BUDAPEST AND ITS REGION

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The top of the urban network of Hungary is occupied by the only major city in the Carpathian Basin with more than one million inhabitants, Budapest. Although Buda and Pest received city privileges as early as the 13th century, and the twin cities – with the exception of the Turkish occupation – were always the primary political, economic and spiritual-cultural centre of Hungary, the unification in 1872 and the subsequent rapid urbanisation ('urban boom') set in motion the transformation of Budapest into a modern metropolis of millions of inhabitants 1. The spatial extent of the city, its building stock, its economic function and the composition of local society have undergone many changes over the past century and a half, resulting in the development of a complex metropolitan space today.

Urban structure

The first step towards presenting the spatial structure of Budapest was the creation of 151 more or less homogeneous neighbourhoods from the basic units of the censuses, the so-called residential blocks. A more detailed picture could then be given by consolidating the data. Accordingly, the city was divided into seven zones based on the architectural and functional features 1. These zones reflect both the physical geographical conditions and the strict urban planning regulations applied since the unification of Buda and Pest. The main characteristics of each zone are as follows:

- 1. The City Centre, or inner city (downtown), which in the strict sense only developed on the Pest side and is demarcated today by the Nagykörút (i.e. Grand Boulevard). This is the primary hub for business,
- banking and trade, as well as tourism in Hungary. 2. Inner residential zone. A predominantly residential zone with 4-5-storey buildings surrounding the City Centre on both sides of the Danube, the formation of which took place largely before World War I. In terms of urban development, this zone may have suffered the greatest damage in the communist period. Many of the buildings have deteriorated severely owing to the lack of renovations. Local society is aged and its previous high status has declined. Since 1990, thanks to urban rehabilitation interventions, certain parts of the zone have been spectacularly renewed.
- 3. Outer apartment zone. Areas with a predominantly residential function on the edge of the inner residential zone or occasionally further afield (e.g. Újpest Centre, Wekerletelep) that are characterised by lower composition of the housing stock is mixed. (2-3-storey) buildings and by lower population den- 5. Industrial transitional zone ('rust belt'). An area in-



sity. The zone is not a contiguous area and it differs from the inner residential zone mainly in its development; the extent of slum development and the associated social decline were much smaller here in the decades following World War II.

4. Villa quarter in Buda. The Buda Mountains are a high-status area with detached and semi-detached housing. The elite villa quarter is barely a proper zone within the city, as it appears only on the Buda side. Its formation began at the end of the 19th century and development continued between the two world wars and then under communism. Following the collapse of communism, the expansion of the villa quarter accelerated at the expense of the remaining green spaces. As built-up areas are almost continuous, the



1 Budapest, the capital of Hungary, has many national landmarks (Buda Castle, Chain Bridge, Parliament)

corporated in Budapest before 1950 that was once mainly home to industrial, transport and warehousing activities, as well as other institutions (e.g. cemeteries) requiring space. By the end of the 20th century it had become a highly dilapidated 'under-used' area. The centre of the zone is also on the Pest side; contiguous former industrial areas can be found only in Kelenföld and in Óbuda on the Buda side.

- 6. Housing estates. A series of housing estates were built in Budapest predominantly after World War II, largely as greenfield investments. The housing estates do not form a contiguous zone, but rather have arisen between and among the zones of detached houses and industrial belts. The zone itself is not homogeneous. Based on their size and the construction technology used, several generations of housing estates can be distinguished. Housing estates consisting primarily of small houses with traditional brickwork were established along the inner residential zone, while large high-rise prefab housing estates dominate the outer parts of the city.
- 7. Zone of detached houses. Consisting predominantly of single-family homes, the zone is loosely built-up and rich in green areas. It includes the suburban settlements mostly with village-like appearance attached to Budapest in 1950. The major housing estate projects of the 1970s and 1980s particularly affected this zone. After 1990 a significant proportion of new housing constructions in Budapest was concentrated here, especially the 'residential parks' (i.e. gated communities) that emerged in great numbers.

2 AREA AND POPULATION OF THE FUNCTIONAL ZONES (2011)

	Area (sq. km)	Resident	Population density	Area	Resident population	
		population	(people/sq. km)	Distribution (%)		
City Centre	4.5	81,002	18,074.6	0.9	4.7	
Inner residential zone	14.6	266,411	18,284.7	2.9	15.4	
Outer apartment zone	11.2	81,799	7,327.0	2.2	4.7	
Villa quarter in Buda	85.7	162,225	1,892.0	16.9	9.4	
Industrial transitional zone	65.6	119,081	1,814.9	12.9	6.9	
Housing estates	45.9	523,053	11,397.5	9.1	30.3	
Zone of detached houses	280.7	493,719	1,758.6	55.4	28.6	
Budapest in total	508.2	1,727,290	3,398.8	100.3	100.0	
Hungary in total	93,023.0	9,937,628	106.8			



According to the census of 2011, the relative significance of the various zones in terms of area and population varies widely 2. Two zones – the detached housing zone and the housing estates – together account for about 60% of the area and population of Budapest. The share of the other zones is significantly lower.

Population

Population size and density

The population of Budapest was 1 million 729 thousand people in 2011, having decreased by nearly 49 thousand over the preceding ten years. Compared to the population maximum (2 million 59 thousand) in



1980, the city lost 330 thousand inhabitants, much more than, e.g. the population of Debrecen, the second largest city in Hungary. The decrease between 2001 and 2011 is roughly in line with the national average, thus 17.4% of the population of Hungary lived in Budapest at both times. The population decline was caused by natural decrease, as the migration balance was positive for the city. Changes in the population showed significant differences among the districts: only seven of the 23 districts had an increase, and decrease was typical mainly in the inner districts 3.

The population decline was necessarily accompanied by a decrease in population density. The population density of Budapest was 3,921 people/sq. km at

it was only 3,293 people/sq. km, which is more than 30 times the national average (107 people/sq. km). Population density is also characterised by marked spatial differences 4. Among them, the most striking is the significant difference between the Budapest of the pre-1950 period and the outer districts attached to it at that time. Population density in the inner districts (Erzsébetváros: 26,839 people/sq. km) is well above the city average, but the population density of the loosely built outer districts sometimes shows values typical for villages (Soroksár: 519 people/sq. km).

Age structure, household composition

The ageing of the population in Budapest, which began many decades ago, continued in the early 21st century. As a result, the city's population age structure is even less favourable than the national average. The proportion of children (0-14 years old) decreased only slightly in the city (2001: 12.8%, 2011: 12.2%), but there were significant spatial differences behind the averages (maximum: 19.2%, minimum: 5.5%). The most striking is that the proportion of children in and around the City Centre is less than 10% 5 2. This age structure is significantly different in the periphery of the city, where in some neighbourhoods the proportion of children is much higher than the average.

The proportion of the retired-age population (aged 65 or older) increased between the last two censuses (2001: 17.6%, 2011: 18.8%). In the foreseeable future, therefore, one in five residents may be in this age group. The spatial distribution of those aged 65 or older is characterised by a duality: their share is higher in Buda than in Pest, and the high concentration of elderly people can be found largely on the Buda side 6. In this respect, the sole exceptions were some smaller neighbourhoods elsewhere in the city, including several housing estates. This indicates that the ageing process has now reached areas in the city where the population was typically youthful a few decades ago.

The age structure of the population can also be examined by comparing the relative proportions of children and the elderly. In 2011, there were 208 elderly people living in Budapest per 100 children, and this value is much higher than the national average. The situation is particularly acute in the most densely the time of the population peak in 1980, while in 2011, populated inner core of the city, where the ageing in-







2 The inner parts of Budapest have ageing populations and are popular with tourists

dex is uniformly above 208, but there are districts where the number of elderly people is five times higher than that of children 7. Evidently, there are also neighbourhoods where children outnumber elderly people, but such areas are increasingly rare.

The ageing of the population of Budapest became more acute between 2001 and 2011. This is clearly in-





dicated by the fact that there were 138 elderly people per 100 children in 2001, but ten years later there were 208. Changes in the ageing index varied within the city. A higher than average increase could be observed in the peripheral areas of Pest and in several smaller neighbourhoods in other parts of the city 8. At the same time, in a few areas the index decreased. Neighbourhoods with more youthful populations in 2011 could be found in two belts: one lay along the axis of Békásmegyer–Pestszentimre and the other in the central part of Buda near the Danube.

The age structure of the population of Budapest can also be analysed according to the housing conditions and living environments. In the age composition of the City Centre, which has fewer than 80 thousand inhabitants, the very small proportion of children (6.9%) and the higher than average proportion of elderly people (21.1%) are particularly striking 9. The age structure of the inner residential zone is more favourable, as shown by the high proportion of young people aged 15–39 (42.3%). The age structure of the villa quarter of Buda is quite specific: a higher than average proportion of children (14.4%) is coupled with a high proportion of elderly people (24.2%). As a result, however, the proportion of people of working age is relatively low. The number of people living in the outer apartment zone is practically the same as in the City Centre, but the age structure of the population is more favourable here, given the higher proportion of children (12.1%) and the lower proportion of elderly people (19.1%). The most youthful age structure could be observed in the rust belt. More than 13% of the nearly 120 thousand inhabitants were children in 2011, at which time the proportion of elderly people was just 12.5%, by far the lowest of all zones. Uniquely among the zones of Budapest, the ageing index here is below 100. A large part of the residents of the city live in the housing estates (30.3%), where the age distribution is closest to the average in Budapest. This indicates that the housing estates, once youthful in age structure, are also experiencing ageing populations. Based on pop-

9 AGE STRUCTURE OF THE POPULATION BY ZONES (2011)												
	Age 0–14	Age 15-39	Age 40-64	Age 65-74	Age 75-x	Total	Age 0-14	Age 15–39	Age 40-64	Age 65-74	Age 75-x	Total
			Num	ber					Propor	tion %	•	
City Centre	5,610	33,558	24,795	7,991	9,048	81,002	6.9	41.4	30.6	9.9	11.2	100.0
Inner residential zone	24,789	112,693	78,743	24,210	25,976	266,411	9.3	42.3	29.5	9.1	9.8	100.0
Outer apartment zone	9,856	32,819	23,466	7,781	7,877	81,799	12.1	40.1	28.7	9.5	9.6	100.0
Villa quarter in Buda	23,363	50,566	49,033	21,581	17,682	162,225	14.4	31.2	30.2	13.3	10.9	100.0
Industrial transitional zone	15,561	53,183	35,386	8,137	6,814	119,081	13.1	44.7	29.7	6.8	5.7	100.0
Housing estates	60,240	194,960	170,146	55,944	41,763	523,053	11.5	37.3	32.5	10.7	8.0	100.0
Zone of detached houses	71,218	163,142	169,895	52,971	36,493	493,719	14.4	33.1	34.4	10.7	7.4	100.0
Budapest in total	210,637	640,921	551,464	178,615	145,653	1,727,290	12.2	37.1	31.9	10.4	8.4	100.0
Hungary in total	1,447,659	3,403,983	3,408,866	946,815	730,305	9,937,628	14.6	34.3	34.3	9.5	7.3	100.0



ulation share, the zone of detached houses is not far behind the housing estates (28.6%). Its age structure, however, is somewhat more favourable, mainly due to the higher proportion of children (14.4%) 3.

The extremely high proportion of *single-person households* in Budapest is astonishing: 41% in 2011, compared to only 29% on average in other urban areas in Hungary. In 2011, 61.5% of single-person house-holds were women, while 44% of single-person house-holds were people over the age of 60. However, if the established trend continues, the proportion of young adults living alone (singles) will continue to increase in the future. The proportion of single-person house-holds exhibited a general decrease from the inner areas towards the urban periphery 10.

An overview of household size in the various zones reveals that the proportion of single-person households was highest in the inner residential zone and the City Centre and lowest in the zone of detached houses 11. The proportion of households with four or more people exhibits a reverse spatial distribution. Thus, the proportion of this type of household is lowest in the inner residential zone and in the City Centre and highest in the zone of detached houses.

Ethnicity, religion

There are significant obstacles to studying ethnicity and religious affiliation. The first difficulty is that the available data stem from censuses carried out only every ten years. A greater problem is that ethnic and religious ties constitute sensitive personal information that citizens are not obliged to declare. Consequently, there were a significant number of no responses in the census in 2011.

In 2011, more than 20 thousand people in Budapest, or 1.2% of the city population, self-identified as *Roma*. There is good reason to assume that the actual number of Roma is much greater, but in terms of their spatial distribution, only the census data could be relied upon. Based on such data, the majority of Roma people live on the Pest side, while on the Buda side their number and share is small. On the left bank of the Dan-



3 The time-honoured Wekerletelep estate still preserves its status (District XIX)

11 STRUCTURE OF HOUSEHOLDS BY ZONES (2011)										
	All households	Single-person households	Households with four or more people	Number of house- holds where the head of the household is employed	Single-person households	Households with four or more people	Number of house- holds where the head of the household is employed			
			Number		Proportion %					
City Centre	45,531	22,773	2,674	25,087	50.0	5.9	55.1			
Inner residential zone	145,275	75,430	11,109	82,356	51.9	7.6	56.7			
Outer apartment zone	40,354	18,912	3,806	23,353	46.9	9.4	57.9			
Villa quarter in Buda	74,875	29,777	10,453	42,218	39.8	14.0	56.4			
Industrial transitional zone	55,338	25,135	6,460	34,806	45.4	11.7	62.9			
Housing estates	253,088	102,728	29,376	140,731	40.6	11.6	55.6			
Zone of detached houses	205,247	64,360	41,343	114,617	31.4	20.1	55.8			
Budapest in total	819,708	339,115	105,221	463,168	41.4	12.8	56.5			
Hungary in total	4,105,708	1,317,138	105,221	2,102,512	32.1	19.4	51.2			

ube (the Pest side), they are overrepresented in neighbourhoods lying in the inner residential area beyond the Nagykörút, especially in the impoverished districts of Terézváros, Józsefváros and Ferencváros. The Roma population share is also higher in Csepel in the city's rust belt and in certain areas of Kőbánya, Angyalföld and Újpest 12.

In total, less than 750 thousand of the approximately 1.73 million inhabitants of Budapest can be considered *religious* because they declared ties to a specific religious denomination. Although there are differences in the spatial distribution, these are not large. Indeed, the difference between the smallest and the highest values is not even double **13**. Pest and Buda differ in this field too: the proportion of the religious population is noticeably higher in the latter.

Level of education, employment

The level of education of the population in Budapest





has been improving for a long time, but the real breakthrough occurred in the group of *higher education graduates*. In 1960, only 6.8% of people aged 25 years or older had a higher education degree. The share was 19% in 1990 and 34.1% in 2011. In terms of the spatial differences in the proportion of those with higher education degrees, the difference between the Pest and the Buda sides is the most striking: the proportion of the population with a higher education degree is much greater than the average in broad areas of Buda, while this category is limited to small areas in Pest 14.

The proportion of people with a higher education degree increased from 23.8% to 34.1% between 2001 and 2011. This spectacular improvement, however, did not result in a noticeable change in the spatial distribution, although the proportion of people with a higher education degree increased more in districts on the Pest side 15. However, this did not affect major contiguous areas, but rather appeared in a mosaic pattern,





associated mostly with newly built residential areas (e.g. residential parks).

The level of education of the population can be expressed by the number of school grades successfully completed. This is an important indicator, especially for the working-age population, as it indicates the 'utility' of this population in the labour market. Budapest is above the national average in this respect as well: the indicator was 12.2 in 2001 and 13.3 in 2011. This means nothing less than that the average working-age person in Budapest had completed the grades necessary for the school-leaving examination. However, there are significant spatial differences behind the impressive overall average in the city, with differences of up to two or three grades between the villa quarter in Buda and some districts in South Pest 16. Since the value of the education indicator in question is most influenced by the proportion of people with a higher education degree, the spatial distribution of the two indicators is quite similar.

There are also significant differences in the education level of the population among the seven zones of Budapest 17. The highest proportion of those completing no more than eight grades of school is 17.4%, with the higher values being mainly in the housing estates and in the rust belt. The opposite extreme is represented by the villa quarter in Buda, where the corresponding proportion is only 8%. As many as 70% of residents over the age of 18 in Budapest have a school-leaving certificate. In this respect, the share in the villa quarter in Buda is particularly high (88.4%), while the other extreme was represented by the city's outer zones (industrial transition zone, housing estates, areas with detached houses). In terms of the proportion of people with a higher education degree, the villa quarter in Buda was again at the front, where more than 60% of the population aged 25 years or older had a higher education qualification. Even the City Centre (42.4%) fell far short of the above value, not to mention the peripheral areas.

The *activity rate* indicates the combined share of employed and unemployed people aged 15–74, the working-age population in the wider sense. The rate was 59% in 2001 and 63% in 2011. Spatial differences in the activity rate are mostly related to the age composition of the population. Its value is high in districts where the proportion of working-age people is also relatively high 18. Such areas are found mainly on the Pest side, where there are housing estates with a higher number of people of active age and renewed residential neighbourhoods belonging to the inner residential zone. The increase in the activity rate between 2001 and 2011 was differentiated spatially. The rate increased in almost all districts. In some cases, however, activity decreased, mainly due to the ageing of the population.



17 DISTRIBUTION OF THE POPULATION ACCORDING TO EDUCATIONAL ATTAINMENT **BY ZONES (2011)**

	Primary school graduates and those not finishing primary school	Graduates of secondary school	University, college graduates	Primary school graduates and those not finishing primary school	Graduates of secondary school	University, college graduates
		Number		Proportion in t aged 18 years	Proportion in the population aged 25 years and older (%)	
City Centre	11,014	56,387	18,696	14.9	76.2	42.4
Inner residential zone	39,273	173,407	56,430	16.6	73.4	40.6
Outer apartment zone	10,749	52,588	15,196	15.4	75.2	40.9
Villa quarter in Buda	10,842	119,435	59,195	8.0	88.4	60.8
Industrial transitional zone	21,081	64,291	11,434	21.0	64.0	31.0
Housing estates	86,012	293,454	82,600	19.1	65.2	25.5
Zone of detached houses	76,842	271,854	64,105	18.8	66.7	29.3
Budapest in total	255,813	1,031,416	307,656	17.4	70.0	34.1
Hungary in total	2,347,136	3,990,859	888,345	28.8	49.0	19.0



The unemployment rate in Budapest was 6.3% in the population aged 15-64 in 2001, rising only marginally to 6.5% ten years later. There was no meaningful shift in the spatial distribution either. Unemployment was well below average in the districts of Buda with a highly educated population, with full employment being realised in some areas 19. Meanwhile, unemployment was higher than average on the Pest side in residential areas beyond the Nagykörút, as well as in former suburbs characterised by a lower level of education.

In terms of employment, conditions in Budapest are favourable on all indicators in a national comparison. In addition to activity rates above the national average, the unemployment rate has also developed favourably. A positive feature is the absence of large differences between the zones in terms of either the activity rate or the unemployment rate 4.





Social characteristics

The International Standard Classification of Occupations (ISCO) can be used to study the occupational structure and the social position of the workforce. In this classification system, the emphasis is placed on the performed activity, which – although closely related to it - does not correspond fully with the qualifications of an employee. Some of the ten categories (major groups) identified by ISCO-08 were aggregated with a view to distinguishing between occupations requiring the highest qualifications and skills and those that can be performed with the lowest level of education.

As a first step, major group 1 (Managers) and major group 2 (Professionals) were merged to form 'elite workers'. They have the highest average level of education and income. Their combined share in employment reached 26% in 1990, rising to 33.8% in 2011. Their geographical distribution within Budapest is





4 Many new jobs have been created in areas of urban renewal (along the Danube in Ferencváros, District IX)

marked; most of them live in the Buda Mountains, in the city centre of Pest in the narrower sense, as well as in some high-status residential areas 20. In the large high-rise housing estates and in traditional workingclass neighbourhoods (e.g. Csepel, Kőbánya), their share is below the city average.

At the opposite end of the socio-occupational scale, major groups 7 (Craft and Related Trades Workers), 8 (Plant and Machine Operators and Assemblers) and 9 (Elementary Occupations) were also merged. They constitute the lower socio-economic group. Their combined share in employment was greater than 38% in 1990, but it fell to 24.1% in 2001 and 19.9% in 2011, as a result of economic restructuring and the gradual expansion of knowledge-intensive sectors. Their geographical distribution coincides with the low-status residential areas 21. Their proportion is above average in some residential areas near the City Centre, in many neighbourhoods of the rust belt and in certain southern and eastern parts of Budapest.

The gradual transformation of the socio-spatial structure of Budapest is indicated by the fact that between 2001 and 2011 the proportion of high-status groups on the Pest side increased mainly in the upgraded parts of the inner residential zone and the industrial transition zone (e.g. Angyalföld, Outer Ferencváros, Kőbánya). Elite areas in Buda continued to expand north and south, and they were joined by a few exclusive residential parks 22 developed most recently on the peripheral areas of Pest.

There are also significant differences in the distribution of employees at the level of the larger urban zones 23. The share of employees in industry and building industry in both the zone of detached houses and the rust belt is high, at more than 17%. Unsurprisingly, their share is lowest among the active earners of the villa quarter in Buda (11.3%). The ratio of employees in the service sector is highest in the Buda Mountains, but the City Centre is only a little behind it. In essence, this is reflected in the spatial distribution of the major occupational groups as well. The combined share of





5 The Corvin-Szigony neighbourhood in the central part of Józsefváros (District VIII) has been a symbol of urban renewal in Budapest in recent years

the high-status elite groups reached 59.1% in the villa quarter of Buda in 2011. In terms of high social status, the villa quarter of Buda is followed by the City Centre with 42.5%. The share of high-status employees is lowest in the zone of housing estates with 24.7%. A slight social erosion of the housing estates is indicated by the fact that this figure was 25.7% in 2001. Thus, although the proportion of highly skilled employees in the city as a whole increased from 32.1% to 33.8% between 2001 and 2011, a decrease was nevertheless registered in the zone of housing estates. The most favourable shift occurred in the rust belt, where the proportion of high-status people rose from 22.4% to 30.3% between the two censuses. Therefore, socio-economic upgrading can also be detected in the rust belt, reflecting the emergence of new upmarket housing in this area.

The proportion of low-status groups is the highest in the housing estates with 23.2%, but the rust belt is not far behind (22.7%). However, the two major urban zones evolved in different directions between the last two censuses. While the measured value was 25.8% in the housing estates in 2001, the rust belt worked off its previous disadvantage. Based on the above, in socio-economic terms the housing estates can be considered losers of the transition, while certain regenerated neighbourhoods in the rust belt and in the inner residential zone have experienced a spectacular increase in status.

Housing market

Age structure of the housing stock

In general, the housing stock of Budapest becomes younger as one moves away from the City Centre. This is interrupted only in the centres of the former suburbs (Újpest, Kispest, Pesterzsébet, etc.) 24. Nearly a third of the housing stock (31.7%) was built before 1945. This proportion, which is significantly above the national average (18.6%), reflects the historical development of Budapest and its rapid growth after the Austro–Hungarian Compromise (1867). The proportion of old houses is the highest (90.6%) in the City Centre, but the average in the inner residential zone is also above 70%. This poses a major challenge for the districts concerned, both from a technical and social point of view. Within the zone, newer dwellings (those built since 1990) can only be found in larger numbers in the core areas of urban rehabilitation (Central Ferencváros, Central Józsefváros, etc.) 5.

Dwellings built between 1945 and 1990 constitute more than half of the housing stock (53.2%) of Budapest. Between 1945 and 1960, mostly war-damaged buildings were reconstructed in Budapest. Only from the 1960s were new dwellings built in larger numbers. 'Socialist' housing construction peaked in the 1970s, thanks to prefab technology. Already four 'housing factories' were operated in Budapest in 1975 with a capacity of 15 thousand dwellings per year 6. Accord

23 EMPLOYMENT CONDITIONS BY ZONES (2011)										
	Employees in services	Employees in industry, construction industry	ISCO 1+2	ISCO 7+8+9	Employees in services	Employees in industry, construction industry	ISCO 1+2	ISCO 7+8+9		
		Nun	nber		Proportion (%)					
City Centre	33,691	4,419	16,231	5,793	88.1	11.6	42.5	15.2		
Inner residential zone	107,797	15,526	49,542	20,673	87.1	12.5	40.0	16.7		
Outer apartment zone	31,718	4,958	14,891	6,008	86.3	13.5	40.5	16.3		
Villa quarter in Buda	60,037	7,715	40,245	5,362	88.2	11.3	59.1	7.9		
Industrial transitional zone	46,093	9,542	16,892	12,686	82.5	17.1	30.3	22.7		
Housing estates	200,707	38,801	59,328	55,677	83.6	16.2	24.7	23.2		
Zone of detached houses	172,943	37,506	64,313	47,528	81.8	17.7	30.4	22.5		
Budapest in total	652,986	118,467	261,442	153,727	84.3	15.3	33.8	19.9		
Hungary in total	2,645,062	1,114,811	824,954	1,410,372	67.2	28.3	21.0	35.8		







6 The high-rise Havanna Estate in District XVIII of Budapest was completed in 1978 with pre-fab technology

ingly, the spatial focal point of housing construction between 1945 and 1990 was in the housing estates of the 1970s and 1980s 25. The late communist period brought about development in the construction of both single-family homes and condominiums, as a result of rising living standards and concessions to the private sector. These constructions were concentrated mostly in the villa districts of Buda (districts II and XII) and the traditional zones of detached housing on the Pest side.

As generally in Hungary, so in Budapest a radical transformation took place in the functioning of the housing market after 1990. The number of dwellings built by the state fell to a fraction of the previous figure. At the same time, a part of the population moved to the suburbs (suburbanisation), which significantly reduced demand for housing in the inner areas of the city. Between 1990 and 2011, a total of 118 thousand new dwellings were built, which is only 43% of the sum in the previous two decades. In the spatial distribution of dwellings built after 1990, two basic features can be observed ²⁶. First, most of the new detached houses and apartments, as well as the residential parks, were built in the outer areas of the city in the 1990s (e.g. Máriaremete, Testvérhegy, Táborhegy). Second, the rehabilitation of the inner residential zone (Central Ferencváros, Central Józsefváros) and the former industrial rust belt (Kelenföld, Angyalföld) accelerated after the turn of the millennium. More and more new dwellings were built in the upgrading areas, often in the form of exclusive homes for wealthier inhabitants.

The oldest dwellings (those built before 1919) and the newest ones (built since 1990) have nearly the same share (15-17%) in the housing market 27. Most of the old dwellings remain concentrated in the City Centre and in the compact, inner residential neighbourhoods. The proportion of new (post-1990) dwellings is highest in the rust belt, where they account for about a third of the housing stock. This is the result of the regeneration of the former industrial zone and the associated functional changes. Plots in the rust belt with good



27 AGE STRUCTURE OF INHABITED DWELLINGS BY ZONES (2011)

	Built before 1919	Built between 1919 and 1945	Built between 1946 and 1990	Built between 1991 and 2011	Total	Built before 1919	Built between 1919 and 1945	Built between 1946 and 1990	Built between 1991 and 2011	Total
		Nur	nber of dwe	llings		Proportio	on of dwe	llings (%))	
City Centre	32,285	6,969	2,099	1,957	43,310	74.5	16.1	4.9	4.5	100.0
Inner residential zone	64,224	34,214	24,339	16,895	139,672	46.0	24.5	17.4	12.1	100.0
Outer apartment zone	9,052	10,831	12,099	7,432	39,414	22.9	27.5	30.7	18.9	100.0
Villa quarter in Buda	4,772	13,529	41,272	13,045	72,618	6.6	18.6	56.8	18.0	100.0
Industrial transitional zone	9,285	11,705	14,218	18,529	53,737	17.3	21.8	26.4	34.5	100.0
Housing estates	1,220	2,900	231,327	9,847	245,294	0.5	1.2	94.3	4.0	100.0
Zone of detached houses	11,599	37,548	93,390	50,752	193,289	6.0	19.4	48.3	26.3	100.0
Budapest in total	132,437	117,696	418,744	118,457	787,334	16.8	14.9	53.2	15.1	100.0
Hungary in total	306,210	424,089	2,562,556	619,574	3,912,429	7.8	10.9	65.5	15.8	100.0

28 CHANGES IN THE NUMBER OF INHABITED DWELLINGS AND THEIR OWNERSHIP **BY ZONES (2011)**

	Number of inhabited dwellings	Changes in the number of inhabited dwellings 2001–2011	Number of non-inhabited dwellings	Number of municipally owned dwellings	Proportion of inhabited dwellings (%)	Changes in the pro- portion of inhabited dwellings 2001–2011 (2001=100%)	Proportion of non-inhabited dwellings (%)	Proportion of municipally owned dwellings (%)
City Centre	43,310	2,304	10,941	2,961	79.8	5.6	20.2	6.8
Inner residential zone	139,672	4,328	34,197	12,310	80.3	3.2	19.7	8.8
Outer apartment zone	39,414	5,200	6,233	2,407	86.3	15.2	13.7	6.1
Villa quarter in Buda	72,618	5,201	13,831	1,082	84.0	7.7	16.0	1.5
Industrial transitional zone	53,737	12,870	10,723	7,319	83.4	31.5	16.6	13.6
Housing estates	245,294	1,681	20,927	9,880	92.1	0.7	7.9	4.0
Zone of detached houses	193,289	18,962	21,219	4,436	90.1	10.9	9.9	2.3
Budapest in total	787,334	50,546	118,071	40,395	87.0	6.9	13.0	5.1
Hungary in total	3,912,429	221,656	477,873	106,300	89.1	6.0	10.9	2.7

accessibility (e.g. metro line) and a favourable location (e.g. Danube embankment) attracted housing investments due to their relatively lower prices 7.

Housing tenure, number of rooms

The number of inhabited dwellings in Budapest increased by more than 50 thousand between 2001 and 2011. Growth was most dynamic in the rust belt (31.5%) and the outer apartment zone (15.2%) 28. In both areas, growth can be linked to urban renewal, the regeneration of formerly run-down areas and the functional change. In contrast, the number of inhabited dwellings barely increased in the City Centre, the inner residential zone and in the zone of housing estates after the turn of the millennium. Demand for the functional conversion of flats (e.g. into offices and private accommodation) and the amalgamation of smaller dwellings was greatest in the inner residential neighbourhoods.

ROPORTION OF INHABITED MUNICIPALLY-OWNED DWELLINGS

(%, 2011)

Over 15.0

10.0–15.0

5.0- 9.9

Under 5.0

According to ownership, 93.3% of inhabited dwellings in Budapest were owned by individuals in 2011, 5.1% were owned by municipalities and 1.6% by other institutions (e.g. Hungarian State Railways). Owner occupied housing dominates in all districts of Budapest, and its proportion exceeds 96% in the outer districts, which decreases to 87-88% in the inner districts that make up the core of the city.

Before 1945, the extent of the public (social) housing sector in Budapest was negligible. Thereafter, however, the size of the public (i.e. state-owned) housing sector increased dynamically due to nationalisations of tenement houses (which largely affected the inner residential neighbourhoods) and the launch of public housing construction programmes. At the end of the communist period, 410 thousand dwellings, 51.9% of the housing stock, were state-owned.

State-owned dwellings passed into municipal ownership in 1990, and many of them became privately





7 The exclusive Marina Bay Residence in the former industrial zone of Angyalföld near the Danube (District XIII)

owned through privatisation in the following years. In 2001, there were still 64 thousand dwellings in municipal ownership, but by 2011 the number had decreased to 40 thousand. This is regrettably low compared to other major European cities. The spatial distribution of municipally owned dwellings is very uneven 29. Most of them are concentrated on the Pest side in the inner residential zone (30.4%) and in the housing estate zone (24.5%).

After the collapse of communism, and especially after the turn of the millennium, the composition of the city's housing stock by the number of rooms changed significantly. The number and proportion of singleroom dwellings decreased over the period. This is explained by the fact that newly constructed dwellings were mostly larger with several rooms, while urban rehabilitation resulted in the demise of smaller, single-room flats. While one in five inhabited dwellings had only one room in Budapest in 2001, by 2011 their share fell to 17.1%. Still, it was almost twice the national average. The proportion of single-room apartments is highest in the inner residential zone especially on the Pest side 8 and in the rust belt. Most of the single-room dwellings are in older buildings with lower levels of comfort and prestige <u>30</u>.

Housing conditions, residential mobility, urban renewal

Residential floor space per 100 inhabitants is in many ways a measure of 'well-being'. The advantage of the Buda side compared to Pest is very striking in this regard 31. However, the Pest side is not homogeneous either: in view of the relatively large average floor space of dwellings in the inner areas of the city and the high share of households with one or two (elderly) people, the floor space per resident is high, and the same is true for the peripheral zone with detached houses. At the same time, in neighbourhoods between the two zones and especially in the housing estates, the average floor space per resident is much smaller.

The occupancy rate of dwellings in Budapest, as in other major cities around the world, is considerably less than 100%. Indeed, only 787 thousand of the 905 thousand dwellings in the city (i.e. 87% of the total housing stock) were inhabited in 2011. As many as 118 thousand houses were used for other purposes



8 Dwellings with one room and a kitchen are common in the inner residential zone even today (Józsefváros, District VIII)



32 PROPORTION OF NON-INHABITED DWELLINGS (%, 2011) Over 18.0 13.0-18.0 8.0-12.9 Under 8.0



(e.g. as offices, doctor's offices, guest accommodations) or were vacant. The number and proportion of noninhabited dwellings has been steadily increasing in Budapest since 1990, and their share is extremely high particularly in the City Centre. Nearly 40% of them are concentrated in the City Centre and the inner residential zone 32. In these zones, one in five dwellings is used for a purpose other than habitation. The high share of such dwellings in areas close to the Danube on the Buda side (surroundings of Várhegy [Castle Hill] and Gellérthegy) is particularly noteworthy. In contrast, the proportion of non-inhabited dwellings is lowest in the housing estates (7.9%).

The proportion of residents moving into their current dwellings between 2001 and 2011 indicates the dynamics of residential mobility in each neighbourhood after the turn of the millennium 33. The value of the indicator is high in areas where many new dwellings have been built in recent times, either through the construction of new housing (e.g. residential parks, semi-detached houses) or through the rehabilitation of the existing stock. The map shows how the formerly industrial areas along the Danube axis as well as the upgrading residential districts of the Pest side near the City Centre and other rapidly changing neighbourhoods have become increasingly attractive to new residents.

In practical terms, this is also reflected by the map showing the locations of urban rehabilitation and dynamic urban development. A large proportion of the renewed areas lie in or near the belt along the Danube - as the main axis of the city - close to the centre $\frac{34}{34}$. There were many under-used areas here (e.g. the location of today's Infopark in Lágymányos) and areas that had lost their previous industrial function (e.g. Graphisoft Park and Marina Beach). Urban renewal resulted in a large-scale transformation in the inner residential zone (e.g. Central Ferencváros, Central Józsefváros) and in the rust belt (e.g. Angyalföld or Kelenföld). The renovation of outdated residential areas, which had previously declined, with public and private money, has been dynamic over the past two decades, resulting in a spectacular renewal and population change (gentrification) of the affected neighbourhoods.

Budapest agglomeration

Historical development and spatial structure of the agglomeration

The current spatial structure of the Budapest agglomeration is the result of a long historical development. This region played a prominent role in the spatial structure of Hungary from an early stage as a central, densely populated area of the Carpathian Basin. The medieval

long-distance trade routes crossed each other here, at the intersection of Pest and Buda, and the lines of the Carpathian Basin railway network, which was built in the mid-19th century, met at this junction (see Chapter VII, History of Settlement). This resulted in an above-average population density and created the conditions for the development of close links among the municipalities. The combined population of Pest, Buda and Óbuda, which later formed the core of Little Budapest, reached 270 thousand at the time of the Austro-Hungarian Compromise (1867). The unification of the three towns in 1872 essentially acknowledged the existence of the early agglomeration ³⁵. The new capital city underwent a spectacular urban boom in the last third of the 19th century, and its population tripled to 880 thousand by 1910. However, urban development did not stop at the boundaries of the city; the growth of suburbs also occurred. Consequently, their population reached 200 thousand by 1910.

Following the redrawing of the borders under the Treaty of Trianon, the development of Hungary and Budapest halted. Even so, the city's outer suburbs became the fastest growing group of municipalities in the country. The process of agglomeration was reflected not only in population growth rates above the rural average but also in rapid occupational re-stratification and in the strengthening of connections with the capital. Some industrial suburbs (e.g. Újpest, Kispest, Pesterzsébet) had considerably more than 50 thousand inhabitants at the time of the census in 1949.

After World War II, the agglomeration developed under completely new circumstances. On 1 January 1950, Greater Budapest was formed and 23 municipalities, including 7 towns and 16 villages, were attached to the city. After this 'consolidation' in the former agglomeration zone, a new agglomeration belt gradually evolved outside the administrative boundaries of Budapest in the 1950s and 1960s. The 'forced growth' of



35 TERRITORIAL DEVELOPMENT OF THE BUDAPEST AGGLOMERATION







9 Terrapark, an office park in Budaörs offering high-quality job opportunities

the suburbs was a strange peculiarity of the communist period. Owing to the introduction of a ban, inside Budapest, on in-migration from the countryside, the population of the commuter settlements surrounding Budapest (e.g. Vecsés, Gyál and Érd) started to increase from the 1950s. This trend was reinforced by the availability of cheaper properties in such settlements. From a statistical-planning point of view, the National Concept for Settlement Network Development (OTK) of 1971 officially recognised the existence of a 'new agglomeration', identifying 44 suburban municipalities as part of this agglomeration. However, this zone did not receive any special status and it had no planning rights. The current boundary of the Budapest agglomeration was set by Government Decree No 89/1997, whereby originally 78 municipalities were listed as belonging to the agglomeration. This number has since increased to 80 due to the administrative division of two settlements.

The nature of connections and division of labour between Budapest and its suburbs entered a new stage of development after the collapse of communism. With the emergence of a free and unrestricted real estate market, it became possible for wealthier people who wanted to live in detached houses, to move to the suburbs. As suburbanisation progressed, many firms also moved to the suburbs. The urban sprawl around Budapest resulted in significant spatial transformations. An important change was the 'inhabitation' of the natural landscape, and the re-zoning and building up of previously cultivated or so-called garden plots 36. According to our calculations, between 1990 and 2012, the extent of artificial surfaces for housing, economic and leisure purposes in the 80 municipalities of the Budapest agglomeration increased by 145 sq. km (i.e. by more than 20%). The expansion of artificial surfaces around Budapest took place mainly at the expense of former arable land, vineyards and orchards.

Alongside the spatial rearrangement of the population, a spectacular increase in production (industrial) and service functions took place in the Budapest agglomeration in the period before and after the turn of the millennium. However, the relocation of companies to the area reflected investments from outside (in many cases from abroad) rather than primarily the 'suburbanisation' of Budapest-based businesses. The economy of the agglomeration zone is typically organised into functionally highly specialised spaces 37. Regarding these, the growth pole around Budaörs and Törökbálint has particular significance. Here, at the western gate of Budapest and the junction of three motorways, there was a profound economic transformation in the 1990s, one that resembled the development of the American 'edge cities' (see Chapter VIII) 9. Economic development was sometimes able to dynamise traditional centres, the best example of which is Gödöllő. The logistics (specialising in warehousing and



distribution, wholesale) and industrial zone around Szigetszentmiklós-Dunaharaszti-Alsónémedi represents a completely new type of spatial structure. By virtue of the logistical investments that have been made in settlements along the M0 motorway in recent years, the largest logistics centre of the Carpathian Basin is under formation in the southern part of the city, which is already an important location for the trade of goods between Western Europe and the Balkans and the Middle East. Further novel components of the spatial structure are the new commercial centres (e.g. in Budakalász, and along the sections of motorways M3 and M5 leading out of Budapest) and the new business clusters that have emerged as a result of the construction of the eastern section of the M0 and the ongoing development of Budapest airport.

Society in the agglomeration

Based on the boundaries identified in 1997, the population of the agglomeration has fluctuated around 2.5 million ever since 1990 (i.e. one in four of the country's inhabitants lived here). The population numbers remained relatively stable even while the population of Budapest decreased from more than 2 million in 1990 to 1 million 729 thousand in 2011, as many residents moved out of the city to the suburbs. During the same period, the population of the agglomeration rose from 566 thousand to 805 thousand. All this means that the relative population weight of the suburban zone within the metropolitan region increased from 22% to 31.8% between 1990 and 2011.

The population steadily declined in most districts in Budapest, with growth occurring in only three districts between 1990 and 2000 and in eight districts over the next decade, all of which were on the Pest side 38. In contrast, settlements with declining populations were rare in the agglomeration zone (1990–2000: Visegrád, 2001–2011: Vác and Tök). The population of several municipalities grew very dynamically largely owing to suburbanisation, with the population more than doubling in ten municipalities in the period 1990– 2011. Thus, for example, in Telki there was a sixfold increase (1990: 629, 2011: 3661 inhabitants). In the already populous settlements, the increase was in the order of tens of thousands (Érd: 20,304 people, Szigetszentmiklós: 15,336 people, Dunakeszi: 14,434 people).

Natural decrease, so typical in the vast majority of municipalities in Hungary, also occurs in the agglomeration, but the overall situation here is more favourable. Similarly to other indicators, there are also marked differences in natural increase between Budapest and the agglomeration zone: the parameters in the city are much worse ³⁹. This was particularly evident in the period between 1990 and 2001, when in Budapest the number of deaths exceeded that of births by nearly 130 thousand. While an improvement could be observed between 2001 and 2011 with the excess in deaths declining to 75 thousand, natural decrease remained typical for the population of all city districts.

In the majority of the 80 agglomeration municipalities, natural decrease also occurred between 1990 and 2001, but in 21 cases the number of births exceeded that of deaths. A significant improvement in the following decade is indicated by the natural increase that was observed in the majority of municipalities (47 cases) at that time. Concurrently, the rate of natural increase also rose. Thus, whereas the highest value between 1990 and 2001 was 4.9‰ (in Százhalombatta), during the next decade it was 8.9‰ (Telki).

Budapest and its surroundings have long been the most important region of population attraction in Hungary, and this has remained the case since the collapse of communism. However, in a significant change, urbanisation has given way to suburbanisation, coupled with a significantly different migration pattern (see Chapter IX, Cities). The most important feature of this is the out-migration of people from Budapest to the agglomeration. This caused large population losses mainly in the period between 1990 and 2001, when only five peripheral districts within Budapest had modest migration gains 40. In contrast, in the same period, only one municipality in the agglomeration had migration losses (Százhalombatta, -3,5‰), and in 11 cases the migration gain exceeded 30‰, with an extremely high value (97.6%) being recorded in Telki.

Migration differences between Budapest and its ag-





glomeration zone decreased somewhat in the first decade of the 21st century. This is indicated by a migration gain of about 27 thousand people in Budapest as a whole, whereby the migration balance was positive in 14 districts. During this decade, all agglomeration municipalities had migration gains, with a value of more than 30‰ in 16 cases. Concerning migration between the city and the agglomeration zone, the bal-

ance was positive for the latter, as 265 thousand people left Budapest to settle in one of the agglomeration settlements and only 156 thousand people moved in the opposite direction.

The pattern of migration since 1990 has transformed the composition, housing market needs and spatial behaviour of local society in the agglomeration zone, as mainly younger and more educated families have







10 A luxury dwelling in the Budapest agglomeration (Budajenő)

moved there. However, whereas the population of Budapest has traditionally been highly educated, this does not apply to most municipalities in the agglomeration zone 41. This is also indicated by the fact that the ratio of people with tertiary education exceeded the national average in only 27 municipalities in the zone. Suburbanisation, however, has spectacularly increased the proportion of higher education graduates in some municipalities, to above 40% in several places (Telki: 55.9%, Remeteszőlős: 48.0%, Nagykovácsi: 46.1%, Budajenő: 40.4%, Üröm: 40.3%, 10).

The data on daily commuting to work clearly indicate that the spatial movement of the workforce in the Budapest region was transformed after 1990. Over time the concentration of workplaces and residences shifted towards a new, polycentric spatial structure. A clear sign of this was the emergence of new commuting directions, such as counter-commuting from Budapest to settlements in the agglomeration, or cross-commuting between suburban centres (e.g. Budaörs, Törökbálint and Érd). Despite all these, the most significant commuting continues to take place in the direction of the capital 42. In 2011, the 225 thousand daily commuters accounted for almost one in four employees in Budapest, with a significant proportion of them coming from the agglomeration zone. The proportion of people who commuted to Budapest on a daily basis was extremely high (around 60%) among local employees both in smaller settlements adjacent to the capital (e.g. Üröm, Pilisborosjenő and Remeteszőlős) and in municipalities with good suburban rail (HÉV) connections (e.g. Budakalász, Csömör and Nagytarcsa).

At the same time, it was observed that the number of commuters from Budapest to the agglomeration increased much faster, doubling in the 21 years following the collapse of communism. In the inner agglomeration belt, there was a particularly large increase in the number of out-commuters from the city. It exceed-







ed the increase in the number of people commuting towards Budapest 43. The best example of this is Budaörs. In 2001, about 5,200 people commuted in both directions in a rough balance, but in 2011 the number of out-commuters from Budapest (7,847 people) was already 45% higher than the number of people daily entering the capital from Budaörs (5,392). Similarly, residents of Budapest accounted for more than 40% of the in-commuting employees in some of the more populous settlements, including Budakalász (48.3%), Pécel (45.4%), Törökbálint (45.3%), Vecsés (43.4%) and Budakeszi (42.2%).

Housing market of the agglomeration

The increasing spatial mobility of people, their changing housing preferences and the supply-demand-based



11 *Magdolnavölgy Residential Park in Piliscsaba offers an attractive residential environment on the western side of the agglomeration*





consolidation of the housing market after 1990 resulted in significant transformations in the metropolitan region of Budapest. In addition to external demand, local authorities also played an important role in the development of the local housing stock, as they determined the quantity and quality of the available building plots. As many as 35.8% of the 307 thousand inhabited dwellings in the agglomeration zone were built after 1990 (2011). This share is more than twice the proportion in Budapest (15%). Yet, it also shows spectacular spatial differences 44.

In general, most new homes were built in the attractive hilly areas surrounding Budapest from the north. Another popular group of settlements can be found in the northern part of Csepel Island. The absolute frontrunner is Telki, where 80.4% of the 1,186 houses in the settlement were built after 1990. However, Remeteszőlős (68.3%), Veresegyház (58.8%), Herceghalom (58.8%) and Budajenő (57.5%) are not far behind either, in terms of the dynamism of the housing market. In contrast, less than one fifth of the dwellings of Visegrád (14%), Vác (15.7%), Perbál (16.5%) and Dunabogdány (19.4%) were built after 1990. Thus, the efforts of local municipal leaderships to create and sell new plots and attract new inhabitants varied greatly within the agglomeration.

Data on the number of houses built after 2001 per thousand inhabitants 45 further refines the picture. Herceghalom tops the list with 198 houses, followed by Csomád (177), Telki (156), Remeteszőlős (154) and



Dunakeszi (152). These municipalities were the main target areas for residential mobility in the agglomeration in the decade following the turn of the millennium. In many cases, the construction of new dwellings also resulted in a qualitative transformation, with an increase in the share of large houses with several rooms. In 2011, the share of houses with four or more rooms in the local housing market was highest in Telki (72.6%), Remeteszőlős (64.8%), Nagykovácsi (57.1%) and Budajenő (55.8%) 46. These are the most exclusive locations in the suburban area of Budapest.

Housing prices in Budapest and its region stand out in Hungary (see Chapter XII 2.1, Housing Conditions). The average price of second-hand apartments was 32.2 million HUF in Budapest and 30 million HUF in its agglomeration in 2018/2019, behind which significant spatial differences can be observed 47. Prices were highest in districts V (59.2 million HUF), II (55.1) and XII (48.0) within the city. Average prices in those districts were two and a half times or three times higher than in districts X, XX and XXI. In the latter, least expensive districts, dwellings could be bought for an average of 21 million HUF. In the western and northern parts of the agglomeration, a zone with high prices closely aligned with those in the neighbouring Buda districts can be identified. The highest number of dwellings were built here in the decades following the turn of the millennium, mostly in the form of large, single family homes with luxury facilities (swimming pools) and residential parks 10 11. The most expensive municipalities - Remeteszőlős (61.9 million HUF), Nagykovácsi (59.2), Üröm (58.1) and Telki (56.1) - are on the same level as the most expensive districts of Budapest. In contrast, on the southeastern side of the agglomeration, the average price of second-hand dwellings is less than 20 million HUF, with an average price of just 10.5 million in the village of Csörög.

The change in the average price of second-hand homes between 2008 and 2019 shows a different spatial pattern 48. In addition to the central districts (I and V), the highest price increases in Budapest (more than 200%) were recorded in those districts where investor interest was strongest after the turn of the millennium (e.g. Terézváros, Erzsébetváros, Józsefváros and Ferencváros) and in districts where, in view of the renewal of the rust belt, many new high-quality houses were built (e.g. Kelenföld and Angyalföld). With average price increases of more than 190%, Szada (193.2%), Diósd (191.6%) and Pócsmegyer (190.1%) were the market winners of the period in the agglomeration, but they started from a lower base. ×

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Cover design

Geographical Institute, RCAES, Ildikó Kuti – Civertan Bt.

Design and typography

Ildikó Kuti – Civertan Bt.

Printing

Pannónia Nyomda Kft. (Budapest)

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Publisher: László Kiss (Director general)

Eötvös Loránd Research Network (ELKH), Research Centre for Astronomy and Earth Sciences (CSFK), www.csfk.org © Geographical Institute, CSFK www.mtafki.hu, Budapest, 2021

The publication is supported by: Government of Hungary Ministry for Innovation and Technology (ITM) Eötvös Loránd Research Network (ELKH) Hungarian Academy of Sciences (MTA)

Closing date of editing: 1st May 2021

ISBN 978-963-9545-58-8ö ISBN 978-963-9545-64-9

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