host to artists from the region, who joined an effort to transform Vukovar into contemporary and inspiring city with big city murals at the gables of residential buildings (Fig. 306).



Fig. 304 / Aerial photo of the Museum of Vučedol Culture (Author: Radionica arhitekture + V. Ilić)

Fig. 305 / Author's sketch of the concept of the Museum of Vučedol Culture (Author: Radionica arhitekture + V. Ilić)

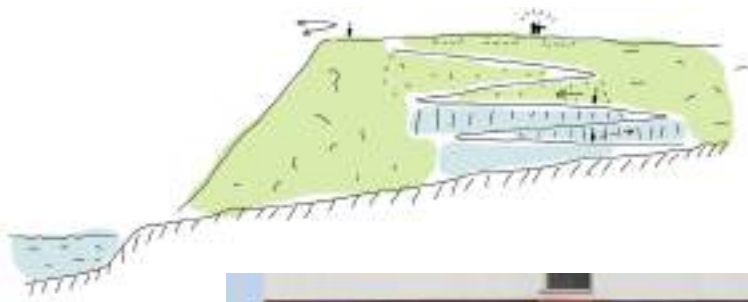


Fig. 306 / “VukovART” street Mural Vera Bugatti-Abnegation dream (Author: VukovArt)

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- Karac, Z. (1994). Basic analysis of the urban and architectural development of Vukovar; Compendium of research to date. *Prostor*, 2(1-2(5-6)), 77-96. <https://hrcak.srce.hr/30781>.
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4.5.3

CASE STUDY 3 // GOLUBAC, SERBIA

Aleksandra Djukić

POPULATION:
1991: 3,082
2001: 2,821
2011: 2,581

** Golubac Urban Area includes four settlements:
Golubac, Radoševac, Usije and Vinci*

Golubac is located at the entrance of the Iron Gate, the longest gorge of the Danube, surrounded with magnificent landscape and many endemic species. The entire area acquired the status of a national park in 1974. The fortress of Golubac is at the entrance of the national park and it is one of the best-preserved medieval fortresses in Serbia and along the Danube (Fig. 307).

Fig. 307 / Recently reconstructed Golubac Fortress (Author: A. Djukić, 2021).

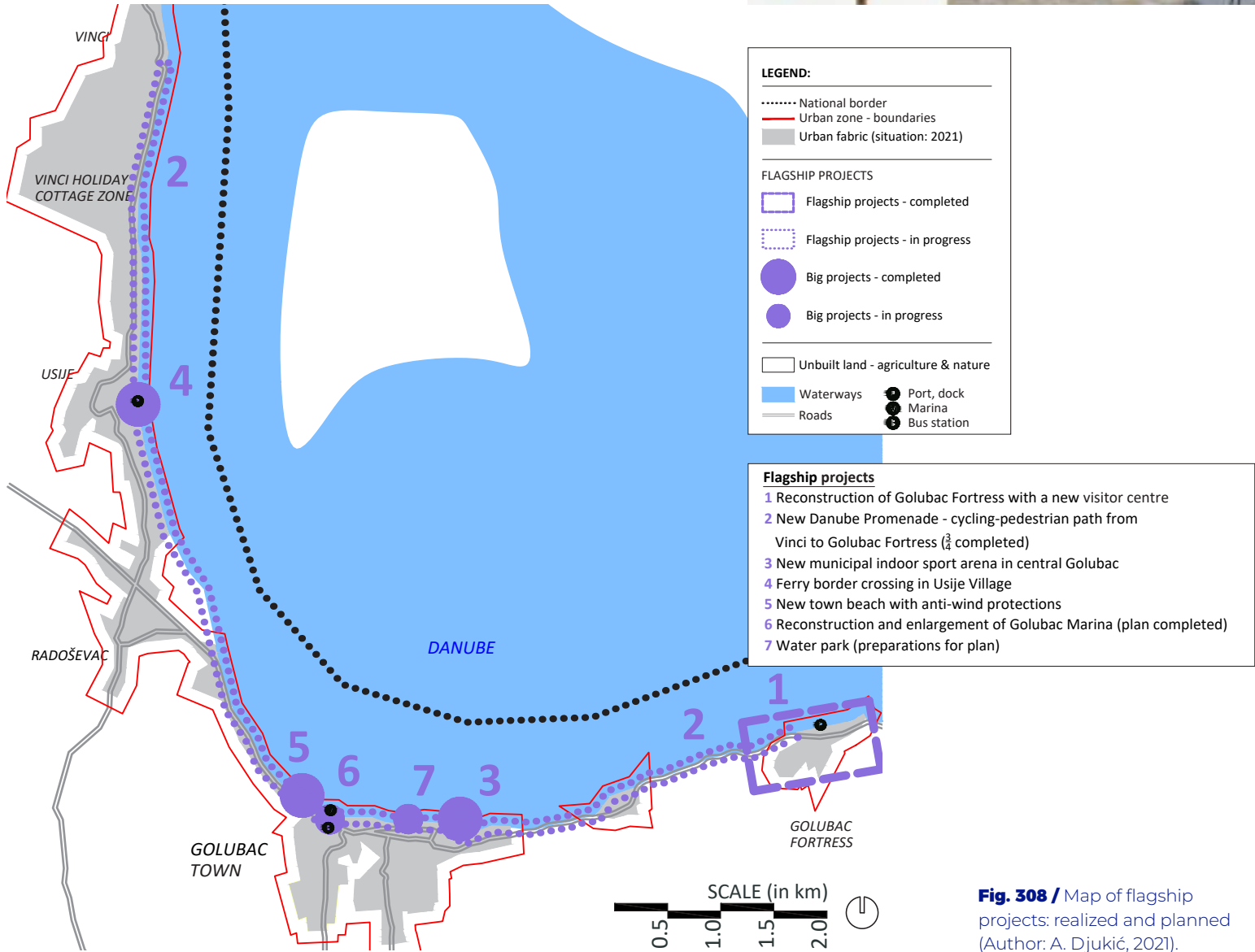


Fig. 308 / Map of flagship projects: realized and planned (Author: A. Djukić, 2021).

However, economic performance of the town has been in a very bad state for decades. During the 2000s, Golubac was among 20% of the most endangered municipalities in Serbia, with the level of general development below 50% of the national average (MRDRS, 2009-15). Furthermore, the Municipality of Golubac lost more than 55% of its population during the period 1948-2011, 17% during the last three decades (SORS, 2011).

Since 2010, the several projects of good practices are realised that can significantly improve the quality of life in Golubac, tourist offer and solve the problems of urban shrinkage (Fig. 308):

- Projects that highlight tangible heritage – the reconstruction of Golubac Fortress with new visitor centre, which is a flagship project for the town (Fig. 307). It is reconstructed with EU funds, and it is planned to be connected with the town with a new Danube promenade.
- Project that enhances the Danube – new Danube promenade – bicycle and pedestrian path along the riverbank that stretches from Vinci cottage area to Golubac Fortress (Fig. 309). The initial motive was the promotion of the Eurovelo 6 cycling route along the Danube and later widened to include the main tourist and cultural assets along the urban part of the riverside;



Fig. 310 / New town beach (Author: TO Golubac, 2022).

- Infrastructure project – a ferry link for cars, pedestrians, bicycles between Serbia and Romania in Usije Village, established in 2020;
- Neighbourhood-scale projects that should raise the quality of life in town: new municipal indoor sport arena in city centre, outdoor playground next to the riverbank and new town beach with anti-wind protection (Fig. 310).

Fig. 309 / Pedestrian and bicycle path along the Danube riverfront (Author: A. Djukić, 2021).



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- Djukić, A., Djokić, V. & Antonić, B. (2018). Chapter 6: Territorial Planning as a Creative Tool for the Upgrading of Cultural Tourism in Golubac, Serbia. In: T. Ohnmacht, J. Priskin & J. Stettler (Eds.), Contemporary Challenges of Climate Change, Sustainable Tourism Consumption, and Destination Competitiveness (pp. 101-122). Howard House, UK: Emerald Group.
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- Statistical Office of the Republic of Serbia – SORS (2011). Comparative review of population number: 1948, 1953, 1961, 1971, 1981, 1991, 2002 and 2011. Belgrade: SORS.

4.5.4

CASE STUDY 4 // DROBETA-TURNU SEVERIN, ROMANIA

Marius Găman

Fig. 311 / Map: three main projects in Drobeta-Turnu Severin (Author: M. Găman, 2021).

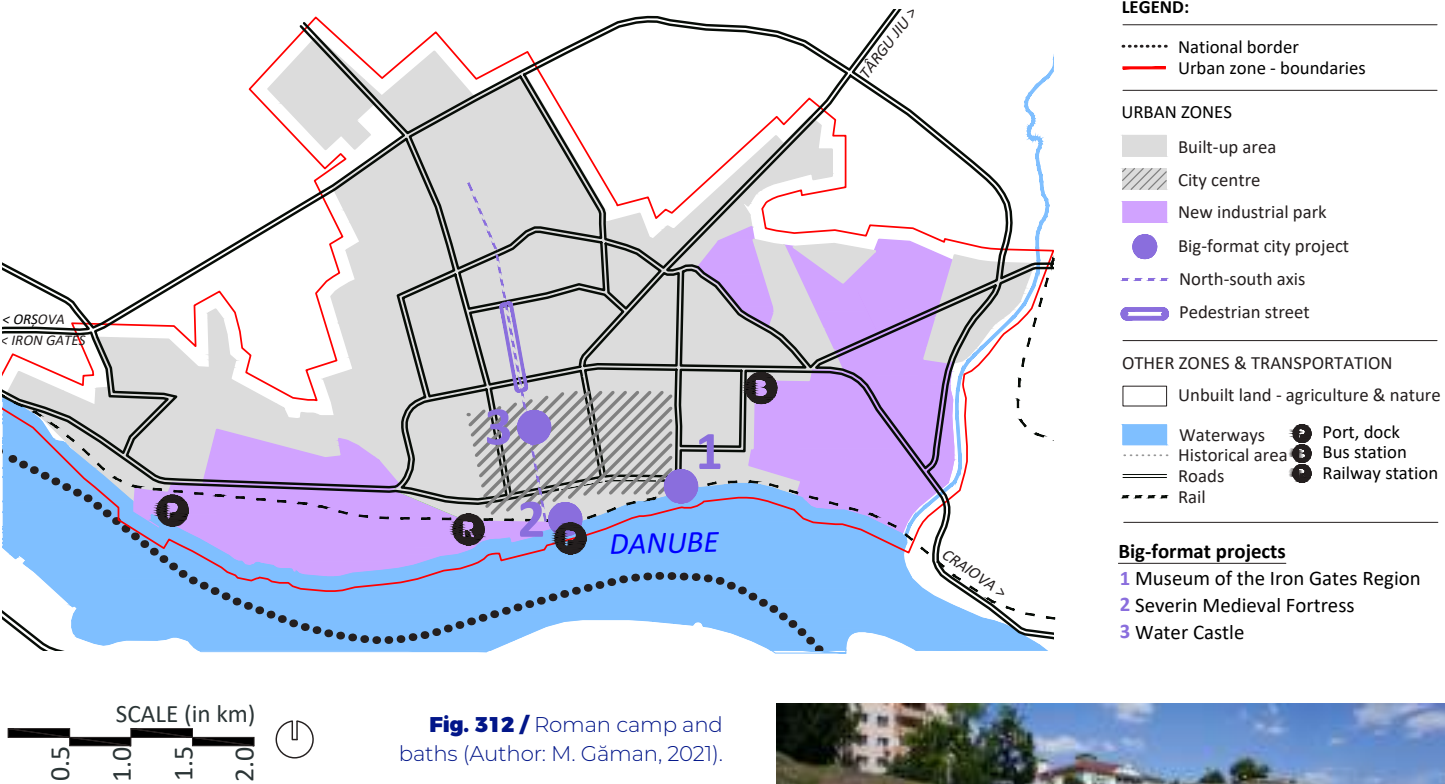


Fig. 312 / Roman camp and baths (Author: M. Găman, 2021).



Fig. 313 / Restored main museum building (Author: M. Găman, 2021).





Fig. 314 / The Roman amphitheatre and the new multifunctional pavilion (Author: M. Găman, 2021).

Additionally, a railway overpass (Fig. 315) was built to reach the ruins of a pier of Trajan's Bridge, built by Apollodorus of Damascus. As a part of this complex rehabilitation project, a Roman amphitheatre was discovered between the Roman baths and the camp. The rehabilitation and restoration of the ruins of the Severin Medieval Fortress was another important intervention that represented an attraction on the riverbank (Fig. 316). Through this project, the fortress was made accessible to the public and a new building was erected to house the artifacts discovered during the excavations.



Fig. 315 / The railway overpass to the pier of Trajan's Bridge (Author: M. Găman, 2021).

Improvements have also been made to the main north-south city axis, which also represents the axis of symmetry of the old city and connects the denser built area in the north of the city with the historical area and the Danube in the south. It was partially transformed into a pedestrian street, with refurbished Water Castle, the city landmark, into a cultural and tourist info-centre (Fig. 317).



Fig. 317 / The Water Castle (Author: M. Găman, 2021).

Fig. 316 / Rehabilitated ruins of the Severin Medieval Fortress (Author: M. Găman, 2021).



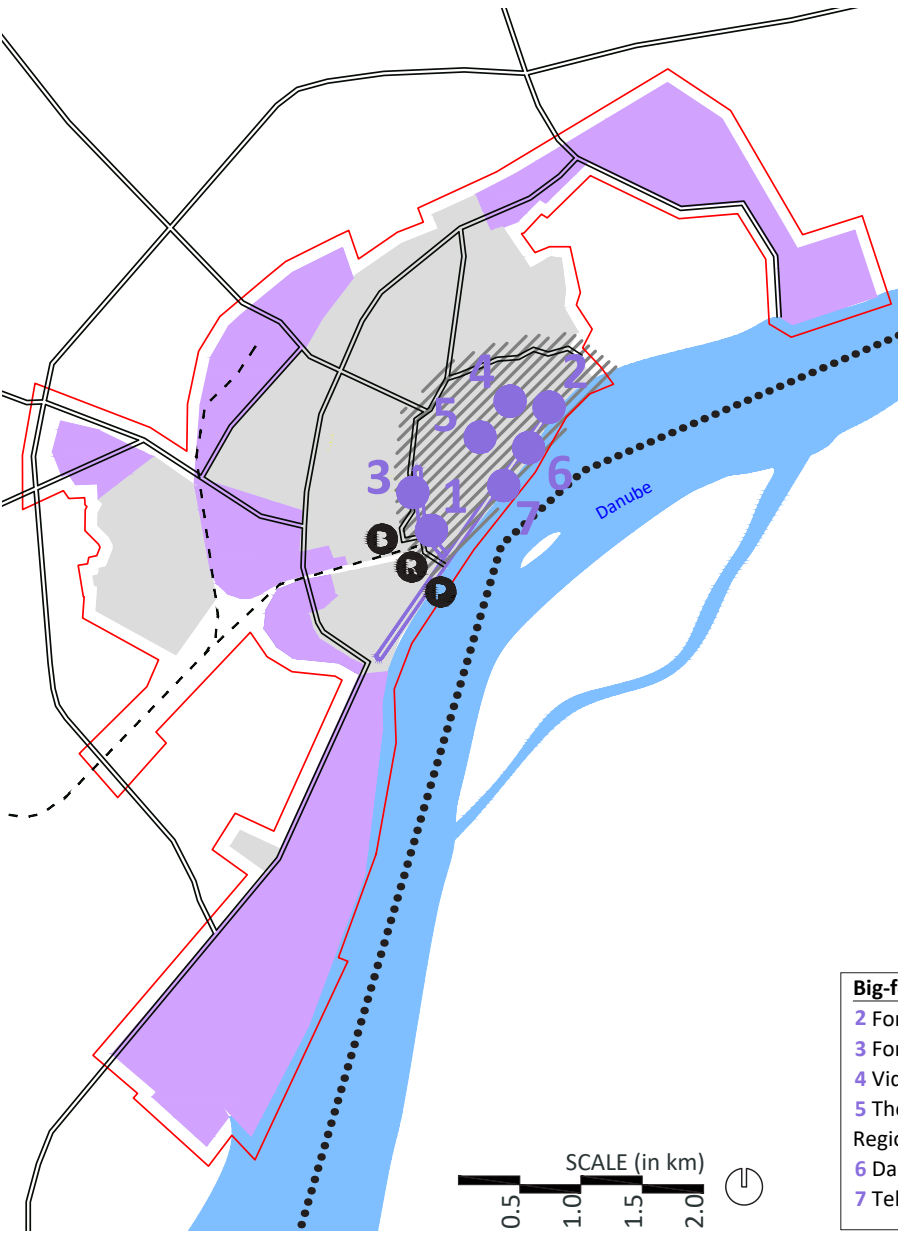
4.5.5

CASE STUDY 5 // VIDIN, BULGARIA

Miriana Yordanova

In recent years, Vidin has gone through a more acute crisis period than the rest of Bulgaria. The city has recently undertaken a more proactive approach – the integrated development of Vidin plan includes several key projects for the protection of cultural heritage, which are located in the old historical part of the Danube town (CV, 2013). These projects aim to express the history of the city and its connection with a natural phenomenon – the Danube River that led to its development (Fig. 318).

Fig. 318 / Map: Vidin land use map and main projects (Author: Bulgarian Guide, 2022).



Fortress Bononia / Bdin / Vidin (locally known as “Baba Vida”) is the only surviving Bulgarian medieval fortress (Fig. 319) with the foundations in the ancient Roman Fortress. The recent revitalisation of the fortress with surroundings preserved its authentic atmosphere.



Fig. 319 / Recently revitalised Fortress Bononia / Bdin / Vidin, locally known as “Baba Vida” (Author: G. Jordanov, 2021).



Big-format projects

- 2 Fortress Bononia / Bdin / Vidin (folklore called “Baba Vida”)
- 3 Former Military club, today art gallery “Nikola Petrov”
- 4 Vidin Synagogue under reconstruction
- 5 The Cross Barracks (1801), part of the structure of the Regional Museum in Vidin
- 6 Danube Park of Vidin
- 7 Telegraph Gate. Danube Park of Vidin

The other flagship projects that are realised in Vidin are: the reconstruction of the central pedestrian zone, the rehabilitation of the historic building of the former Ottoman konak and the current “Konaka” Historical Museum (17th century), the rehabilitation of the building of the former Military Club (1892), today Art Gallery “Nikola Petrov”, built on the foundations of one of the front gates of the Medieval Vidin Fortress, “Vida” Municipal Drama Theatre, the restoration and adaptation of the Vidin Synagogue to “Jules Pascin” Cultural Centre (Fig. 320). Cross Barracks (1801) are part of the structure of the Regional Museum in Vidin. In this all-stone two-storey building with remarkable architecture and a plan in the shape of an isosceles cross, ethnographic collections are most often exhibited (Fig. 321).

All these landmarks are located on the main compositional axis, parallel to the riverbank, part of which is the Danube Park of Vidin (Fig. 322), founded in 1878-1899. In harmony with the bosquet baroque forms of vegetation, the preserved monuments of architecture and culture, located in the Danube Park and in its immediate vicinity represent an attractive and beautiful place on the Danube Riverbank.



Fig. 320 / Vidin Synagogue under the first phase of reconstruction (Author: M. Iordanova, 2021).



Fig. 321/ The Cross Barracks (1801), part of the structure of the Regional Museum in Vidin (Author: M. Iordanova, 2021).



Fig. 322 / Danube Park of Vidin (Author: Bulgarian Guide, 2022).

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- City of Vidin – CV (2008). Общ устройствен план на Видин / General Development Plan of Vidin. Retrieved from <http://old.vidin.bg/wp-content/uploads/2016/04/OUP%20gr.%20Vidin.pdf>.
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4.5.6

CASE STUDY 6 // GIURGIU, ROMANIA

Angelica Stan & Sorin Manea

In the last thirty years, the urban development of Giurgiu has experienced a slow transition process from the industrial profile – imposed by the socialist state – to tertiary activities and a small-format production. The city authorities try to reconsider the natural values and architectural and urban heritage, initialising and undertaking urban regeneration programmes and projects, both at the city and district level.

The difficult communist legacy also meant a total neglect of the potential to capitalise on the tourism based on the great natural resources of the Danube – forested shores, beaches, channels, islands (Fig. 323). Local residents acutely feel the lack of leisure facilities and landscaped green spaces, along with the deficiencies in urban traffic, the poor quality of open public spaces, the abandonment of mainstream values of historic identity, or the absence of the city green connections with the Danube banks (GM, 2009, p. 56).

Starting with 2012, Giurgiu Municipality has launched a series of public projects for urban

regeneration and restructuring (Fig. 324): (1) Giurgiu Fortress Area – delimitation, protection and public accessibility; (2) Plant Alley – Ceinture Road Area – urban connection and spatio-functional reconfiguration; (3) Cama Chanel Area – development of the recreation area related to the water banks; (4) Mihai Viteazu Zone – development of the public space; (5) Marina Port-Plant Basin-Mocănașul Area – development of spaces for boats and leisure, recreation on the shore water; (6) Central area – historic monuments protection and public valorisation; (7) Delta of Plants – landscape project for wetland bio park; and (8) The Ash Lake – leisure and recreational area, landscape restauration project. These projects are not yet fully implemented, but they represent a framework for subsequent operations to harmonise public interests with the private ones. Some of these projects are already or in the different phases of submitting for accessing EU funding. Aside of these physical projects, many cultural projects and events are also realised as functional catalysers in urban regeneration process (Fig. 325).

Fig. 323 / The natural resources of the Danube near Giurgiu – view from the Bizet Bridge (Author: C. Vărzaru, 2021).



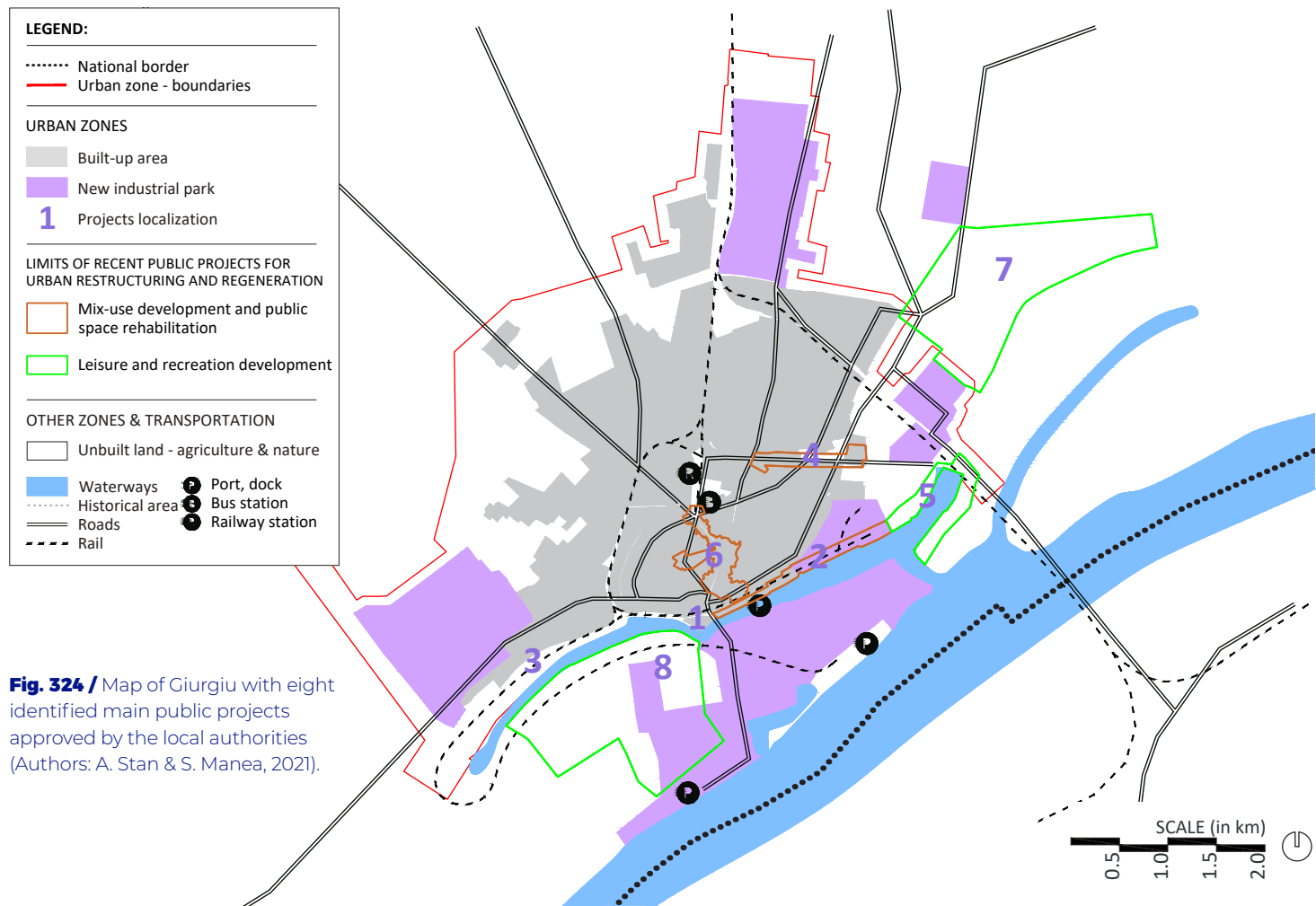


Fig. 324 / Map of Giurgiu with eight identified main public projects approved by the local authorities (Authors: A. Stan & S. Manea, 2021).

Projects localization

- 1 Giurgiu Fortreess Area
- 2 Plant Alley - Ceinture Road Area- urban connection and spatio-functional reconfiguration
- 3 Cama Chanel Area - development of the recreation area related to the water banks
- 4 Mihai Viteazu Area - public space development
- 5 Marina Port - Plant Basin - Mocănașul Area - leisure & water recreation development
- 6 Central area - hystoric monuments protection and public valorization,
- 7 Plants Delta - landscape project for wetland bio park
- 8 "Cenusa" Lake - leisure area/ thematic park develo



Fig. 325 / March band in Sugar Factory Park – new outdoor cultural events as a catalyser for the revitalisation of open public spaces in Giurgiu (Author: C. Vărzaru, 2021).

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- Giurgiu Municipality – GM (2009). Plan urbanistic general Municipiul Giurgiu / General Urban Plan of Giurgiu. Retrieved from [http://www.primariagiurgiu.ro/portal/giurgiu/primarie/portal.nsf/0/A1AB333C3D93A81A42257AB600332F0E/\\$FILE/RLU%20final.pdf](http://www.primariagiurgiu.ro/portal/giurgiu/primarie/portal.nsf/0/A1AB333C3D93A81A42257AB600332F0E/$FILE/RLU%20final.pdf).
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4.6

ACTIVATING SHRINKING DANUBIAN CITIES WITH URBAN ACUPUNCTURE INTERVENTIONS

// INTRODUCTION

Bálint Kádár

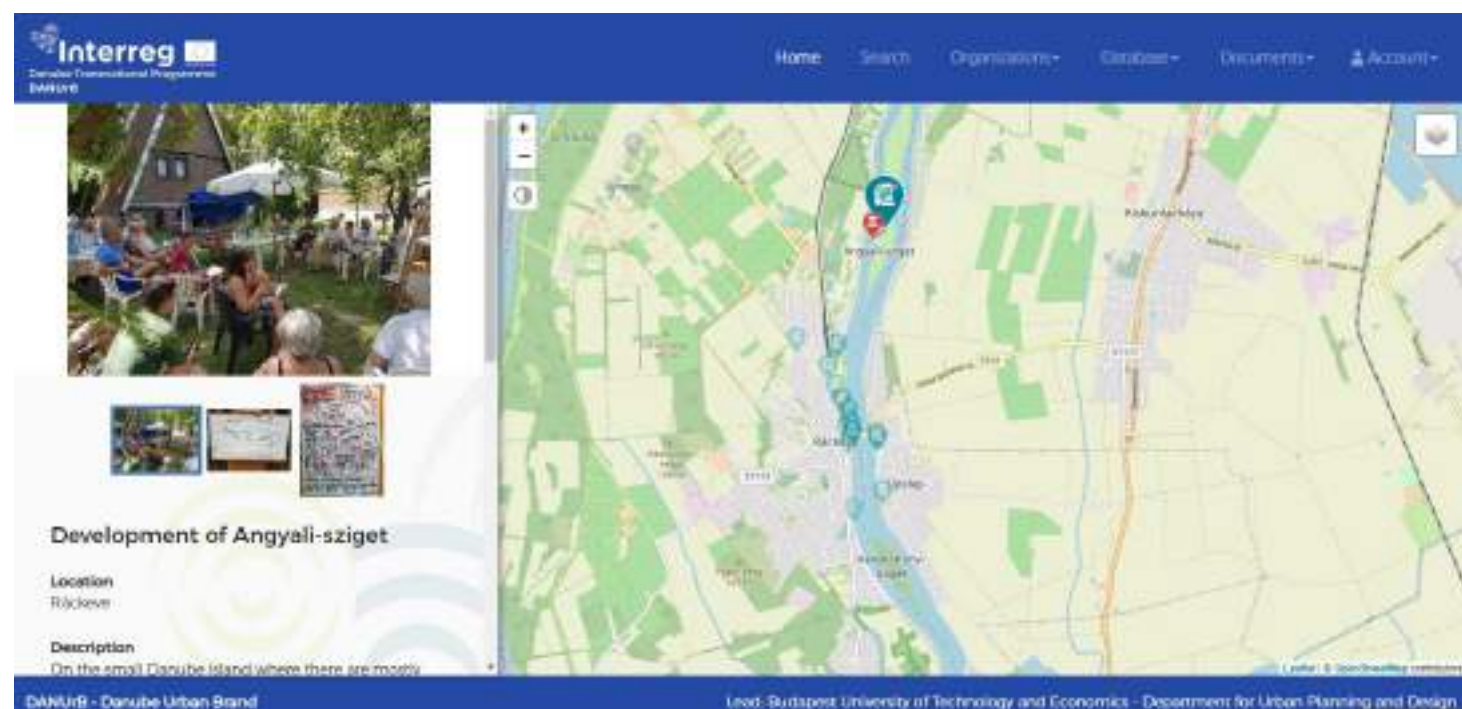
IT IS OBVIOUS, that large infrastructure interventions and development projects can improve the peripheral situation of disadvantageous communities if planned according to appropriate strategies. However, deprived communities often cannot wait for large investments and central interventions, as their demographic and economic shrinkage needs fast changes and local action, activating the energies of those local stakeholders who are still willing to act in place for their own communities. Without large development funds the framework for local action is often limited, and it becomes essential to use the limited resources in the most impactful way.

But this discourse can be also reversed: local action in specific smaller interventions can have a positive effect for the whole community, and the good practices of singular stakeholders can many times become so successful to put the whole community on the map. All these local good practice initiatives can be defined as urban acupuncture interventions, as these act locally also in space, developing only one specific point of a town or region, but have a healing effect on the wider area (Lerner, 2014).

2019) and found some common features in successful acupuncture interventions in these shrinking regions (Fig. 326). These show clearly which are the potentials along this river to make a change with small locally initiated projects. First, successful interventions were always initiated by local stakeholders or actors who specifically care for the given locality. Many times, a productive form of local cooperation was needed to make the interventions possible (Frame & Taylor, 2005). Second, these always built on the resources already present in the landscape: local traditions, local heritage or the river itself. Instead of bringing some new product or service into the community, these interventions often re-valorised previously existing values, giving new forms of usage to traditional places or

Fig. 326 / Good practices along the Danube according to the DANuRB Platform – Showcase project: the development of Angyali-sziget in Ráckeve, Hungary (www.danurb.eu/#).

Urban acupuncture is a tool already successfully used in peripheral situations, even in projects like CULBURB in Central Europe (Bugarič, 2018). The DANuRB Project collected good practices from all along the river Danube (Benkő et al,



assets (Cerisola, 2019). Third, these interventions were rarely outstanding as architectural objects (Enia & Martella, 2019), but they always fit well into the traditional cultural landscapes and townscapes, often involving the valorisation of an architectural space which was abandoned previously.

These three common features were always essential to make a change in Danube's shrinking towns. Local human and economic resources were needed to initiate these projects, as not much external economic interest could be moved to valorise local heritage or values in such peripheral economic situations. But locals had to rely on already sparse resources, therefore innovation, re-use of existing structures and resources, cooperation and concentration of the project to one specific site was needed,

as well as the relying on local produces, heritage or potentials. In many cases, the abundance of space and human labour, common assets in shrinking cities also helped, as the realization of projects were made more economical by these (Burkholder, 2012). Nevertheless, the results show that all the constraints given by the disadvantageous situations could become advantages for the projects, as authentic initiatives and places emerged by the Danube, building on local traditions and heritage, making these very attractive even for visitors from far-away centres. As these good practices valorised local produces, potentials or heritage successfully, the whole shrinking region got a chance to build new economies based on the valorised assets, becoming well known because of these successful acupuncture projects (Fig. 327).



Fig. 327 / New outdoor furniture in Szob, Hungary – an urban-acupuncture intervention done by the students and their instructors of the Budapest University of Technology and Economics (Author: BME, 2021).

R

- Benkő, M, Gregor, P., Kádár B. & Vítková, L. (2019). Book on the unexplored cultural heritage in communities by the Danube. Praha: Gasset.
- Bugarič, B. (2018). Urban acupuncture treatment: Implementing communication tools with youth in Ljubljana suburbs. *Urbani izziv*, 29, 95-108. DOI: 10.5379/urbani-izziv-en-2018-29-supplement-006.
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4.6.1

CASE STUDY 1 // WOODEN MICRO-PROJECTS, DANUBE REGION IN SLOVAKIA

L'ubica Vitková &
Katarína Smatanová

Fig. 328 / Small wooden interventions on the Little Danube: Lookout Tower in Malinovo (Authors: L. Vitková & K. Smatanová).



In shrinking cities, even smaller investments and small improvements are the impetus for more fundamental change. The activities that support the culture, sport, recreation or traditional economy of the region play an important role. They are the “starters” of and an “inspiration” for a more fundamental development of the city or locality. Such realisations in the Danube Region in Slovakia are, for example, the Duna bird observatory on the banks of the Danube near Hamuliakovo, the

the implementation of Korzo Zálesie Project (Fig. 330), which represents the revitalisation of the Little Danube Embankment for leisure activities in Zálesie Village (Fig. 331-332). It is a multi-year project, which gradually transforms the neglected river embankment into a lively local centre and promenade for social, cultural and educational activities. It offers facilities for paddlers, tourists and cyclists, but, above all, it is intended for its inhabitants. The revitalisation of the waterfront was carried out by the civic association “Naše Zálesičko” and with the support of the INTERREG project. The project was awarded the prize of the Slovak Chamber of Architects CEZAAR.

Fig. 329/ Small wooden interventions on the Little Danube: Wooden footbridge in Dunajský Klátov (Authors: L. Vitková & K. Smatanová).



reconstruction of the synagogue in Šamorín, or new sculptures of public spaces in Gabčíkovo. Valuable impulses are also farmers’ markets, restaurants with local gastronomy or the sale of flowers and products along the main roads. Particularly valuable smaller investments are the reconstructions of water mills in Kolárovo, Dunajský Klátov, Jahodná, Tomašíkovo, Jelka, or new projects that follow the tradition of architecture, such as wooden bridges, piers or other wooden structures on the Small Danube (Fig. 328-329).

The most interesting act, which caused the extraordinary popularity among the inhabitants and the attention of the professional public, is



Fig. 331-332 / "Korzo Zálesie" – Zálesie Promenade, as a centre of social life of the village and its surroundings (Author: A. Radulescu, 2021).

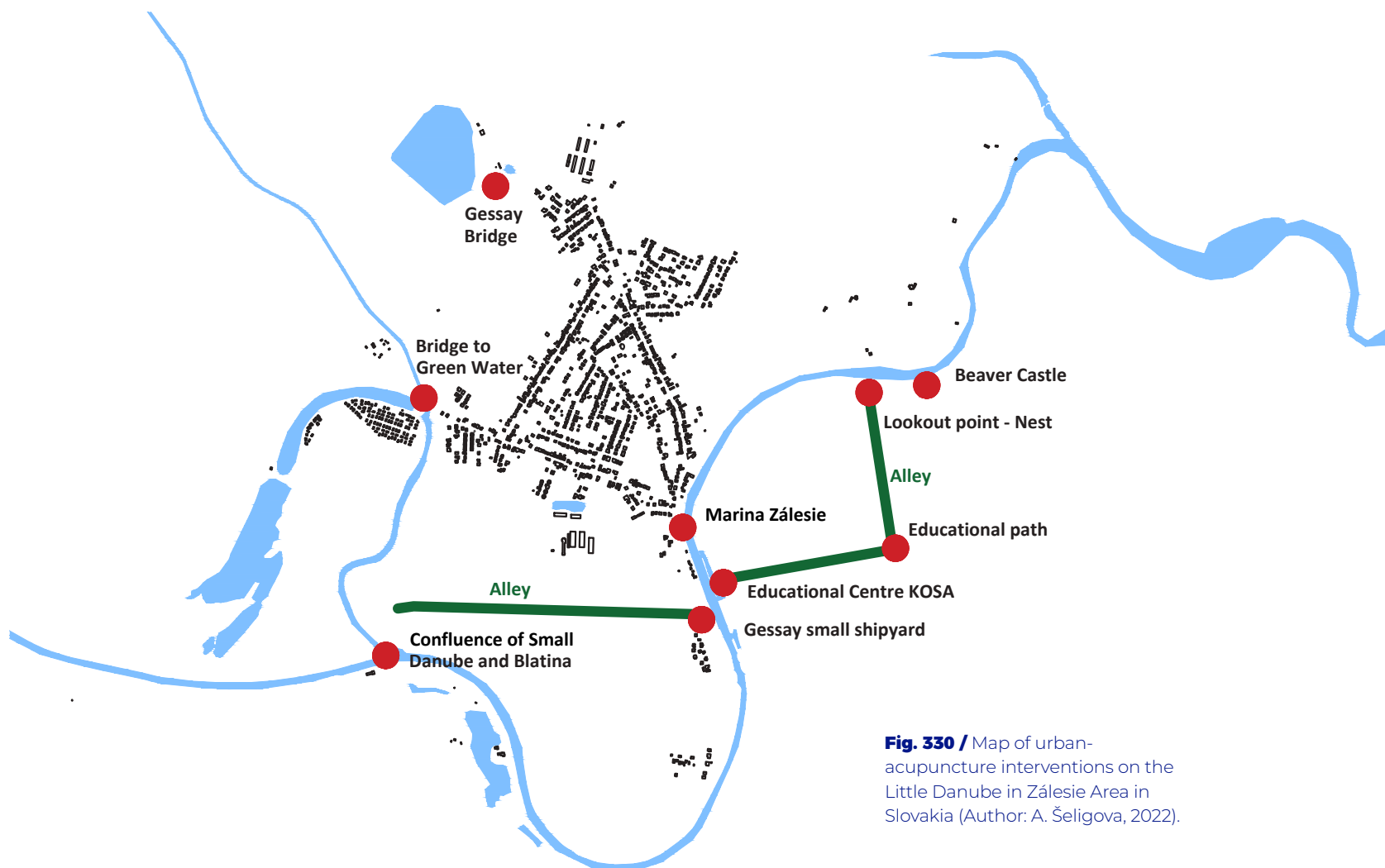


Fig. 330 / Map of urban-acupuncture interventions on the Little Danube in Zálesie Area in Slovakia (Author: A. Šeligová, 2022).

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4.6.2

CASE STUDY 2 // PONTIPOLY PONTOON BRIDGE & SZOB MICRO-INTERVENTIONS, HUNGARY

Réka Zsófia Artner & Béla Zsolt Gergely

Fig. 333 /

PONTIpoly micro-intervention – the construction of a pontoon bridge on the Ipoly River (Author: BME, 2021).



Fig. 334-335 / PONTIpoly micro-intervention – pedestrians on a pontoon bridge on the Ipoly River during its 'one-day life' (Author: BME, 2021).

The 2001 destruction of the concrete bridge spanning the Ipoly River (Slovak: Ipeľ), linking Ipolydamásd, Hungary, to Chľaba, Slovakia (Hungarian: Helemba), weakened a physical connection between the two settlements. This was a motive for PONTIpoly micro-intervention in DANUrB+ Project – a pontoon bridge built in July 2021, aiming to briefly connect the two sides of Ipoly again before the January 2023 inauguration of a new permanent bridge between these two settlements.

45 students of architecture and their instructors from the Department of Urban Planning and Design of the Budapest University of Technology and Economics built the floating foot-bridge following a six-month planning process. Canoes placed in a row across the river and covered by a series of cross planks formed a continuous deck for pedestrians and connected two river shores (Fig. 333). Although the

installation of the bridge stood only for one day, it became so popular locally, that it saw tremendous foot traffic (Fig. 334-335).

The following day the pontoon was taken apart and its lumber was transported downstream to Szob, Hungary, by way of the very canoes used for supporting it (Fig. 336). In Szob, the lumber was given new life by the students who crafted the planks into outdoor furniture and wooden playground structures and installations. Through an Adopt-A-Bench programme, each piece of furniture was placed in the care of various local public and private entities. They not only provide a long-lasting beautification to the public spaces of Szob, but also honour the memory of the pontoon bridge and symbolise the cohesion of the community (Fig. 337-338).

Fig. 337-338 / PONTIpoly micro-intervention – the 'new life' of the bridge material for outdoor furniture in Szob, Hungary (Author: BME, 2021).



Fig. 336 / PONTIpoly micro-intervention – the transport of the material of the pontoon bridge to Szob to use it for urban furniture (Author: BME, 2021).



4.6.3 CASE STUDY 3 // MICRO-MUSEUM QUARTER IN SOMBOR, SERBIA

Milorad Obradović

After the fall of socialism in the former Yugoslavia, Sombor has become even more a border city, with the establishment of a new border to Croatia on the Danube. The city has faced many economic problems and they have been visible through the recent demographic decline and building deterioration.

The micro-museum district in Sombor is a local project with the aim of the renewal of old cultural and protected heritage sites in the western part of the historic core of Sombor, known as a “Venac” (Eng. *Coronet*). The historic core is encircled by the ring of four boulevards and contains buildings and open public spaces, some of them older than 250 years (Fig. 339). Hence, it is protected as a “spatial cultural-historical unit” by national legislation, which corresponds to a definition of a protected historic centre by UNESCO (UNESCO, 1996).

Additional incentives for the renewal of the Sombor core emerged with a new urban plan with stricter rules for sustainable development. This included the refurbishment and reuse of old public buildings for cultural activities in a new micro-museum quarter (Fig. 340). Some good local examples represent Grašalković Pal-

Fig. 339 / Location of the micro-museum quarter in the protected historic core of Sombor (Author: M. Obradović, 2022).

In metres
0 50 100 150 200 250

LEGEND

- Museum Quarter - Pedestrian zone
- Museum Quarter - Cultural institutions
- Protected buildings - Cultural heritage
- Other buildings
- Open public space (street, square)
- Greenery / Venac boulevards

Position of the museum quarter in Sombor

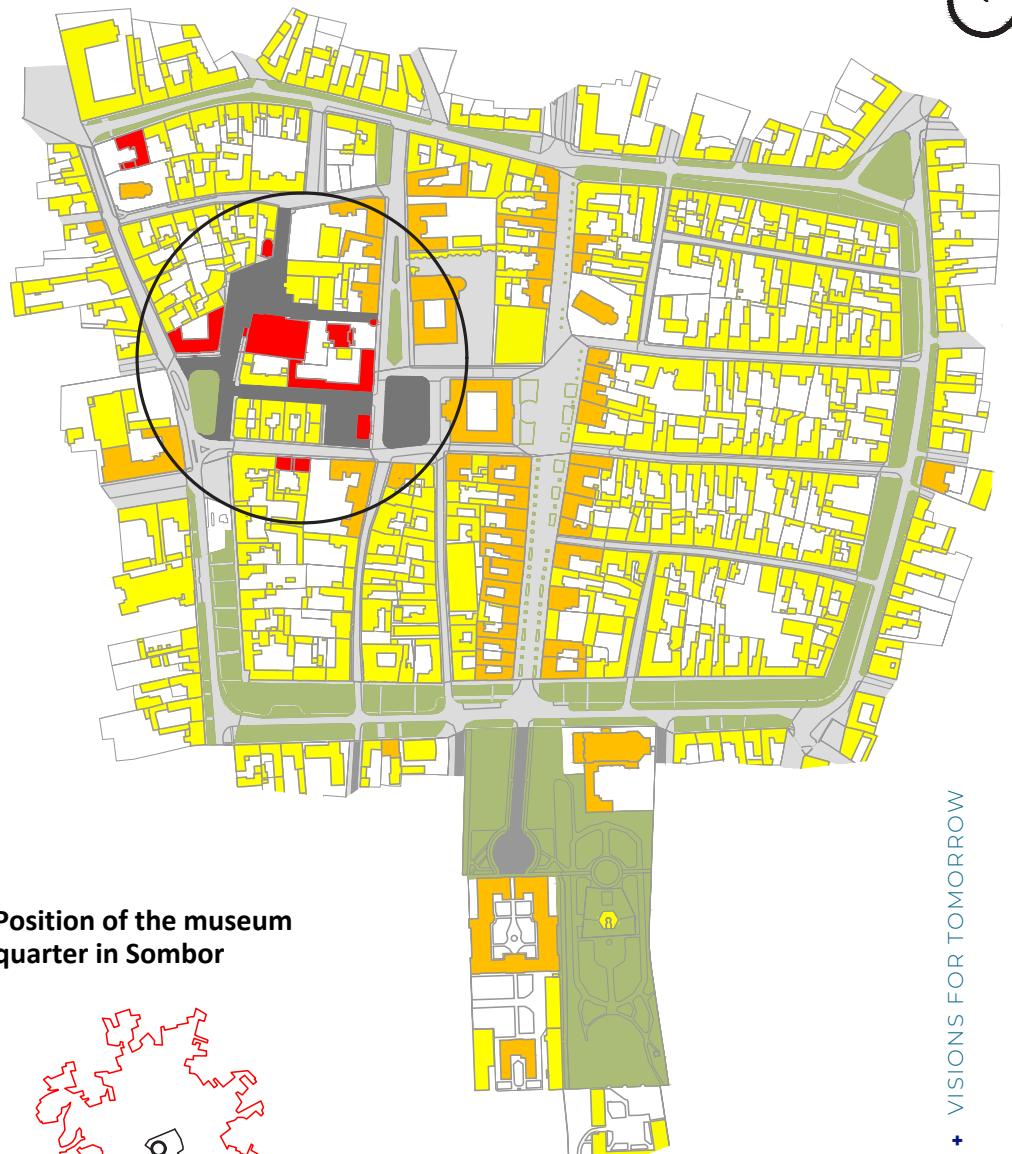
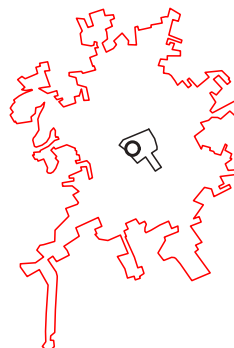
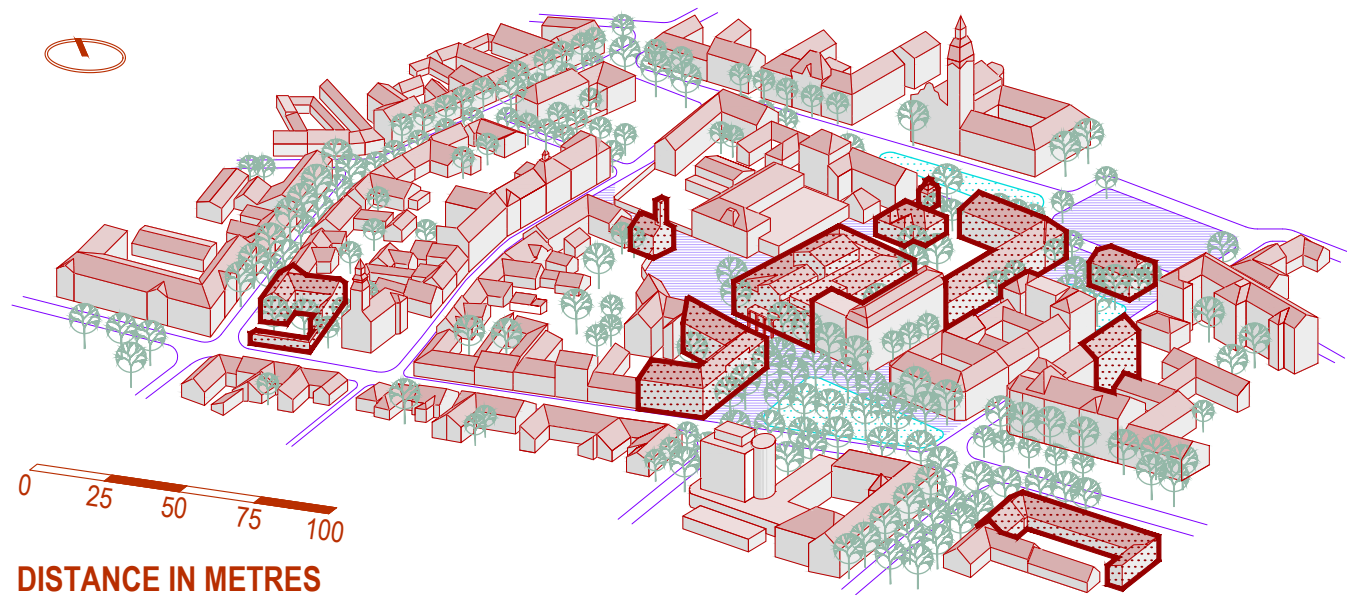


Fig. 340 / Key buildings and open public space in Sombor micro-museum quarter (Author: B. Antić, 2021).



ace, which houses the new Museum of Danubian Germans in Serbia, with ongoing plans to establish a creative hub for young people, a completely refurbished Lutheran Church (Fig. 341), or the “Laza Kostić” Cultural Centre which was reconstructed and modernised as well. Open public space in this city zone was reconstructed and pedestrianised in order to become the connective element of the quarter.

The open spaces were designed in a combination of a traditional tone and modern look, altogether striving with a new identity in the city (Fig. 342). Museum quarter was also dedicated to both religious and cultural purposes, such as the small concerts of classical music or other cultural activities. It has been accepted by locals as a good urban practice applicable in different environments.

Fig. 341 / Recently refurbished Lutheran Church and new square in the front of it are the centre of a new micro-museum quarter in Sombor (Author: Dragana Siljanović Kozoderović, 2021).



Fig. 342 / New elements in the micro-museum quarter in Sombor are striving with a new identity in the city. (Author: Dragana Siljanović Kozoderović, 2022).



4.6.4

CASE STUDY 4 // EGRETA COMPLEX IN BERZASCA, ROMANIA

Marius Găman

The dramatic population decline in the Iron Gates Gorge after the collapse of socialism led to a fall in land value and an undeniably sublime landscape. However, this situation has recently triggered the construction of a very large number of hotels, bed & breakfast and holiday homes. Although the landscape is the most important element, the relationship with new constructions or the lack thereof is a major problem. The reason is that most of the owners of these tourist facilities are interested in maximising their profit by erecting large buildings with as many rooms as possible for renting. Many of them were built on the plots located between the national road and the Danube, blocking the visual link between the public space and the river (Fig. 343).

The Egreta Complex is a good insertion example that not only uses the landscape as a

high-quality visual element but tries to integrate itself in a natural way (Fig. 344-345). The complex is positioned on the western edge of Berzasca Village (Fig. 346-347), above the water and on pillars, thus making the most of the main attraction, the river itself. At the same time, this gesture does not block the view to the Danube (Fig. 347). The investment was carried out with funds from the European Union and consists of a small building for reception and bar, 15 separate accommodation units that are connected to each other and to the shore by a pontoon. Each accommodation unit is treated as a single house providing a human scale, common to the traditional architecture of this area. In addition to the accommodation, the pontoon also has the role of facilitating interactions within the community and can be used as a fishing area or a platform for diving and swimming.



Fig. 343 / Many of new tourist accommodations in the Romanian Iron Gates Region block a visual link between the road (public space) and the Danube River (Author: A. Radulescu, 2022).

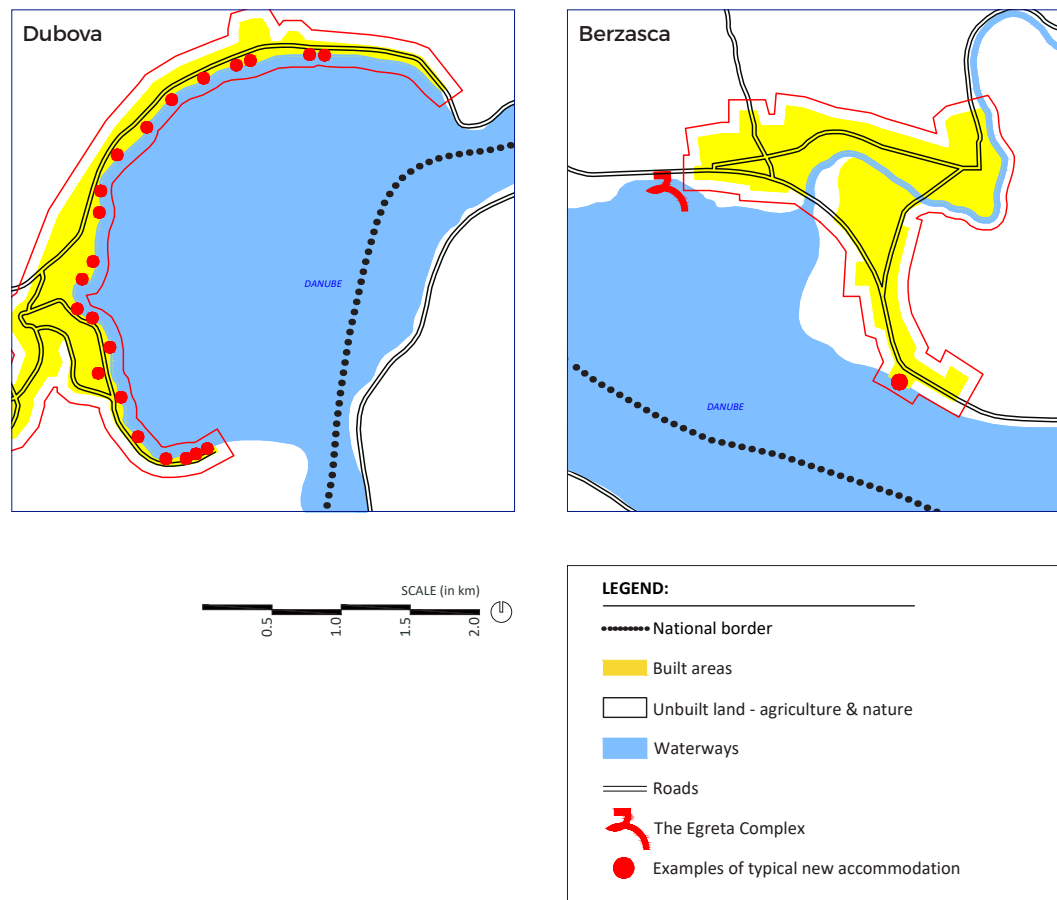


Fig. 344 / Comparative maps of the recent tourist development in Dubova (left) and Berzasca (right). In Dubova, new tourist accommodation obstructs the view of the Danube (Author: M. Găman, 2022).

Fig. 345 / Comparison between landscape integration of the typical new accommodation in the Danube Gorge area in Dubova and the Egreta Complex in Berzasca (Author: M. Găman, 2022).

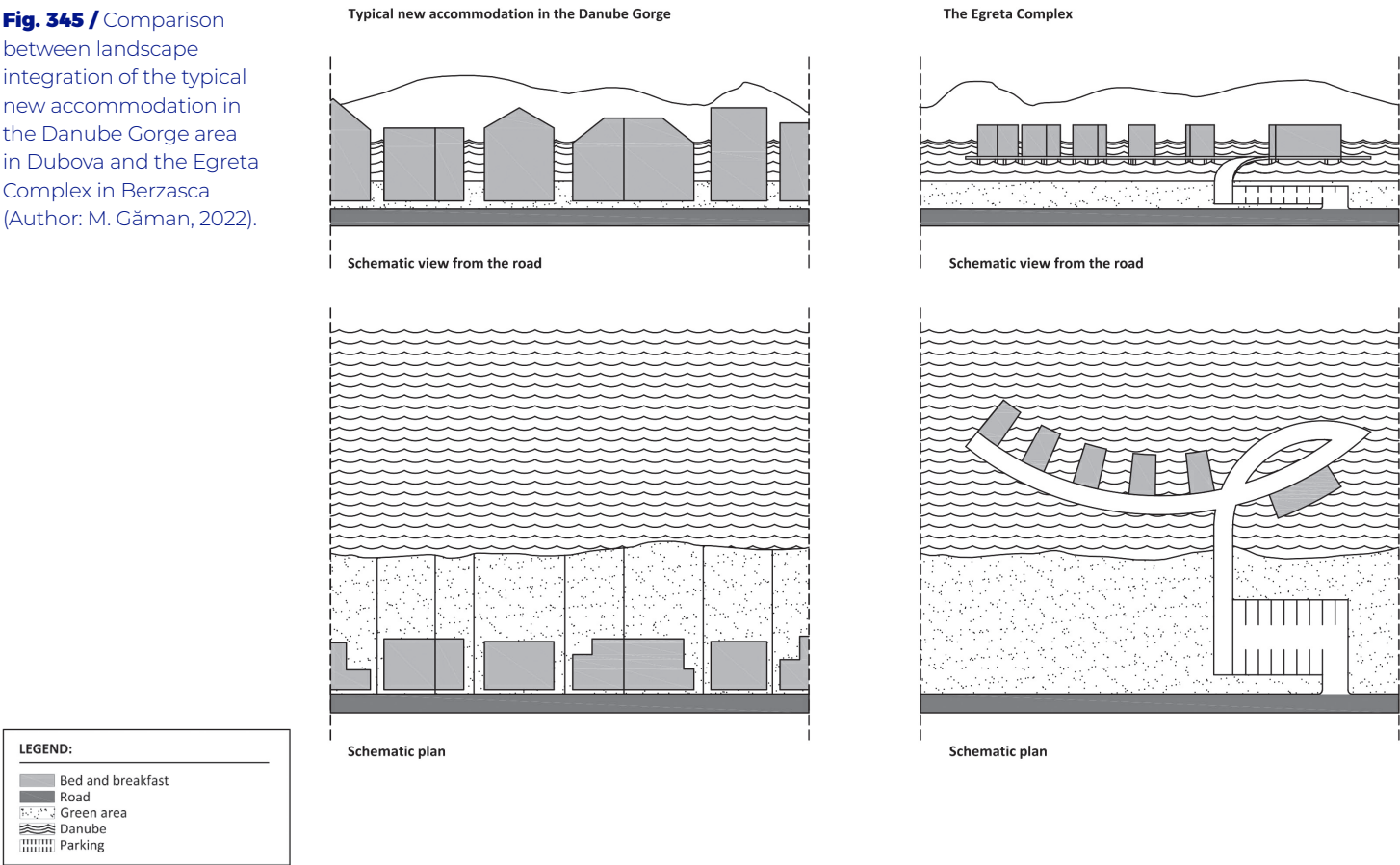


Fig. 346 / Aerial photo of Egreta Complex (Source: complex-egreta.ro).



Fig. 347 / Photo of Egreta Complex from the national road (Source: complex-egreta.ro).



4.6.5 CASE STUDY 5 // URBAN-ACUPUNCTURE PROJECTS IN DANUBIAN CITIES IN BULGARIA

Miriyana Yordanova & Georgi Georgiev

Urban Acupuncture is an interconnected architectural influence of the collective intellect of the city, in which citizens are encouraged to join the process of creative planning (Casagrande, 2019). Basically, it refers to the urban changes that revitalise the inactive built environment by “needling” urban interventions (ParCitypatory, 2021). It is believed that even small urban change can “cure” entire neighbourhoods or even a city. Such interventions are: reconstruction of abandoned riverbeds, the restoration of community centres and cinemas, the creation of thematic cafes or light, music or colour decoration.

There have been many of the urban-acupuncture projects in Danubian Cities in Bulgaria. “Selfie Alley” Intervention was created in the Danube Park in Silistra (Fig. 348). It was formed as the echo of the “Umbrella Sky” Project, which aimed to promote certain places bathed in colours that fill residents and guests with positive emotions (Georgieva, 2021). Similar project has been implemented in Vidin for several years in a row; one hundred colourful umbrellas have created a mood in Rova Park in the city centre, making a positive impression on local people (Pavlova, 2018). Then, “Dragon Alley” becomes a magnet every year in the “Night of the Harry Potter Books”, organized by the Regional Library “Mihalaki Georgiev” in Vidin (RV, 2021). In addition to the transformation of the street space, this event also prepares programme with entertaining games

for participants. In Ruse, “Poeziomat”, the so-called jukebox for poetry (Fig. 349), an art installation designed by Ondrej Kobza, “recites” poems by European authors and creates a unique touch to fiction in the urban environment (24Ruse.com, 2018).



Fig. 348 / “Selfie Alley” in Silistra, Bulgaria (source: Municipality of Silistra).



Fig. 349 / “Poeziomat” in Ruse, Bulgaria (source: 24ruse.com).

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4.6.6

CASE STUDY 6 // SUGAR FACTORY PARK IN GIURGIU, ROMANIA

Ana Opreș &
Angelica Stan

Sugar Factory Park is a part of the industrial historical heritage of a sugar factory, built in 1920, in the old Smârda Neighbourhood in Giurgiu, near the channelled arm of the Danube. It is a small residential complex built for factory workers. The complex was enhanced with a park and outdoor recreation area, with a wooden stage for outdoor performances, a booth for a wooden cinema, a tennis court, and a fanfare music kiosk.

As the factory was liquidated after 1990, houses around the park became private property, while the Sugar Factory Park is currently under the municipality's public domain administration. The park is not a part of a coherent system of green spaces within Giurgiu. During last decades, the architectural-landscape ensemble was inadequately valorised and inhabitants lost their attachment to this green space planned for spending leisure time and socialisation.

The participatory community project started in 2018, when "AICI Architecture Studio" from Bucharest obtained support from The National Cultural Fund for the Programme "Sugar Factory Park – participatory community recoveries through parametric modelling". After a cleaning operation carried out by municipality and residents from the park's vicinity (Fig. 350), partnership was signed with "Ion

Mincu" University of Architecture and Urban Planning, and the team of specialists got involved and developed together with the local community two joint workshops and a summer school programme. The first part, "Sugar Factory Park Reactivation", included the construction of a multifunctional pavilion for cultural and recreational activities (Fig. 351), coordinated by architect Ruxandra Iancu Bratosin and engineer Alessandro Mattoccia, on behalf of the "Basics studio" in Madrid. The second programme took place soon after the first one, entitled "Connection through urban design". It completed the construction of the pavilion through fitting furniture, as well through the landscaping of several park areas, fulfilling the intention of the municipality to commence a comprehensive park rehabilitation project. The working team was composed of a new group of urban and landscape students, coordinated by urbanist Ana Opreș, PhD, and architect Adrian Moleavin, from UAUIM, landscape architect Alexandru Gheorghe and architect Valentina Puzderca from "Poteca Studio" (Fig. 352). All interventions have been designed by students and accomplished with the help of the neighbourhood residents and in cooperation with Giurgiu representatives. The promotion of these interventions has set an example for other projects undertaken in sub-standard functioning areas.



Fig. 350 / July 2018: cleaning action with the team of experts of the project, the team employees of the city hall of Giurgiu (including the Mayor and the Chief Architect) and the residents of the neighbourhood (Source: AICI).



Fig. 351 / August 2018: the first educational activity (with architect students) – the construction of the pavilion (Source: AICI).



Fig. 352 / October 2018: 3D simulations within the landscape design project (Source: A. Opreș).



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