Danubiana Carpathica

Jahrbuch für Geschichte und Kultur in den deutschen Siedlungsgebieten Südosteuropas

herausgegeben von

Mathias Beer, Reinhard Johler, Florian Kührer-Wielach, Jana Osterkamp

Band 14 (61)

2024

DE GRUYTER OLDENBOURG

Herausgegeben im Auftrag

der Kommission für Geschichte und Kultur der Deutschen in Südosteuropa, des Bukowina-Instituts an der Universität Augsburg, des Instituts für deutsche Kultur und Geschichte Südosteuropas an der LMU München, des Instituts für donauschwäbische Geschichte und Landeskunde, Tübingen, und des Zentrums zur Erforschung deutscher Geschichte und Kultur in Südosteuropa an der Universität Tübingen.

Redaktion
Angela Ilić, Sabine Jesner, Michael Kabelka, Olivia Spiridon

ISSN 1863-9887
ISBN 978-3-11-136841-2

Anfragen und Beiträge sind zu richten an die Kommission für Geschichte und Kultur der Deutschen in Südosteuropa, c/o Alter Postweg 97a, D-86150 Augsburg, kgkds@bukowina-institut.de
Das Jahrbuch ist über De Gruyter Oldenbourg zu beziehen.

Druck: AZ Druck und Datentechnik GmbH, Kempten
Satz: Ralf Thomas Göllner

Veröffentlicht durch den Verlag De Gruyter Oldenbourg Berlin/Boston

The City in Transition.
Transformation Processes in Southeastern Europe since the 1980s

edited by

Daniela Simon

Danubiana Carpathica Band 14 (61), 2024

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Máté Tamáska

Waterfront Komárno. Topography of a Small Town's National Port

(Translated from Hungarian by Mate Eichenseher)

Komárno (Komorn in German, Komárom in Hungarian)[1] is a twin-town located one hundred kilometers from Budapest on the Slovakian side of the Slovak-Hungarian border. Its southern twin, in Hungary, is called Komárom; the northern, Slovakian town is also dominated by Hungarian speakers. Seen from the Danube, it is not so much the town itself, but the long port, that dominates the skyline (Fig. 1). Cranes, barges, wagons and warehouses form a corridor between the town and the river. At first glance, the harbor might look like an industrial relict, but it is still in operation today and the energy crisis seems to have boosted its traffic. Brownfield sites with similar waterfront features—remnants of the classic industrial era of the late nineteenth century and the turn of the century—are particularly valuable sites for urban growth elsewhere. As the extensive literature on waterfront issues (Hoyle 2000; West 1989; Wrenn 1983) has discussed, ports close to the city are being dismantled and replaced to the edges of cities, in response to the increased logistical capacity of waterborne transport. Abandoned ports, with their special atmosphere and spaces open to the landscape (especially to the water), have become popular sites for gentrification. One does not have to travel far to find this type of real estate development: The old port of the Slovakian capital, Bratislava, for example, has been occupied by residential buildings for the past decades. Signs of post-industrial transformation are also visible in Komárno, where the weekend holiday homes on Elisabeth Island, the island opposite the port, are being expanded or demolished to make way for the construction of 'luxury' detached houses. At the tip of the island, a leisure park is being developed with tennis courts, hotels, restaurants and, of course, a marina.

[1] Thanks to the support of the TEMPU Foundation. The article is part of the project Ports on the Danube: History, Architecture, People, 2023–2026. (https://danube-ports.com/), accessed 1.4.2024.

Fig. 1. Cityscape of Komárno (2021), dominated by the shipyard (left front) and the port facilities (Photo by author)

Yet it is not this marina, but the working harbor that makes Komárno's cityscape special. Along the fast-growing economic axis of Vienna-Bratislava-Budapest, Komárno's port is a rarity. Elsewhere, we see either brownfield sites in search of a new function, as in neighboring Almásfüzitő, or intensive real estate developments, as in Győr (Raab in German) (Hardi 2008). The aim of this chapter is to describe Komárno's atypical situation in order to understand the position of the port in the city's urban structure and its spatial characteristics. Since the typology of ports is not well known, I begin with a brief conceptual overview (Subják 1969; Kertai 1971), before outlining the history of the port of Komárno, including the shipyard that developed in close connection with it. Then, summarizing the lessons learned from interviews conducted on site, site visits and the available summaries of development documents, I describe the present conditions and future plans.

Port Typology

There are two main types of river ports: one for the actual transport of goods, the other for the parking of ships, especially for protection against ice damage in winter (Schoklitsch 1962). Within this typology, further distinctions can be made, depending on the primary function of the port: it can be a passenger port, a commercial port or an industrial port. From an architectural and urban planning point of view, the main difference is whether the port is located directly on the waterfront or has its own, typically artificial, basin or basins. Komárno, like most old harbors, presents a mixed picture: It encompasses an enclosed basin for the storage and repair of ships, but also loading, industrial and passenger sections. Modern harbor types are in fact historical formations, following the technological and logistical changes of the nineteenth to the twenty-first centuries (Lednický and Sosedová 2010).

The literature dates the history of modern ports on the Danube from the nineteenth century, after the comprehensive regulation of the river and the stabilization and construction of its banks (Schmid 2013). Previously, we can only speak of port sites that were sometimes washed out and flooded, often forcing the existing traffic to move to other locations. The basic type of permanent harbor is a quay on a flood protection barrier. As people typically wanted to keep valuable real estate assets safe, the first quays were located in front of densely built neighborhoods, leaving rather little space for the actual loading function (Kolundzsija 2019). However, river regulation and the construction of a dam became a major urban development factor, allowing expansion into areas where no houses had previously stood. In these 'new lands,' quays were designed to allow the establishment of prosperous businesses behind them. Budapest thus became the largest milling center in Europe, supported by ships that could be loaded directly from the mills or railway wagons (Klement 2010). The factory-port merged into one huge machine, a symbiosis that in time became a design principle. Twentieth-century industrial projects based on water logistics, such as cement works, aluminum factories or ironworks, were usually 'integrated' into their ports, using special structures to link production and transport capacities (Subják 1969; Kertai 1971).

Returning to the quays, it should be mentioned, that not only the lack of space was a problem to be solved, but also the fluctuations in water levels and the damage caused by ice. The Danube shipping experts of the late nineteenth century therefore called for the construction of enclosed artificial basin harbors following Western models (Gonda 1899). Where possible, they tried to reduce the costs of enclosed basins by closing off tributaries and developing winter harbors. The most modern solution, however, was the giant inner basin harbor with a comb-shaped branching form, rationalized in its water system. These harbors have typically been developed as projects at the edge of the cities. Warehouse space was planned in advance; plots were made available to the industry. From the mid-twentieth century onwards, where such new ports were built, the former quays within the downtowns lost their logistical function. The old ports were either completely dismantled or converted to accommodate excursion boats (Cseh 2014, 2018).

This historical typology is largely consistent with the development modeled by Budapest. Budapest is of particular importance not only because, among European capitals, its modern development has been most closely linked to the waterfront, but also because it was the model for the urban development of Komárno at the end of the nineteenth century (the city was part of the Kingdom of Hungary named as Komárom until 1920). At the beginning of the nineteenth century, Pest-Buda (Budapest was unified only in 1873), was able to serve as the central base for the imperial steamship company, First Danube Steamship Company (DDSG, abbreviated from the original German company name, Erste Donaudampfschiffahrtsgesellschaft, today DDSG Blue Danube) thanks to its excellent natural resources. In the 1850s the company set up its dockyards next to the Chain Bridge (Lánchíd). The dockyards area was extremely small by today's standards. The dockyard was surrounded by a decorated fence and its entrance was made more spectacular by the addition of sculptures (Fig 2). As the quays in the city center were an integral part of the cityscape everywhere, care was taken to ensure that these new quays were carefully and artistically designed (Holló and Zsigmond 2021).

Fig. 2. The port of the first Danube steamship company in Budapest,
at the head of the *Lánchíd* (Chain Bridge),
with the building of the Hungarian Academy of Sciences.
This port is directly connected to the most elegant district of the city.
(Source: Fortepan 82083, Archive of Budapest,
photo made by Klösz, György (1900))

Yet the quays themselves were by no means elegant places. Attempts were made to hide the low, barrack-like warehouses under the high stone embankments, so as not to 'disturb' the beauty of the palaces of the bourgeois city. Moving away from the city center, this modesty disappeared. The quays themselves became increasingly simple. By the turn of the century, about four kilometers of quays had been built along the entire length of the new city, with harbors lining both banks of the Danube. The most important port was the so-called southern port, Ferencváros. The core of Ferencváros was the market hall, where it was possible to load directly from the waterfront, but the cityscape took on a truly industrial character further south, with the construction of the huge mill factories (Klement 2010). North of the city center, the river was of a different character (or rather, less regulated), with smaller and larger affluents and islands characterizing the riverbed.

The closure of the protected tributaries led to the establishment of shipbuilding and repair facilities and winter harbors, which attracted further investment, mainly in heavy industry, to the area near the banks.

By the end of the nineteenth century, despite the over-using of the quays of Budapest, it took nearly four decades to complete the great port of Csepel (Tschepele or Eugensinsel in German, Čepeljski otok or Ada in Croatian), south of the city, bringing about substantial change (Cseh 2018). The delay was due to the fact that the Kingdom of Hungary's transport policy had favored the railway, even in opposition to inland navigation. After World War I, however, the customs policies of the new states made rail transport expensive, which increased the role of the Danube waterway. In Csepel, the largest artificial basin port in Budapest and Central Europe was built, or more precisely, ports, as there are several facilities. Characteristic of its scale, the new grain store, a 14-story block, became a defining symbol of the inter-war cityscape. In parallel to the building of the port of Csepel, the downtown DDSG harbor was dismantled. In its place, a 'motorway quay' with a viewing terrace was planned (Ferkai 2001). The latter was never completed. At the same time, a passenger port was built with some new buildings. After the Second World War, the increasing car traffic occupied the quays, so that the passenger port was definitely cut off from the city center.

Not only in the narrow city center, but also elsewhere, urban planning in the second half of the twentieth century attempted to get rid of the quayside harbors that hampered urban growth. The process accelerated spectacularly in the decades after 1989. By then, not only the ports, but also the shipyards and other factories that had developed in close connection with them, had been closed down. Thanks to the freed-up areas, the 'Danube axis' in Budapest became a development zone in its own right, with waterfront residential areas and office buildings, as well as cultural and sports facilities (Tolnai 2018). As a result of the post-industrial turnaround, only the port of Csepel now still welcomes cargo ships. At the same time, hotel ships have taken over a large part of the urban berths, so that today—just as a hundred years ago—ships still wait 'unchanged' in front of the rows of houses in Pest (the berths on the Buda side are less intensively used).

The History of the Port of Komárno until 1989

At the beginning of the eighteenth century, Komárom (today: Komárno, but I use the name that was common until 1920, which also corresponds to the sources) was one of the most important towns in the Kingdom of Hungary. Its grain trade rivaled that of Pest, and its merchant ships served the whole region. However, the city's main strategic importance was its defensive role, as it was here that one of the largest fortifications of the Habsburg Empire was built. Accordingly, the city structure consisted of a military town (castle) and a civic city (Kecskés 1984).

The following will only discuss the civic city, since it is more important from the perspective of the ports, although it is worth knowing that a significant naval fleet was also stationed on the Danube. The town is not located directly on the main branch of the Danube, but behind an island, in a relatively sheltered position, occupying the triangular mouth of the Old Danube and the Váh-Danube, also named as "Little Danube" (the Váh is a river in Slovakia; in Hungarian: Vág). Following the confluence of the rivers, the city's structure also took on a triangular shape. By the twentieth century, the city had a relatively dense network of building plots with many passages to the shore, indicating the dominance of the water. As one moves away from the water, the plot sizes 'increase,' with extensive orchards loosening up building development. The prosperity of Komárom, which had been a trading town, came to an end with the development of Pest into a large city, coinciding with the arrival of steamships and then the railway. In the second half of the nineteenth century, long-distance trade between Vienna and Pest required fewer and fewer intermediate stations such as Komárom (Tamáska 2016).[2]

In response to this structural crisis, Komárom again saw the Danube as its only guarantee for its future. With the construction of the flood protection dikes, a port very similar to the one in Pest was built. The geographical lexicon of the time, with the Hungarian titles *Magyarország vármegyéi és városai 1896-1914* (Chronicle of the county), which was still used as a basic text at

[2] In addition to Komárom, the relative economic weight of Esztergom, Győr and Moson (Mosonmagyaróvár) also declined spectacularly in the second half of the nineteenth century.

the turn of the century (1907), states that "From the island, on the Small Danube branch, which has been converted into a winter harbor, we arrive at the Franz Joseph quay, also a state-owned iron bridge. This is the busiest place in the town, where the weekly fairs are held. Here is also the station harbor of the Danube Steamship Company, which carries both freight and passenger traffic" (Borovszky 1907).[3] As in Pest, elegant residences and hotels were built, along with a promenade following the quay line. The quay itself was sharply separated from this elegant world. Across from the city, essentially opposite the harbor, at the eastern tip of the island, the State Shipyard (1898) was built, which would fundamentally change the face of the city for the next hundred years. But in the early twentieth century, an even more significant investment was the installation of a munitions factory on the banks of the Váh-Danube, which completely industrialized the area, with railway tracks and huge industrial buildings (Tamáska 2016). This paved the way for the development of the port, which, according to the available documents, took place only after 1918, when Komárom, now called Komárno in Slovak, became part of Czechoslovakia.

The new Czechoslovakia placed itself at the center of the North-South European trade corridor; to do this, it needed to develop not only Bratislava but also the port of Komárno. In 1922, the park around the bridgehead was purchased by the state from the now bankrupt city, and the central part of the port was constructed, including its imposing 'red' warehouses. In the 1930s, the harbor was expanded further, the rails were moved under the bridge, and the shore below the fortifications was occupied by wharfs. Three oil tanker containers were also built along the Váh-Danube. The growth of the port was marked by the fact that the prewar 1,500 meters of developed quay increased to nearly 5,000 meters, with four electric loading cranes. The largest traffic was in coal, mainly from Poland (Fritsch 1938). Although there were already those who considered the port of Komárno (between 1938–1945 it belonged to Hungary again) to be oversized. Despite these consid-

[3] Later, MAHART, a Hungarian competitor to the Hungarian DDSG, also established a station there, as did the Czechoslovak National Shipping Company after World War I.

erations, the new Czechoslovak government once again drew up ambitious development plans after 1945.[4]

If the plans of the 1940s had been realized, every section of the Komárno's river bank would have been occupied by docks, railway tracks and warehouses. But this great expansion was not to be. Instead, an investment that profoundly transformed the city's identity was made: the development of the shipyard into a large socialist enterprise. During the four decades of socialism, there was hardly a family without a shipyard worker. The yard was a 'city within a city,' with its own company newspaper and housing estates. Over time, the harbor became more and more part of the shipyard, with ships waiting to be loaded and ships waiting to be repaired side by side. Komárno, in line with the general socialist municipal policy, reflected the model of 'one factory—one city' (Germuska 2004), which explains why the economic crisis of the 1980s and the change in regime caused great difficulties not only the shipyard but also the port.

The Current Situation

Slovakia, which became independent on 1 January 1993, experienced a relatively slow transition among the countries that underwent a regime change during this period. While on the Hungarian bank of the Danube, in Komárom, socialist industrial development was wiped out in a few years, only to be followed almost simultaneously with its partition through a completely new system of industrial parks in line with international trends, Komárno's industry shrank step by step (Kovács and Szabó 2008). The shipyard was finally closed in 2012, but this closure was not complete, and ships are still repaired and built there today, albeit only one to two per year instead of the three to four new ships per month that were typical in its heyday. According to press reports, the latest to be completed was a hotel ship in 2020.[5] Articles have already claimed that Komárno is "back on the Euro-

[4] The development maps and documents are located at the Danube Museum, Komárom Historical collection, NH 1905. The fonds, containing about 50–60 plans, including mixed building and land use plans, contain sources from 1920 to 1946.

[5] "Komárom shipyard comes to life, hotel ship under construction." 2020-02-18, http://komaromonline.sk, accessed 1.4.2024.

pean shipbuilding map." It is perhaps too early to tell, but if there is a new boom, it will not be structurally similar to the large socialist factory of the past. The great era of shipbuilding in Komárno has come to an end, and is now part of the city's memory.

The shipyard and the port were closely linked together, the memory of the shipyard dominates the local discourses. Back in 1998, a jubilee edition was published summarizing "a hundred years of Slovak shipbuilding" (Holka, Bednár and Mihálik 1998), which shows that the shipbuilding industry is at least as linked to the discourse on the modern (Czecho)Slovak state as to the local history of the town. Conversely, other cultural monuments in the town, such as the castle, the main square or the schools, which are typically pre-1920 buildings, tend to reinforce a Hungarian identity (Mácza 1992). This is not an unimportant aspect in a town that is also the cultural center of Hungarian minority in Slovakia. The everyday language of the city is still mostly Hungarian, and Komárno is the intellectual center of Hungarian-speaking Slovakia, with its own Hungarian-language university and theatre.

If the shipyard can be interpreted as a kind of twentieth-century (i.e. Czechoslovak) memorial site, this is particularly true for the port. The port area has been in state hands for well over a century, and investments were directed from the respective ministry headquarters, to the extent that certain official documents after 1920 were written in Czech rather than Slovak. This 'out-of-town' status has been maintained throughout. It is typical that the maps in the Komárno city archives depicting the radical urban planning projects of the 1960s simply did not include the Danube area. Today, the port is still state-owned, although run by a private company.[6] Today the port is depicted in the current zoning plan again, but it has no real influence on the actual function of the area.[7] For decades now, the town hall has pushed, with greater or lesser vigor, for the rehabilitation of the area and the erasure of its industrial character. In what is perhaps the city's most beautiful panoramic spot, at the confluence of the Váh and Danube, there is a ship-loading station, which the town hall is trying to dismantle in order to begin the

[6] See the entry "Dunajské prístavy" on the website of the Slovak Ministry responsible: https://www.mindop.sk, accessed 1.4.2024.

[7] See the "Územný plán mesta" entry on the city website: https://komarno.sk/, accessed 1.4.2024.

process of transforming the area for recreational purposes.[8] In recent years, it seemed likely, since the filling station was not economically viable, that the city could finally achieve its goal. But the 2022 energy crisis has suddenly put the port in a strategic position. Not only the station, but the entire port area has seen unprecedented traffic.

Of course, there was no talk of closing the port completely before 2022 either, but there were discussions about possible plans for relocation and development. A development plan for the port was also drawn up.[9] One scenario that has emerged is that the port could be dismantled in its current location and rebuilt with a completely new infrastructure a few hundred meters below the city (next to the Veľký Harčáš settlement). The current zoning plan already defines this area as industrial. Another solution would be to extend the port toward the Váh-Danube. Both options would allow for closing and the partial demolition of the 100-year-old harbor area near the town. However, the development document also envisages a scenario in which the port remains in its current location.

In the interviews with the company's operators, they are adamantly opposed to the idea of transferring land for urban use. They consider the idea of a 'promenade' to be unfeasible, which they say is something only the city, not the people, want. Indeed, the industrial landscape, with its railway sidings and cranes, does not look like a pedestrian area in its present form, and opening up the area would also require the resolution of basic safety issues (such as the safe passage of railway trains). Despite the difficulties, the proximity to the water is a huge attraction. And although it is an industrial site, the 'red warehouses' built in the 1920s have a certain aesthetic value and are a distinctive feature of the modern twentieth-century urban landscape of Komárno.

Topography of the Port

The harbor consists of two parts: an inner basin formed by closing the island for a bay and a quay directly under the city, in the middle of the main

[8] "Road widening and rest area at the 'spicc'" – Péter Vataščin, Új Szó, 10.2.2022.

[9] See *Strategický plán rozvoja verejného prístavu Komárno – Master Plan*, 2022. Available: www.portslovakia.com/master-plan-komarno, accessed 1.4.2024.

stream (Fig. 3). The two parts are separated by a sluice and a drawbridge, which was modernized in the late 1960s. The enclosed basin was created on the site of the old winter harbor in the 1920s. Four distinctive red-brick hall buildings (warehouses, built in 1924 and 1925), three of which can hold 600 wagons and one of which can hold 400 wagons (10 tons per wagon, Fig. 4).[10] The buildings are interesting because of their suspended roofs, which eliminate the need for central supporting walls, allowing the building to be used as a free-standing warehouse. Lighting in the halls is provided by roof-mounted skylights, which, on the whole, do not break up the enclosed mass effect of the building. On the long sides, there are rail loading platforms, indicating that, at the time of construction, transfers were typically between ships and rail. The size of the warehouses clearly exceeded the needs of the city, but it cannot be claimed that this capacity gave the city's trade a particular advantage to rival the capital's ports. The urban impact of the warehouses was greatly enhanced by the absence of large buildings in this part of Komárno. Moreover, the relatively large warehouses, which arose in front of the houses in the suburbs and were hundreds of meters long, were also visible from the road bridge. The bridge was also an international border crossing after 1918. In this way, the 'red warehouses' were not simply the 'first' buildings in the city, but also the first in Czechoslovakia.

The halls are still in use today, typically by small and medium-sized companies. In principle, rail transfers are possible, but trucks are usually used. Piece goods are hardly ever delivered by ship. As early as the period between the two wars, the port's traffic was dominated by bulk goods such as coal or grain, with iron ore playing a more important role later on. Since bulk goods were basically loaded, the huge cranes on the shore, erected in the 1970s and 1980s, were not adapted to the scale of the warehouses. More broadly, the second half of the twentieth century saw a change of scale in the cityscape around the red warehouses that makes them look relative small in actual townscape. The former one-story suburb was demolished in the 1970s and replaced by a ten-story residential block of flats, in a 'Bratislava-style' (Antoš 2015). To the West, the shipyard's assembly halls are still visible, again much larger than the red warehouses.

[10] The local representative of the company operating the Slovak ports (Verejné prístavy) provided me with information on the construction period of the buildings, based on the technical documentation.

Fig. 3. The map of the port of Komárno. There are two basins: the eastern part is the former winter harbor, later (after the Second World War) the industrial basin of the shipyard. Here you can also find the so-called "red warehouses". In the western part were the passenger ships, directly under the city center. The expansion of the port after the First World War took place here, but most of the buildings were built later. (Source: Klapka György Museum in Komárno. City map, no date, app. 1945–1950.)

Other facilities in the harbor were of modest design and typically used to manage access to the harbor. To the West, a single small guard-house stands beside the railway tracks. A somewhat more substantial entrance was constructed on the central axis of the port toward the town. Here, two office buildings stand opposite each other next to the entrance. An interesting feature of the pair of unadorned, early functionalist buildings is the semi-hexagonal porter's lodge, an innovative solution for its time. From the porter's booth, it was possible to check in and out without the porter having to leave his room.

Fig. 4. The "red storages" erected in the period after WWI (2021) (Photo by author)

The other side of the port is east of the bridge. In the parts closest to the town, before 1918, DDSG and MAHART (formerly known as MFTR, now MAHART Passnave) each had a small warehouse on the riverbank, directly under the bridge.[11] The railway tracks were presumably moved to the other side of the bridge after 1920. The loading dock and coal yard that can be seen today were completed in the early 1930s, after much of the park that had been there previously was cleared. Railway tracks were laid, and a relatively large space was also provided for service administration buildings. However, no warehouse was planned, since there was ample storage capacity in the buildings of the former munitions and later tobacco factories along the Váh-Danube.

[11] The Danube Steamship Company, founded in 1823, was the first steamship company in the Habsburg Empire. The predecessor of MAHART, the Hungarian River and Sea Shipping Company (MEFTER), was established by the Hungarian state in 1895, largely to counterbalance the market monopoly of DDSG (Tamáska 2016).

Most of the port's buildings were only built in the early 1960s. Accordingly, modern architectural forms predominate, with flat roofs and minimalist design, reminiscent of the functionalism of the 1920s and 1930s. Photographs taken in the early 1960s show the strong contrast between these modern port buildings and the late baroque, early neoclassical and eclectic townscape behind it. The freight wagons obscuring the one-story houses, the flat-roofed assembly halls and the crane towering over the church tower are iconic examples of the contrast between old and new, typical of the period (Tamáska 2020). Today, this visual tension can only be guessed at. Indeed, since the 1980s, the land between the port and the city has been occupied by relatively large, prominent buildings that almost completely obscure the old town (Fig. 5). This area is home to services that were 'pushed out' of the city center, but which people need: (back) office buildings, a building supply store and even a private clinic. On pre-World War I maps, there is only one building here, the steam bath. The surrounding land was designated as a development area in the 1930s to be used for office buildings and a swimming pool.

Fig. 5. The view of Komárno (2021).
In the foreground is the island where the first shipyard was built before the First World War. Here you can see some historical industrial buildings. In the back the port, definitely the back offices and warehouses of the edge between the town center and the port. (Photo by author)

No swimming pool was built, only a central office building for the port was completed before World War II, a single-story building with an extremely low-pitched roof. The other buildings in the area, however, were only completed decades later, following a rather heterogeneous architectural vision. This mixed-use area is bounded by a fence both toward the port and toward the city (the fence toward the port is also known as the customs fence). This 'lock' position of the land in both directions was once intended to create an 'intermediate industrial zone,' which could be accessed from the city, but also used the transport capacity of the port. From the 1980s onwards, however, the connection to the port became weaker and even disappeared, while the proximity to the city became more valuable in response to the relative density of shops and services that have settled here. Moving westward, the two fences converge, and only the road now fits under the fortifications. On the other side are the tracks to the port. At their end, the already mentioned filling station stands, dating back to the 1930s, but in its present form was built after 1989.

Closing Words: Waterfront Komárno

The wider twentieth-century trend was to gradually reduce the loading areas close to the city and shift traffic to new areas relatively far from the cities. The reuse of this freed-up land (brown fields) raises a number of architectural, economic, ecological and sociological issues. From an architectural point of view, the main questions are whether the new structures preserve the atmosphere of industrial heritage and how the new developments relate to the established rhythms of the waterfront. These seem to be aesthetic dilemmas, although they are underlined by economic considerations. Investors are, for the most part, interested in dense and high-density developments. Moreover, dense development has consequences not only for the urban landscape but also for urban ecology. Although the closing ports themselves cannot be considered automatically as ecologically valuable areas, sure they are greener as a developing area.[12]

[12] The issue of abandoned ports should be examined separately. Few plant species can colonize heavily contaminated soil. Species diversity is therefore relatively low, but in terms of their appearance, these abandoned areas can be described as green.

From a sociological point of view, the disappearance of the ports is part of a process of forming a new middle-class, in which the working classes are not only diminishing in number, but are also disappearing from the city's identifiable 'visible' spaces. The quayside scene so characteristic of the nineteenth century, with loaders and sailors at water-level and the middle classes of the city living their daily lives on the upper levels, separated but physically close to each other, is now only visible in the juxtaposition of hotel staff and passengers on the hotel ships. In general, the port operates in the shadow of the city's visual skyline, as if it were a separate settlement, with relatively few employees. And although the literature stresses that the transformation of ports, above all in the developed regions of the Atlantic, is typical, it is also necessary to explain why there is little evidence of typical waterfront scenes in Komárno.

Among the underlying reasons, it is certainly worth mentioning an aspect that has been neglected in the analysis so far, namely the border situation of Komárno (Sikos and Tiner 2007). During the first half of the twentieth century, Czechoslovakia developed the port not only for industrial, but also for defensive reasons. On the one hand, the elevated, reinforced quays formed a military line of defense, and on the other, they physically separated the Hungarian-affiliated town from the southern part of the country, which remained in Hungary. When the city was reunified under Hungarian rule between 1939 and 1945, the architect Virgil Bierbauer (1941), who was in charge of the development plan, argued that it was almost impossible to unite the twin cities, which had been separated for less than twenty years. Socialist industrial development made the disintegration even deeper. But the border situation is not the only explanation. Certainly, the inherited ownership structure of the port, which is not urban land, is a crucial factor. Conversely, the structural imbalance between the port and the city may also have played a role. Indeed, the company running the harbor may be partly right that few people would like to walk on the beach. Komárno is a small town with about 30,000 inhabitants, but its atmosphere seems even smaller. The 'aesthetic' consumption typical of large cities is not a major demand. In addition, it is not only the Danube coast that is underused; one of the largest fortresses in Europe, right next to the city center, also stands empty (Vajda 2019). By comparison, the much smaller bastions on the Hungarian side have been developed into tourist attractions in recent years, as has a prom-

enade on the southern side (albeit a not very attractive solution). There is therefore potential for cultural heritage development in the area, but this is currently concentrated on the southern side.

Port development also tends to be more active there. The river side port (toward the open water) of Komárom in Hungary has expanded in recent years. This expansion, together with the development of the port of Gönyű in Hungary, less than 30 kilometers away, shows that Danube shipping is still seen as a source of considerable economic potential. The port of Komárno, however, has neither closed nor been developed in recent decades. Its closure was only prevented by its strategic importance; no matter of how difficult the current situation may be, it remains the second largest river access in Slovakia. Development would require fundamental infrastructure changes (such as a high-capacity access road), which would require not only the willingness of investors to participate, but also the 'rethinking' of the city structure. The uniqueness of Komárno today lies precisely in the fact that it has survived and been preserved in its quintessential twentieth-century condition. From a research point of view, it is particularly valuable, since studying its example allows for a 'better understanding' of classical port situation, also in cities, where the economic changes had long ago erased the morphological imprints of ports in urban fabric.

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