CHRONOLOGY OF THE URBAN EXPANSION OF SKOPJE

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Abstract

The phenomenon of spatial expansion and sprawling of cities in one particular territory is a condition that has greatly influenced the contemporary city and society.

The topic of this study is the genesis and the matrix of the spatial development of Skopje and determining the cause-effect factors and results.

The main thesis of the study suggests necessity for introducing a program-spatial matrix/paradigm in the development, so as to regulate the spatial expansion of the urban web. The program-spatial matrix is associated with the segment of planning, or the introduction of the normative structure.

The work methodology is based on comparative analysis of the changes from a spatial-physical and a planning point of view. Due to the specifications of the region concerned, this study, in methodological sense, starts with providing documentary grounds, based on methods of collecting, documenting and analyzing the information found.

The conclusion of this study encourages the need for introducing a normative structure in the spatial development planning of cities in order to improve the spatial quality, the economic dynamics and the social cohesion.

The results of the study analyses ought to provide a clearer representation of the relations between the urban planning (spatial and general) and the space as well as the consequences of their implementation, or non-implementation.

Key words: The City of Skopje, Skopje Valley, spatial development, spatial expansion, urban development

INTRODUCTION

The topic of this study is the City of Skopje, the conglomerate and the center of development, a pole with great influence in the region and the country itself, its geographical position in the region, or the spatial-physical context in the geographical surroundings, as a phenomenon with its own specific individual development. For better understanding of the issue, an analysis of the natural-geographic, socio-geographic and economic-geographic features of the space has been made.

The spatial and urban city planning has been observed as a special segment. Skopje is marked by more than hundred years of history of spatial planning. The spontaneous and non-regulated development (taking place until 1914) from 1914 is replaced by a process of urban planning of the city space. The planning documents are products of the social-political conditions that existed in that

particular moment as well as of the position and the significance of Skopje in that particular territory.

From 1914 until today seven urban plans have been adopted, each of them covers the city integrally and define its development as such. The plans have different content and qualitative characteristics. They represent the contemporary surrounding and input at the moment, the atmosphere, the aspirations of the officials in charge and the actual relevant legislation, and their addition to the previous does not present continuity in the planning development related to the present condition.

In this study, different planning treatments are separately discussed in relation to the adopted plans, their decision on the borders of the urban-planning area as well as the city borders. The goal is to obtain more persistent analysis of the process of spatial and urban expansion of the City of Skopje.

GEOGRAPHIC POSITION AND ADMINISTRATIVE ORGANIZATION

Geographic position

The City of Skopje is placed in the Skopje Valley, in the northern part of the Republic of Macedonia at 41° 42'15" and 42° 16'20" n.g.w (northern geographic width) and 21° 09'40" and 21° 49'15" e.g.w. (east geographic width) along Grinich. In the framework of its natural-geographic borders the valley covers an area of 1914 km² [21, 22, 23], or 7% of the Republic of Macedonia. The space is

physically delimited with the mountain massif Karadzica and Goleshnica from south, Mountain Gradeshka from east to the Ovche Pole, the Kumanovo Valley and the Skopska Crna Gora massif from south, and the Zheden mountain from west separates it from the Polog Valley. It is worth mentioning that the southern border of the Skopje Valley overlaps with the country border of Kosovo.

Picture 1. Geographic position of the Skopje Region in the Republic of Macedonia (by the autor)

Administrative organization

The territory of the Skopje Valley is administratively covered by the Skopje Region (NUTS – Nomenclature of Territorial Units for Statistics level 3) as one of the eighth non-administrative units-statistic regions that arouse from grouping municipalities from lower rank in as administrative units in the Republic of Macedonia. With the Law on Territorial Organization of the Local Self-government in the Republic of Macedonia [28] the territory of the planning region of Skopje has been organized in 17 units of the local

self-governement – municipalities and the city of Skopje as a special unit of the local self-government. From the stated 17 municipalities, ten are seated in the City of Skopje (Aerodrom, Butel, Gazi Baba, Gjorche Petrov, Karposh, Kisela voda, Saraj, Centar, Chair and Shuto Orizari), and seven are municipalities outside Skopje, seated in a village (Arachinovo, Zelenikovo, Ilinden, Petrovec, Sopishte, Studenichani and Chucher Sandevo), along with the villages that pertain to them territorially.

Picture 2. Territorial organization of the region of Skopje [1,28]

CHRONOLOGY OF THE URBAN EXPANSION OF SKOPJE

Several factors had a great impact on the evolutionary line of urban development of Skopje, such as - the social-political atmosphere, the dynamics of the administrative political changes, the role of Skopje as Capital and its significance

regarding the surroundings, the legislative framework, the planning approach, the continuous structure as a built constructional fund and the conditions for implementing the planning solutions.

Picture 3. Reconstruction of the Skopje city structure from 1890 г. [31]

Note: The Hijri was prepared by the Youth Commission of the Association of Culture and Solidarity of the Rumeli Turks, who benefited from the Salmanesi of the Kosovo Vilayet, dated 1310 (Miladi 1890) and the original Ottoman, and a

German engineer (Miladi 1890).(Istanbul 2003). Prepared by: H. Yildirim Aganoglu, Graphic: Sibel Esen, Printing: Bircan Cakir.

Generally, the urban development of Skopje can be seen through two periods: pre-planning period until

1914, and planning period from 1914 until today. In the pre-planning period, with a lack of space regulation for planning, Skopje was developing spontaneously and uncontrollably. The planning period started after the Balkan Wars, with freeing the city territory from the Ottoman Empire. The

planning treatment of the city space has started since then [26].. This early planning period includes the first urban ideas for the City of Skopje. They are oriented towards de-Ottomanization, presenting ideas for transforming the existing city structure with elements from European cities.

Picture 4. Competition study: General Regulation Plan of the City of Skopje, 1914.
Appendix with planned tram lines [4]

Chronological preview of the urban plans

*The competition study/work of the architect
Dimitrie T. Leko from 1914*

The competition work of the architect Dimitrie T. Leko is the first known planning document for the City of Skopje-the General Regulation Plan of the City of Skopje. The main concept of the study is the idea for a European image of the city, which is why the planning concept has radical visions for the urban development regarding the existing urban structure. An important quality of the plan is the

integral approach for solving more and more urban problems, especially infrastructural systems (planning of the street web and the tram routes). Due to the Balkan Wars and the First World War, the implementation of this planning concept is not realized, but it has a tremendous impact on the further development of the urban planning in Skopje [26].

In the period when it comes to the competition work, the region of the Skopje valley is territorially part of the Kingdom of Serbia. Then Skopje has 47,384 inhabitants [25]. In that period there was no specific legislation that treated urban planning. It is regulated by the document "Decree on occupations of civil in the liberated and assigned areas of the Kingdom of Serbia". The surface of the mountain range is about 1,112.26 ha, which is three times larger than the existing area of the city, which is about 357.02 ha.

General Regulation Plan for the city of Skopje from 1929

The General Regulation Plan for the City of Skopje from 1929 is the first official planning document for the city which enroots the development of Skopje as contemporary European city. The planning solution presents continuation of the morphological and program matrix of the plan of the architect D.T. Leko, but redefining the irregular web (out of respect for the cadastral ground) in more expressive formal, geometric matrix.

Picture 5. General Regulation Plan of the City of Skopje, R = 1:5.000, 1929 [3].

Author of the plan is the architect Josif Mihajlovikj, originating from Tresonche, gaining education in Skopje, Thessaloniki and Belgrade, specializing and mastering in Europe and America.

He was Skopje's mayor and governed the construction department. Having in mind the city problems, he resolved crucial and significant issues with the plan. For the needs for the documentary

base of the plan a cadastral measuring of the city was done for the first time. The city structure was more built on the right bank of the Vardar river, and more constructional activities were carried out in the south-eastern part of the city. The old Ottoman part on the left bank is abandoned, while the new web is spread on south.

It is worth mentioning the following infrastructural objects:

- the construction of contemporary water supply system from the headwater Rashche
- the construction of power plant under Kale
- the dam of the Treska river and the hydroelectric power plant Matka and others.

Under Mihalovikj's government and authorship a lot of public objects have been built. They are protected as cultural heritage even today. In the concept for modern urbanization many possibilities were projected for Skopje to become developed and hygienically healthy city. Thus, for the first time, a crucial attention is paid to the green park areas. The concept of cities-gardens and open construction system are projected on the outskirts of the urban surfaces.

The social-political conditions that governed this period when implementing this General Regulation Plan are extremely complex, thus, the plan is important as both planning document and instigator

of the city development. During that period, Skopje becomes more important as a center to a bigger territory than before. After the First World War it becomes center of the Skopje District (one of the 33th districts of the newly established Kingdom of Serbians, Croats and Slovenians (the so-called SCS Kingdom in 1918) and finally resulting in center of the newly formed Vardarian Banovina. Regarding the legislation, according to the periodization of Siljanoska [29], or the period from 1914-1948: a period where an urban activity and legislative material are established through which an integral treatment of all aspects important for control of the spatial-physical development of the city is ensured. The planning area of the city is around 1.192 ha, and according to the author the planning solution has the capacity of providing housing for 120-150 thousand residents. Skopje had 40.660 residents in 1921 [25].

It is important to note that the General Regulation Plan for Skopje treats the wider surrounding of the city as well. For this purpose, a special graphic representation was made where the opinion on the controlled expansion of Skopje can be noticed, together with the creation of a green belt-ring, 1km wide, where constructions would be banned [24,26].

Picture 6. Map of Skopje with surroundings, situation in1929 [6]

*General Regulation Plan of the city Skopje
from the Czechoslovakian architect Ludjek Kubesh
1948*

After Second World War there is a new era in the urban planning of Skopje. With the new social-political conditions Macedonia is part of the Federative National Republic of Yugoslavia, as an independent country, and Skopje is the Capital of the Republic of Macedonia.

The capitalistic system is replaced by socialist system that was oriented towards equality. As a result of the war, cities are generally destroyed, there are human loses, economic poverty and destroyed economy. In the urban planning, a new concept is implemented which is based on the postulate of the "Functional city" and the Athens

Charter of CIAM from 1933, covering the provisions for: division of the city functions, pleasing the enhanced necessity for speed and time saving, establishing relation with the region, establishing programming of the needs and the overall analyses of the natural and assigned factors, introducing humane dimension, establishing the initial nucleus (habitation) and forming residential units, and placing the public interest above the individual one.

In 1948, the architect Ludjek Kubesh elaborates the General Regulation Plan for Skopje, following a direct draft from the Czecho-Slovakian engineers from the Architectural studio from Prague (Atelier architektů - Praha Skopje) and Macedonian experts.

Picture 7. General Regulation Plan of the City of Skopje, R = 1:10.000, 1948 [5]

The Constructional Law from 1931 is a basis for development and implementation of the plan, as well as the Basic Construction Regulation act from 1948 and the Basic Design Projection Regulation act from 1948, which have been adopted for the needs of rebuilding the cities after the war. The plan is different from the Regulation framework in such a way that is a free conceptually developed document which supports the "functional city" in the sense of: zoning the main city zones (industrial, business and residential), providing efficient transport system, providing an open space near the functional zones and allowing proper suburbanization.

Skopje in 1948 counts 102.600 residents, so the increase of the population from 1929 to 1948 generally happens in the same urban area, with a slight augmentation of the constructed area. The high population growth is concentrated in Bunjakovec, which territorially covers almost half

of the existing city. The plan contains an area of 4.637 ha, but broadly speaking, it defines the area of the so-called "Big Skopje" with 9.676 ha.

With this plan, the city undergoes fast development. Following the tendency to industrialization, Skopje is considered as a center of a wider gravitational area.

Special important qualitative segment of the plan is the solution on the traffic infrastructure. A hierarchy of the traffic corridors is made, so intercity transport and surrounding area traffic is included in the traffic concept. For the first time a ring road is planned on the western, northern and eastern margin of the city. Railway lines compose a close circle system around the city, which marks the border of the city constructional region, and connects it with the region and the world. The projected connection between the industrial complexes and the railway lines is of special interest.

This plan includes the air traffic for the first time - planning for a new airport in the north-west, or south from Zajchev Rid. Probably the bravest move in the plan is treating Vardas as sailing river. The plan has resulted in changing of the city image. The rapid growth of the population in the city arose the need for plan revision, which was made in 1955. The revision stipulates enlargement of the city with a housing zone around Zajchev Rid with capacity of 30.000 residents. Thus, in 1961, the population

number has increased up to 165.000 residents, and there was a need for another revision of the plan. With the second revision the city area increased from 4.637 ha to 6.142 ha, while the area of the wider region remains relatively the same (from 9.676-9.791 ha). A demographic study is carried out which stipulates that the population will increase up to 400.000 residents, resulting in projected density of 73 residents/ha [26].

Picture 8. Land use and zone plan for 1971 [14]

Basic Urban plan of Skopje, made by “Polservis” from Warsaw, “Doksijadis” from Athens and the Institute for Urbanism and Architecture of Skopje from 1965

The Basic Urban Plan of Skopje from 1965 is made by “Polservis” from Warsaw, “Doksijadis” from Athens and the Institute for Urbanism and Architecture of Skopje, which included numerous world and native experts that elaborated a lot of all-embracing studies. This plan was being developed in relation to the rebirth of Skopje after the catastrophic earthquake on 26.7.1963. The plan is made under the auspices of The United Nations, where a special trust fund is formed and the whole operation is about humanity and solidarity from countries from all over the world, and due to this unfortunate circumstances, it brought worlds’ attention to Skopje and it is known as “the most famous urban plan of Skopje”.

The plan operates in accordance with a new methodology of all-embracing planning, so it includes economic, social and ecological aspects. The city is considered in wider context of the regional planning, as a center of a bigger sub-region that steps out of the frameworks of then SRM and has an impact on whole Kosovo, Metohija and South Serbia.

In reviewing the elaboration of the Basic urban plan, the whole Skopje Valley is taken as a territory, 47 km long and 50 km wide. In 1965, when the development of the plan started, the Skopje region counts 312.000 residents and it is divided in 3 municipalities, that cover territories of the city of Skopje [14]. The initial territory chosen for the plan is 9,090 ha, while it finally covers 11.556,7 ha. For detailed analyses an area of 4,215 ha is planned, which also covers the area of the “city center” of 290 ha. [14]. In this period the city counts 219.989

citizens, and for the purposes of the planning two planning periods are considered: first period until 1971, with population growth to 270.000 citizens, and second until 1981, with population growth to 350.000. The basic urban plan from 1965 is made as a typical zone plan, which is a general regulation plan, and it is a basis for further elaboration with

adoption of detailed urban plans that must establish the directions for city development and construction. Therefore, city borders for two developing eras until 1971 and 1981 are determined, and the city is divided in zones (according to land use) and urban units. These two categories were introduced for the first time in the urban planning of the city.

Picture 9. Land use plan and zone plan for 1981 [14]

The plan focuses on the industry – the main driver of future development. Expansion of current and construction of new capacities are projected. Industry classification is also made according to the pollution level, and proper location of the industrial capacities is determined. Heavy industry is located out of the city, while light industry is located following the equal placement principle in the urban territory.

According to the system of hierarchy, public functions are given to centers with local, regional and city characteristics.

The traffic concept is defined according to the basic relief of Skopje Valley and the flow of the Vardar River, mainly in direction NW-SE. City high ways (express magistral) are established that tangentially touch the city center. Traffic arteries are classified into express magistral, magistral streets, gathering streets and their intercrossing on more levels or at the same level.

The plan also makes thorough changes to the railway traffic system as well as impacts its full reconstruction. [12]. The southern railway route is

stopped (the authors of this article believe this was a serious mistake) and it became a car corridor – South Boulevard (Juzhen Bulevar). The main railway station is dislocated among the settlements Aerodrom and Prolet, while the old object is transformed into Museum of the City of Skopje. A division of the systems of passenger and freight traffic is also made, with common stations in Gjorche Petrov, Madzhari and Drachevo as entrance stations in Skopje and the station Skopje-North. Connections of product supply and delivery is organized from big factories, and the factory Zelezara gains its own internal system.

In this plan the idea for water traffic and flowing Vardar River is completely dismissed, and changes are planned for the air traffic also, with the dislocation of the airport from the city borders, to the east, where the airport “Petrovec” has been formed, today known as “International Airport Skopje”.

Greenery receives special treatment with this plan, as a developed system of green recreation areas. Local, regional and city parks are introduced with

connected green corridors to the greenery from the outskirts. The plan specifies big green areas outside the city (Vodno and Skopska Crna Gora mountains), which are planned as big park-forests. Several tourist-recreational centers such as Matka, Rashche, Volkovo, Katlanovo, Zelenikovo and others are also planned.

A very special component of the plan is the appendix with recommendations for further implementation of the plan stated in the section called “Realization” [14]. Realization is divided into “Every-day Realization of the Actual Problems” and “Rules of Realization”.

The plan covers area of 11.556,7 ha. The planned

number of 270.000 until 1971 (which was supposed to increase up to 350.000 until 1981) was surpassed, so in 1975 the population counted 352.000 residents [11, 26].

Basic Urban Plan of the City of Skopje – Amendments, 1985

The Basic Urban Plan of the City of Skopje from 1985 is made by the Institute for Urbanism and Architecture of Skopje, under the auspices of Blagoj Kolev, Phd. The plan follows the principles from the previous BUP (Basic Urban Plan) from 1965 and it makes necessary adjustments to the current situation.

Picture 10. BUP Skopje 1985 – Synthesis presentation/plan [15]

The drawing up of the plan is carried out at the same time with the processing of the Spatial Planning of the RM and the Spatial planning of Skopje. The social-political conditions are relatively stable, Macedonia is still part of the SFRY, but one can feel the beginning of the stagnation of the social-economic development. In the planning solution “municipalities” (as basic cells of the social-political organization) are introduced - an obligation from the Constitution of SFRY from 1975. The introduction of these units causes problems because the borders of the urban units defined in the plan often don't correspond with the territories of the municipalities. The legislative framework for drawing and adopting the plan is defined by the “Law on Spatial and Urban Planning” from 1978. According to Siljanoska, this law belongs to the third period of the legislation or the “period of enlarging the control instruments

important for shaping the city space” [29]. It is worth mentioning that the plan contains “provisions for realization”, In the plan, Skopje is treated in broader regional context (Kumanovo, Veles, Tetovo), while the concept of rings (central, middle and peripheral) is considered at a city level.

During this period the city had 409.000 residents. There was a great realization of the planned contents from the previous plan, and there were larger number of residential units than of families (tendency to own more flats and immigration of people from the inner parts of Macedonia and the wider region of Kosovo and South Serbia).

The traffic concept from the previous plan is still present. A division in primary and secondary street web is introduced. The primary is defined by the Basic Urban Plan, while the secondary by the detailed urban plans. This plan shows a great level of realization in the residential construction, but the

planning web of traffic artery is not implemented completely, and that leaves consequences until today.

Almost all of the planned industrial capacities are built, but the stipulated dislocation of the existing factories in the central city area is not completed.

Picture 11. General Urban Plan of Skopje, 2002 – Synthesis plan [18]

General Urban Plan of the City of Skopje from 2002
The stated planning concept in the plan from 1985 is continuously upgraded and the latest amendments of the GUP in 2002 contributes to a great extent to keeping the established borders from the previous plan with an area of 7.656,4 ha [11]. The plan is in accordance with the Law on Spatial and Urban planning [28]. The planning solution defines the land use and its implementation is not direct, it is further developed through drawing up and adopting Detailed Urban Plans [17]. The number of residents is planned in two planning periods: 582.300 residents until 2010 and 614.400 until 2020.

In relation to keeping the urban area, due to growth of the population number, enlargement of the population concentration is stipulated in the housing zones, and especially in the zones for individual housing, as well as rebuilding the dense central city web by finishing the current perimetric city blocks and forming new ones. The implemented concept of the spatial non-development of the city is justified, except to the expansion of the working zones along the magistral exit road directions. From current point of view, it is noticed that this planning concept is in direct

collision with the phenomenon of illegal construction and the treatment of such, defined by the law solution of the Law on Procedure for Illegally Constructed Objects [17].

The organization of working zones in the plan stipulates usage of the already built capacities and maintaining the three industrial zones, and the north-eastern zone enlarges with the free economic zone “Zhelezara”. In the plan the urban planning approach is based on contemporary standards of sustainable development and protection of the environment (dislocation of factories “Alumina” and “Treska”) as well as construction of new high technical-technological capacities by engaging highly productive staff.

A special attention is paid to greenery, strict provisions are defined in such a way as to guarantee its protection – “areas aimed for greenery, sport and recreation shall not to be used for other purposes, at the same time, all areas planned for public use and other uses shall be protected by erecting green areas until the plan is realized” [17]. However, park-forests such as “Gazi Baba”, partially “Vodno”, “Saraj”, the City Park, Kale and Zajchev Rid are still maintained, but not the near-river greenery along the Vardar River.

The traffic concept follows the concept of the solution from previous plans. There is a tendency to constructing public car parks in the central region.

General Urban Plan of the City of Skopje, 2012

The planning concept of the latest adopted general urban plan for Skopje is based on the concept of The General Urban Plan of the City of Skopje from 2002 (planning period 2001-2020), the analysis of the space and the possibilities for spatial development.

The planning documentation is defined by the Law on Spatial and Urban Planning [28], the Rulebook on standards and norms for urban planning and the Rulebook on detailed contents, scale and methods of graphic processing of urban plans. The plan is strategically developed document with general elements of spatial development that has to be realized following regulation plans and detailed urban plans. The plan defines 162 units-fourth for further elaboration.

Picture 12. GUP Skopje 2012 – Synthesis plan [18]

The surface area of the plan is 8.790 ha, including Radishani and Drachevo, as well as the borders of the GUP Saraj, which are now included within the city borders [28]. When determining the urban area, a special attention is paid to the aspect of reserved surface, for the post-planning period. This reserved surface is planned to have the role of a tampon zone

between the constructed built surface in the city and the rural populated places, which would be agricultural until its function is changed (resulting in ruinous approach for Skopje considering the biological capacity of the geographic space of the valley).

Picture 13. GUP Skopje 2012 – Function plan of the land – function zones [18].

The planning development of the contact area of the city in the future is expected to exclude Drachevo,

Radishani and Saraj into satellite city neighborhoods containing urban features outside

the city of Skopje. Expansion of borders is also expected with the locality of Penitentiary “Shutka”. Expansion of the urban area is also projected in the working zone Pintija (along Drachevski road) with the purpose of complex and integral regulation of the construction of industrial buildings, as well as of numerous localities with illegal constructed buildings. Apart from expansion of the stated parts, the plan stipulates excluding of spaces between “Zhelezara” and lake Smilkovo from the borders of GUP, or in other words, the space between the zone for technological-industrial development adopted in the GUP of Skopje from 2002, and the space between “Novo Selo” and “Lepenec”, projected for expansion of the western industrial zone. To determine and direct the development of the contact settlements, planning solution defines the detailed tracks for constructing entry-exit magistral and regional traffic arteries.

The population of the city of Skopje shows less growth dynamics in comparison with previous decades. According to the expectations in the plan, in 2012 Skopje would count 613.047 residents, while in 2021 647.950 residents [18]. According to the projections (medium variant) of the United Nations (UN) a decrease in the population number is assumed – from 2010 a negative increase of 0.04 percent is expected, while in the period 2007 – 2050 - 14, 4 percent.

In relation to the production activities, the planning solution respects the existing city industrial zones and individual production buildings spread in the urban city web. Planning provisions are directed towards the three formed zones - north-east, south-east and west. Pollution capacities are tended to be dislocated outside the city (as stipulated in the previous GUP as well). Industrial activity development is also projected in new spaces outside the planning area of the GUP of Skopje. In planning these spaces, the technological-industrial zones occupy a special place. The concept supports the formed economic zones, located outside the city, TIDZ (technological industrial developing zone)

Skopje 1 (140 ha) and TIDZ Skopje 2 (97 ha), already being infrastructurally equipped.

One of plan’s aims is to create conditions for development of several rural centers outside the city area for decreasing the mechanical flow and for redistribution the city population. Due to city domination and polarization in relation to other cities, it is necessary for regional and national purposes to set balance on the development of Skopje as metropolitan concentrated region. This assumes establishing proper regional politics that would enable balanced development by effectuating the developing potential of other cities and regions. Following this approach, Skopje would have the development perspective of a first-rank city at a higher qualitative level. Therefore, the development of the city can be directed to tertiary and quaternary activities.

Regarding the system of centers, the plan stipulates introduction of fifth-degree centers in suburban settlements, changing the functions of the space for cultural centers, park-entertainment centers, malls, social/public buildings. Examples of such current industrial complexes are: “Treska”, “OHIS”, “Cementarnica”, “Imperial Tobacco” and others.

The aspect of greenery in the plan has all-embracing treatment approach, but the practice is opposite of the planning stipulations.

The plan defines localities and building that are outside the planning area of the city but are especially important for functioning of the city systems. Those are headwaters “Rashche”, the city airport, “Drisla” landfill and others.

Analysis of the territorial expansion of the city

The analysis of the territorial expansion of the city is made with the help of a method for comparing-overlapping the surfaces of urban areas of urban plans. Based on the hereby said, a documentary basis is made as a foundation for elaborating the urban plans. The estimated measures are plan-by-plan and integrally discussed.

Table 1. Preview of surfaces of existing situations and planning areas of urban plans (ha)

period (ha)	General Regulation Plan, 1914	General Regulation Plan, 1929	General Regulation Plan, 1949	Basic Urban Plan 1965	Basic Urban Plan 1985	General Urban Plan 2002	General Urban Plan 2012
situation	357,0	796,2	625,9	4.104,7	4.755,2	7.088,0	8.464,0
area surface	1.112,3	1.192,9	4.637,0	11.556,7	6.844,9	7.656,4	8.790,0
surface increase	755,2	396,7	4.011,0	7.454,9	2.089,8	568,4	326,0

Source: [2,3,4,5,6,8,9,10,11,12,13,14,15,16,17,18, 26]

General Regulation Plan, 1914. The city borders as continuous situation defined for elaboration of the competition study od D. Leko covered a territory of

around 357 ha. With the competition plan, although the city borders are not precisely defined, a city development with an area of around 1.113 ha is

projected, which is practically an increase in the territory of 756 ha (67%) or augmenting the existing condition three times. The expansion is stipulated for all parts, except the eastern.

General Regulation Plan, 1929. With this General Regulation Plan from 1929 the territory is 1.192,88 ha, which contributes to increasing the existing constructed structure of 33 % - 396,7 ha. With this the area of the existing city is increased by 50%. Bigger expansion is projected in the north-west, and smaller one in its eastern border.

General Regulation Plan, 1949. The General Regulation Plan from 1949 includes the most radical changes regarding territory. An expansion of the existing structure towards all sides is stipulated, the southern part has certain limitations due to its relief features ("Vodno"). The biggest expansion is in the east-west. The new borders of

the city area change the whole physiognomy of the city, with dominantly east-western axis. The new planning area is 4.101,7 ha, which is an increase up to six and a half times from the existing city. The expansion is 84% of the urban area.

Basic Urban Plan, 1965. The Basic Urban Plan for Skopje from 1965 is a more strategic document with two planning periods - 1971 and 1981. The analyses use foundations from 1981. The borders in this plan are not precisely determined, and the zone plan was being used for comparing. This plan also stipulates augmentation of the territory up to 7.454,97 ha (which is 64% from the area) or increase in 2,8 times of the existing condition. The border expansion includes all directions, except the southern part due to location of the natural borders – the slopes of Vodno. The plan proposes large reserved areas for future expansion of the city.

Picture 14. Planning area of the GUP of Skopje in the period 1914-2012 [18,26].

Basic Urban Plan, 1985 – amendments. The amendments of the Basic Urban Plan from 1985 follow the planning concept of the previous plan from 1965. However, this plan is the first plan to propose decreasing in the city borders and more realistic planning of the future construction and the rational connection by covering the surrounding territories. The border, or the territory of the

planned urban area is 6.844,96 ha which presents decrease in 59% in comparison with the BUP from 1965. Regarding the existing situation the new area includes increase up to 1,4 times of the city territory. Territorial decrease is planned almost in all peripheral areas, but mostly in the northern part from Zajchev Rid and in the direction towards Skopska Crna Gora, and v. Lisiche.

General Urban Plan, 2002. The planning area of the General Urban Plan from 2002 follows the condition that is marked in the document foundation and stipulates slight increase of 568,4 ha, which is around 7 % of the planning area of the existing situation.

General Urban Plan, 2012. The General Urban Plan from 2012, adhering to the concept of rational use of the land, follows the existing condition of the city and plans an area of 8.790 ha, which includes expansion of 506 hectare (including Saraj) which is around 5,7 % of the planning city territory. Due to clearer identification of the borders of

spatial expansion of Skopje, in picture 13 the chronology of planning areas overlapping in all urban plans for the city is presented. The borders themselves of the urban plans demonstrate the presence of rapid expansion of the urban part of the city. However, apart from planning territory expansion, the results from the researches are threatening because they point to seriously high rate of land sealing, in the shape of land degradation, where in the period 1965-2010 unproductive land in the region of Skopje is increased up to 63 %, that is – 0,14% annual rate regarding the whole land, or 0, 24% average annual loss of the arable land [30].

CONCLUSION

Having in mind all elaborations, we can conclude that the planed urban development of Skopje starts in 1914, where the area of 357 ha is increased to 1.112 ha (the plan makes a triple increase of the urban tissue), following the matrix of European contemporary cities. The development continues along with the next plan in 1929, which stipulates an area of 1.192 ha. This plan is characterized by slight increase in the planning city borders, on a foundation of a constructed physical structure double sized then in 1914. The following plan in 1949 covers a post-war period and big changes in the society and the social-political system. This plan supposes big expansion of the area – 4.101,7 ha, which is six times more than the existing urban web. The biggest expansion is stipulated with the plan from 1965 after the earthquake, where the planned area is 11.556,67 ha. However, in the next plan from 1985 there is a decrease in the city borders and the territory is 6.844,96 ha. The plan from 2002 projects a city area of 7.656,4 ha, while in the latest GUP from 2012 the city borders cover 8.790 ha. This means that with the planning development of the city of Skopje during a time span of 100 years (103), starting from a present condition of 357 ha in 1914 to planning development of 1.112 ha, Skopje has reached an existing condition of 8.464 ha with planed urban area of 8.790 ha. The planning urban area in this period of more than 100 years stipulates increase in the city borders six times more, while the existing condition of that period has increased by more than 23 times.

These numbers present a significant growth in the borders of Skopje, covering its territorial expansion of the space of Skopje Valley, raise an inevitable question about politics of sustainable development,

rational use of the land and protection of the agricultural land and forests. Taking the geographic space of the valley and the biological capacity into account it is estimated that the ecological rate of valley exhaustion is 4 times higher than the natural capacity [33].

Due to the complex structure involving different segments and their interrelations there is a need of all-inclusive analysis. In this way we can receive an integral representation of the occurrence and its meaning in general. The research has to provide the interrelated differences, the conflict points and the negative effects of the urban expansion of the city web at the expense of elements for sustainable development and rational usage of the land, protection of agricultural land and forests. When determining the proper program-spatial matrix as a tool for spatial planning, apart from all aspects of the existing condition, the inventory, the relations in the urban web, the relations between the urban and the rural sections, the needs, the spheres of interest, the possibilities for alternative and multi-purposeful use, as well as the conflict points in using the land, the developing line should be based on the strategic theses of the European Union for spatial planning which are mainly oriented towards polycentric and balanced spatial development, integration of the urban and rural environments, territorial integration in the inter-border functional regions, providing competition in regions based on strong local economies, improving communication infrastructure between the population and the community and the economy. This can be done if all aspects of protecting and enhancing the environment and the cultural goods are taken into account [32].

REFERENCES

- [1] Agency for Spatial Planning of the Republic of Macedonia (2010): Spatial planning of Skopje Region 2005-2020 – Draft. Skopje: Assembly of the Republic of Macedonia

- [2] Agency for Spatial Planning of the Republic of Macedonia (2012): General Urban Plan of the City Skopje. City Skopje Council, Skopje.
- [3] Archive of Macedonia, arch.no. AM_1.872.20-9
- [4] Archive of Macedonia, arch.no. AM_1.872.20-10
- [5] Archive of Macedonia, arch.no. AC_6.76.522.1
- [6] Archive of Macedonia, arch.no. AM_1.872.20-88
- [7] Government of the RM (December, 26, 2010): Decision on determining the nomenclature of territorial units for statistics – NTUS, no. 19-7957/1, Skopje
- [8] Institute for Urbanism and Architecture of the City of Skopje, Doksijadis Company – Consultants for development and ekistics (1964): BUP Skopje preview of constructed surfaces. Book 6. document ЗУА-СК -10, ДОКС-ЈУГ. А2 (30-4-65), prepared for United Nations and the city assembly – Skopje, Skopje.
- [9] Institute for Urbanism and Architecture of the City of Skopje (1964): BUP Skopje urban study – Reviews, recommendations, conclusions, book 4, Skopje
- [10] Institute for Urbanism and Architecture of the City of Skopje (1964): BUP Skopje spatial concept, book 5, Skopje
- [11] Institute for Urbanism and Architecture of the City of Skopje (1965): Basic urban plan of Skopje, book 1-21. Skopje.
- [12] Institute for Urbanism and Architecture of the City of Skopje (1965): Basic urban plan of Skopje, book 12. Skopje.
- [13] Institute for Urbanism and Architecture of the City of Skopje (1965): Regional plan of Skopje, book 14, Skopje.
- [14] Institute for Urbanism and Architecture of the City of Skopje (1965): Basic urban plan of Skopje, book 15, Skopje.
- [15] Institute of Urbanism and Architecture of the City of Skopje (1965): Basic plan of the City Skopje, Assembly of the City of Skopje, book 7. Skopje.
- [16] Institute of Town Planning and Architecture – Skopje (1965): MP Skopje – Summary of the report on the master plan, book 8. Skopje.
- [17] Public Enterprise for Spatial and Urban Plans (2002): General Urban Plan of City Skopje, Assembly of the City of Skopje, Skopje
- [18] Public Enterprise for Spatial and Urban Plans (2012): General Urban Plan of City Skopje, Assembly of the City of Skopje, book 1-2, Skopje
- [19] Korobar, P.B. (1984): Spatial and Physical Courses of the Reurbanisation of the Example of the City of Skopje, Master study, University of Ss. Cyril and Methodius, Faculty of Geography, Skopje (Translated from the original: Коробар, П. В. (1984): Просторно физичките текови на реурбанизацијата на примерот на град Скопје, Магистерски труд, Универзитет “Кирил и Методиј”, Географски факултет, Скопје)
- [20] Kubesh, L. (1949): General Regulation Plan for Skopje 1948. Government of the RM, Skopje (Translated from the original: Кубеш, Л. (1949): Генерален регулационен план за Скопје 1948. Влада на НРМ, Скопје).
- [21] Markoski B. (1992): Cartography Cartometric Studies on Hypsometric Structure of the Space and Location of the Population in the Republic of Macedonia, Phd dissertation defended at the Institute of Geography, Faculty of Natural Sciences and Mathematics, Skopje (script). (Translated from the original: Маркоски Б. (1992): Картографско картометриски проучувања на хипсометриската структура на просторот и разместеноста на населението во Република Македонија, докторска дисертација одбранета на Институтот за географија при ПМФ, Скопје. (ракопис).
- [22] Markoski, B (1995): Hypsometry of the Space and Population in the Republic of Macedonia – Cartographic method. Macedonian treasury – Kumanovo (Translated originally from: Маркоски Б. (1995): Хипсометрија на просторот и населеноста во Република Македонија - картографски метод. Македонска ризница – Куманово.)
- [23] Markoski B (2005): Cartographic preview of the Spatial expansion in Skopje, Study Collection of scientific gatherings “Aspects of the urban development and contemporary urban practice in Skopje”, Skopje. (Translated originally from: Маркоски Б. (2005): Картографски преглед на просторното ширење на Скопје, Зборник на трудови од научен собир “Аспекти на урбаниот развој и современата урбанистичка пракса во Скопје”, Скопје
- [24] Mihajlovikj, J (1929): Regulation Plan of Skopje, Skopje Bulletin, 1929, no. 28, 30, 31, 32. National and University Library “St. Climent Ohridski”, Skopje. (Translated originally from: Михајловиќ, Ј. (1929): Регулациони план Скопља“, Скопски Гласник, 1929, бр. 28, 30, 31, 32, Национална и универзитетска библиотека „Св. Климент Охридски“, Скопје.
- [25] Panov, M. (1976): Geography of Macedonia – natural and socio-geographic characteristics, book 1, Prosvetno Delo, Skopje. (Translated originally from: Панов, М. (1976): Географија на Македонија -природни и социо-географски карактеристики, Книга 1, Просветно дело, Скопје.
- [26] Penchikj, D. (2011): Influence of the urban plans on discontinuous spatial transition of the city Skopje in the twentieth century. Phd dissertation. University of Ss. Cyril and Methodius – Faculty of Architecture, Skopje. (Originally translated from: Пенчиќ Д. (2011): Влијание на урбанистичките планови врз дисконтинуираната

просторна транзиција на градот Скопје во дваесеттиот век. Докторска дисертација. Универзитет “Кирил и Методиј”- Архитектонски Факултет, Скопје).

- [27] POLISERVIS –Konsultanti inženjeri, Varsava, Polska, predstavnik Instituta za urbanizam Varsava, i Zavod za urbanizam i arhitektura grada Skopja, SFR Jugoslavija (1965): MP plan prigradske zone Skopja. Knjiga 16, Izvestaj pripremljen za ujedinjene nacije kao izvrsne agencije ujedinjenih nacija. Skopje.
- [28] The Official Gazette of the Republic of Macedonia: No. 51/2005, 137/2007, 151/2007, 91/2009, 124/2010, 18/2011, 53/2011, 144/2012, 55/2013, 163/2013 and 42/2014, Skopje. Law on Spatial and Urban Planning
- [29] Siljanoska, J. (2001): Planning aspects of shaping the city space, Phd dissertation, University of Ss. Cyril and Methodius, Faculty of Architecture, Skopje. (Originally translated from: Сиљаноска, Ј. (2001) Планерските аспекти на обликувањето на градскиот простор. докторска дисертација, Универзитет “Кирил и Методиј”, Архитектонски факултет, Скопје).
- [30] Trpchevska-Angjelkovikj, D. (2014): Optmization of using the non-urban land in the spatial planning in the Skopje region from aspects of decreasing the processes of its degradation. Phd. dissertation. University of Ss. Cyril and Methodius, Faculty of Forestry, Skopje. (Originally translated from: Трпчевска-Анѓелковиќ Д. (2014): Оптимизација на користење на вонурбаното земјиште во просторното планирање на Скопскиот регион од аспект на намалување на процесите на негова деградација, докторска дисертација. Универзитет “Кирил и Методиј”- Шумарски Факултет, Скопје).
- [31] Not: Hicri 1310 (Miladi 1890) tarihli ve aslı Osmanlıca olan Kosova Vilayeti Salnamesi'nden ve bir Alman mühendisin planıdan (Miladi 1890) yararlanılara Rumeli Türkleri Kültür ve Dayanışma Derneği Gençlik Komisyonu tarafından hazırlanmıştır. (Istanbul 2003) Hazırlayan: H. Yildirim Aganoglu, Grafik: Sibel Esen, Baskı: Bircan Cakir
- [32] Council of the European Union (2011) Territorial agenda of the European Union 2020: Towards an inclusive, smart and sustainable Europe of diverse regions. Agreed at the Informal Ministerial Meeting of Ministers responsible for Spatial Planning and Territorial Development, Gödöllő, Hungary 19 May 2011.
http://ec.europa.eu/regional_policy/sources/policy/what/territorialcohesion/territorial_state_and_perspective_2011.pdf
- [33] Odzaklieska H., Markoski B., Dimitrovska O., Milevski I. (2017) Basic methodological postulates for determining ecological footprint in Republic of Macedonia, Proceedings of the 5th Congress of the Ecologists of Macedonia, with international participation, (Ohrid, 19th—22nd October 2016), Special issues of the Macedonian Ecological Society 13, pp. 135-139, Skopje. ISBN-13 978-9989-648-37-3, Original scientific article, Available online at: www.mes.org.mk