

## SUSTAINABLE ECO PLANNING STRATEGIES IN EAST EUROPE (CASE STUDY OF BELGRADE)

Predrag MILOŠEVIĆ\*

\* Prof.; Faculty of Building Management, Department of Architecture; Union – Nikola Tesla University, Belgrade, Serbia  
E-mail address: *pmilos59@gmail.com*

Received: 6.04.2012; Revised: 27.09.2012; Accepted: 30.12.2012

### Abstract

Cities are increasingly becoming important economic and political actors in their own right. They need to play a full part in all the situations with which they are confronted, including international relations. Their local authorities and administration have to engage in a dialogue with a wide range of stakeholders, civil society, professionals, as well as state authority representatives. International relations may no longer be an appropriate expression to describe the relations established within the world of today. Intergovernmental agencies are essentially represented by national governments, while global organizations include far more than government representatives, and often encompass not only regional and local governments, but also business interests and civil society. The aim of this research was to seek answers for the range of questions that have arisen recently, on how planners and others could create an environment that meets citizen's needs in the city. Which factors determine citizens' friendly environment? In the course of the research project selected issues were surveyed, undertaken on specific themes, such as: urban development, preservation and renewal, facilities, greenery, safety, pressures for change, popularity of sites etc. Certain possible solutions are proposed. This paper is based on research project carried out by the authors in the course of which Warsaw and Belgrade metropolitan areas were surveyed.

### Streszczenie

Miasta stają się coraz bardziej ważnymi, ekonomicznymi i politycznymi przedstawicielami własnych interesów. Miasta muszą zmierzyć się z różnymi sytuacjami, skonfrontować je wzajemnie, uwzględniać międzynarodowe dyrektywy i relacje. Ich miejscowe władze i administracja muszą zająć się dialogiem z szerokim gronem przedstawicieli społeczeństwa, profesjonalistów jak również reprezentantów władzy. Międzyrządowe agencje zasadniczo są reprezentowane przez rządy, podczas gdy globalne organizacje sięgają daleko dalej niż reprezentanci rządu i często obejmują nie tylko regionalne i lokalne samorządy, ale też interesy biznesu i społeczeństwa. Celem tego badania było poszukiwanie odpowiedzi na szereg pytań, które zadano ostatnio: Jak planiści i inni mogliby utworzyć środowisko, które zaspokoi potrzeby mieszkańca miasta? Jakie czynniki wyznaczają przyjazne środowisko mieszkańców? W trakcie projektu badawczego zostało prześledzone wybrane zagadnienie, zawierające określone tematy takie jak: miejski rozwój, utrzymanie i odnowa, usługi, zieleń, bezpieczeństwo, nacisk na zmiany, popularność miejsca etc. Zostały zaproponowane pewne możliwe rozwiązania. Artykuł powstał dzięki projektowi badawczemu zrealizowanemu przez autorów w trakcie kursu, w czasie którego zostały przeanalizowane miejskie przestrzenie Warszawy i Belgradu.

**Keywords:** Transition, Sustainability; Eco-design and planning; Citizens' needs; Friendly environment; Urban development; Preservation and renewal; Pressures for change.

## 1. INTRODUCTION

Today Belgrade too has to compete hard with other similar cities. The most significant economic sectors in the city are financial services, commerce, the port, light manufacturing and growing tourism. Its cultural



**Figure 1.**  
Ružica (Rose) Church in Kalemegdan Fortress, Belgrade. A church of the same name existed on the site in the time of Despot Stefan Lazarević, son of Serbian Commander in famous Kosovo battle, Knez Lazar. It was demolished in 1521 by the invading Ottoman Turks. Today's church was a gunpowder magazine in the 18<sup>th</sup> century, and was converted into a military church between 1867 and 1869. Heavily damaged by Austro-Hungarian canons during the First World War, the church was renovated in 1925

history is very present in the minds of the people, but as elsewhere there is anxiety about global changes, including safety. Politicians aim to use urban planning and architecture to reinstall city pride by regenerating the city centre. Trends encountered in many other cities have also eroded Belgrade's livelihood. The city of Belgrade is one of the biggest employers in the country, and has a very bureaucratic administration to deal with traditional city services such as health, education, police, social services, etc. Politically, Belgrade is now run by coalition of the three main parties against a strong opposition. The divided ruling majority makes it difficult to develop a coherent vision for the city and its future (Breheny, 1992).

Belgrade aims to strengthen its political leadership to better exploit its strategic position at the hearth of economic traffic and mobility in the South East Europe. Due to its financial means, it attempts to use the large investment which the national government is currently putting into transport infrastructure, such as Corridors 7 (Danube River) and 10 (highway London-Mumbai, via Vienna, Belgrade and Istanbul), the port, the half-ringing road and the completion of underground high-speed train system, as opportunities for urban development as well as challenges against user-led traffic. While Belgrade is hoping to get its urban regeneration



**Figure 2.**  
Ruins of downtown Belgrade (1941). German Nazi decided to destroy everything linked with Serbian history and culture (almost all Belgrade's stately buildings were destroyed at the time, but the rest was subsequently demolished in ally's bombings in 1945)

financed, it still requires proper leadership and global vision for the city. Only thus can it direct the implementation of the bulk of national investment into infrastructure towards its own more sustainable urban strategies. This includes setting up public-private partnerships for the redevelopment of the docklands and riverfronts of the old harbors sites, which shall be mostly abandoned when the port moves to the edge of the city. The present challenge for the city of Belgrade is to take on the role of “manager” in developing a canvass for the incorporation of many forthcoming private sector investments into a global plan (Sassen, 2002).

But there is still no focus on the master plan for docklands’ redevelopment which shows no results to this day, for instance. Unlike in the private sector, where relocation can accelerate necessary organizational change and new strategic office layouts can affect behavior, it is not possible to displace cities or leave them behind. The planning process and good eco-design can foster positive physical change in the city and its environment, and influence behavioral change as well (Frey, 1999). Institutions need to react and establish a metropolitan strategy for Belgrade. Without abandoning its tradition, the city must create new jobs in the service, retail, tourist, leisure, cultural and information sectors.

The city’s full urban transformation should be based on four aims: 1. exterior accessibility and internal mobility for the metropolitan area (Belgrade’s ports on the Danube and Sava Rivers, investments in public transport, metropolitan underground, railways and motorways, mobility, urban landscapes), 2. regeneration of the urban environment (water, waste, energy, better heating system to reduce air pollution, cleaning up rivers and riverbanks, well-planned city, safety, accessibility, collective infrastructure and services missing to date, more well-designed better quality housing, real estate, pedestrian areas and parks, etc), 3. investment in human resources and technological transformation (communication, making Belgrade’s universities more organized and sustainable, professional training and employer-supported apprenticeship, human resource policy for the development, transformation strategies) and 4. emphasis on culture (heavy investment in internal dynamism and promotion of the metropolis with its museums, congress and music halls, to the outside world), (Graham, Simon, 1996).

But there is yet no public company set up that would be instrumental in the regeneration of the city. Representatives of all the public administrations, ranging from the central to the local government

should become board members of this organization. Industrial brown-field sites should be handed over to this development agency, many of them in all parts of the city centers and along the rivers (Auge, 1995). These should be developed by private or mixed companies. Projects should include new hotels, leisure centers, and university campuses, just for instance. Luxury flats and public walkways should be constructed alongside both Belgrade rivers with new bridges. The value added from these operations should be reinvested in the deprived parts of the city, railway, underground, and new parks. These innovative regeneration processes should make the city pleasant and clean. This of course requires great vision and perseverance. Some people still doubt the need for the large investment in a metro, but future lines must actually be built as planned long ago, ever since 1982.

Citizens’ experiences of such a massive transformation of their city shall be worthy (Joke, Mulder, Martz, 2002). The people of the long depressed Serbian capital were pessimistic about the future of the city. But since the success of many improvements, their self-esteem recovered and their urban pride has been reinstated. It further requires the support of individual and collective citizen values, social cohesion, quality of work and democratic values. Without such values, there are no valid improvements, and without a good management, such projects could not be implemented.

Belgrade is in position to undergo structural changes. It needs to rethink its future and to rebalance its centre with its periphery.

More than other Serbian/Yugoslav cities, Belgrade was a victim of suburbanization. An agglomeration-wide administration groups 17 communes and the city. Now Belgrade has roughly one-fifth of the country’s population and is the largest urban agglomeration in Serbia. Urban sprawl with lots of peri-urban areas has brought about disorder, ugliness, unemployment and insecurity (Batten, 1995). It still eats up green natural space without proper arrangements for the population in spite of proliferation of urban plans. Current strategic urban plan is designed to create territorial coherence. Lots of local plans were developed to allocate land use. There were lots of traffic plans and housing plans. Recently, more operational plans have laid down concrete objectives: regeneration of the city centre, rivers in the city and modern public transport.

Metro plans were abandoned for a long period, but there is still a debate on the issue going on. Belgrade

needs underground trains to connect the sprawling suburbs in all directions. But more than a physical link, the metro has to re-establish a cord to the city centre and create social links between the different parts of the Belgrade agglomeration. The project is still audacious, and needs a state-of-the-art technology. Running mostly underground, the metro improves urban landscape and becomes a main feature of the public realm, conductive to citizens. Public transport allocates preference over the private car in the city centre, to bring bright streets and living squares back to the people.

Historically, Belgrade developed only on the right side of the wide Danube River. The first and the only bridge over the Danube waters, was built in 1946, and the left riverbank became populated only sparsely later. The port was built close to the city centre and still cuts off the river from the city. Architectural heritage is one of important assets and considered as a driver of future development.

The expectations of the city for the future and the present trends combined with a local urban history of over two millennia and necessitate a degree of preservation, repair, rehabilitation and renewal of the urban architectural substance that qualitatively and quantitatively far empowers new sustainable construction activities (Ajuntament de Barcelona, 2003). This entails obvious problems of urban preservation that, however, differ substantially in their essence and function. Many dwindling social, economic, religious, cultural and some other communities more or less numbered are now unable to maintain their buildings and functions. Unlike some others, many of them established only now, in the age of transition back to the capitalism. Dilapidated palaces and buildings prove difficult to adapt to new uses in an era of changing need for representation.

On the one hand there was socialist, so called self-managing society of Belgrade's past, on the other there is this transitional society now, capitalist, incorporated to the new, global world-view, born with difficulties and growing-up before our eyes, technically and economically obsolete workshops, factories, traffic and industrial facilities whose transformation for new sustainable purposes proves to be anything but simple. And there are thousands of old residential buildings whose layout and standards are not up to modern eco-requirements. Most importantly, there is a high priority to establish urban preservation and urban renewal foundation of the city of Belgrade and other cities and towns in Serbia.

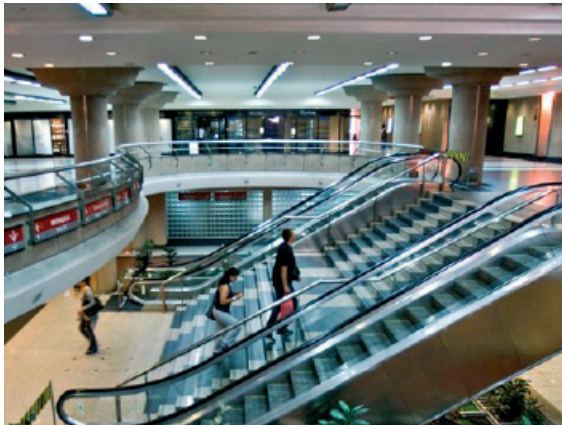
## 2. BACKGROUND

Belgrade holds the key position in Serbia's urban network and dominates country's economy. City develops but suffers from serious under-investment in infrastructure. Belgrade is surrounded by vast areas of illegal settlements. At least one sixth of the population in the metropolitan region lives in illegal settlements. Infrastructure provision and the improvement of sanitary conditions holds still a very low priority in Belgrade's urban policies. That applies to the north bank of the Danube in particular. A new strategic Spatial Plan of Serbia is being devised for the country as a whole. This gives priority to the decentralization of activities to other urban centers within the country and its regions. Surrounding cities should become focused on new development and logistic nodes. According to this integrated relocation and decentralization program, some other cities shall be transformed into new centers of industrial and commercial activities. River transport is also going to be more developed. There is yet a paradox in Belgrade existing to these days: the city is located upon two mighty rivers, but the waterfronts have been perceived as industrial backyards until now. This challenge should be transformed into an asset and river transport will for sure hold a prime position in the future transportation strategy, within and outside the city limits.

Concerning urban development, institutional reform has to be given priority. The city will be holding a key position in the regeneration of the urban fabric and, in particular, the illegal settlements. Administration is to be led by a council which devises the programs and manages them through an operational mechanism with a strong involvement in the local executive. The redevelopment strategy of Belgrade has to be based on the promotion of other cities in the country. It has to be aimed at rebalancing the urban network of the country, by connecting urban centers with complementary functions in the interior. These proposed changes should eventually benefit Belgrade itself, and alleviate its demographic weight due to its past dominance since even Yugoslavian days, which had generated unsustainable and continuous rural exodus.

In the sixties and seventies of the last century western and southern parts of Belgrade were the playgrounds of the first significant urban expansion. At the time, economic and social progress seemed unstoppable and almost unlimited. New semicircle of dormitory suburbs and industrial plants grown in the west part of Belgrade and in the southern ends of the city,





**Figure 3.**  
Metro Underground Station (Vuk's Monument, designed by architect M. Lukić, 2005)



**Figure 4.**  
Belgrade's Old Fairground as built in 1938, now in dilapidated condition, should be commemorating the Second World War tragedy as German and Croatian fascists' Concentration Camp where thousands of Serbs, Jews and Roma were brutally killed

enclosing on almost full three sides (west, south and east) already densely built urban area, just as at the same time happened in many other European cities. North, Trans Danube Belgrade, remained to wait and here is the opportunity to welcome it. There is certainly a great need for a future ultra-modern sustainable Trans Danube Belgrade, and commercial indicators could be easily justified for rapid and more valuable development. In that case the Great War Island, as future large park and recreational area for the entire metropolis, remains at the heart of Belgrade.

First roots of sustainable urban planning are actually in the past of master planning in Belgrade. Changes and amendments to the General Urban Plan of Belgrade until 2002, adopted in 1985, were made in order to “create conditions for the rational construc-

tion of the city, in accordance with the actual material possibilities,” as stated in the text. The aim was to make spatial organization more compact by increasing the density of construction, new zoning and reduced network of primary roads, primarily in relation to the previous solution from 1972. However, reducing urban visions never, not even this time, proved to be usable answer to the real problems of a city and country.

Master Plan of Belgrade 2021, adopted in 2003, has, as its authors stated, “the basic characteristics imposed by the transition of society, new social framework, market and democratic relationships: flexibility rather than rigidity, dynamics rather than statics” (Group of authors, 2003). That is, as the authors themselves further state: “a plan that supports the processes, rather than a plan that supports the «image»”. Well, here is of course an objection, necessary enough, or otherwise we should throw down the water everything what was very much guided by “the image of a city”, what many great urban planners managed to achieve in the cities across Europe and the world: Paris, Luxembourg, Venice, Barcelona, Budapest, Moscow, London, New York, Cape Town, Rio de Janeiro, etc. “Image” is never in collision with “process”. An image always follows a process. That is unavoidable nature of things. An opposite order, i.e. situation in which the process will follow an image is not possible (Padison, 1993). Or, let us say, there is no process without the image, or image without a process.

They just have always been a part of a unique urban vision, as in the case of Belgrade already happen in the works of urban planners as Josimović, Dobrović and Somborski, and as was clearly done by deeds of Haussmann, Serda and Krier, for example. Observation of “backwards”, as it is at this point necessary, is a precondition to be able to see “in advance”. And that is exactly what builds a vision, without which the planning for a sustainable city cannot be possible. Anyway, globalization and the new Serbian Danube orientation, followed by rapid transitional development, require many changes of visions of the Master Plan of Belgrade 2021, which its authors have unfortunately not identified on time, or they were probably prevented to do so by certain politicians.

### 3. IN THE FOCUS

The city should not only remain loyal to tradition, but modern and contemporary, lively city. It has to maintain all good traditions and its own identity, but also to establish a new, partly even unusual accents in the future development. Establishing a balance between these two, at a first glance very opposing positions, and the transformation of their seemingly fundamental contradiction in effective urban planning and design, in an exciting new sustainable architecture, cannot be an easy task. To the extent that still stays slightly larger than in other European capitals, primarily due to some delay in the transition process, there are some substantial efforts in Belgrade today.

But it is still noticeable that in many places where officials make decisions one can also pretty easily see that some continue to avoid further progress, in the full meaning of the word, making constant efforts to delay proper responds to requests for new sustainable solutions that are most demanding for the time now.

Right here, in avoiding of growing need for innovative approaches primarily in the field of urban planning and architecture, specific reasons lay down for the development of Belgrade in waves. This situation has, however, certain advantages too: some of the urban and architectural fashion, like postmodernism, for example, passed but left behind no serious damage. This basic dilemma in Belgrade is clearly expressed especially in recent years, since some substantial reconstructions and revitalizations, but sometimes only “beautification” happened, mainly concentrated in the city center. And now, at the beginning of the third millennium, Belgrade is facing circumstances that provide an opportunity for decisive step, necessary to its future development.



**Figure 5.**  
Pink Television Headquarters in Belgrade, at Unknown Soldier Street (designed by architect Aleksandar Spajić, 2001)



**Figure 6.**  
New Belgrade City Centre, West Side of Mihailo Pupin Boulevard. The outlook of a metropolis

Interest of urban planners and politicians is still primarily concentrated in the central parts of the two banks of the Sava. Their adjustment to the demands of tourism is also evident through beautification, urban cosmetics and continuing urban “museology” interventions, but they should actually be on the move much more towards the periphery and needs of modern urban development as a whole. Chances that Belgrade is now facing are based primarily on its geopolitical position, historical experience on its disposal, cultural opportunities, and active political concept of living here and now and also for the future (Keiner, 2005).

To make a city sustainable metropolis, it must have a high degree of urbanity and cosmopolitan atmosphere, to comprehend and apply a clear distinction between dream and reality which seeks to live by. There are certain means that Belgrade can use to feature the new metropolis for the entire southeast Europe and beyond, i.e. events and venues of the European and world level that happen in culture, science, economy, sports etc. All that offers to Belgrade to build a sort of “bridge to the future”. Certain international events and shows of the kind, organized by the city and country in the near future, could also provide a decisive step that would enable the descent of Belgrade to rivers Sava and Danube in particular, and the crossing of this major European river, which would further enable the city to continue its healthy development in the century which has recently started. Directing the main development axes of Belgrade mostly to the north and the north east, even without the initial large events, is possible and desirable today more than before. The development of these two directions is already happening for a number of

decades, but almost completely ad-hoc, in “informal”, illegal form, and without almost any influence of urban planners, which is one of the nonsense’s in Belgrade’s past and present.

Fortunately enough the city center occupies an elevated plateau. Otherwise many of its visitors could not even see how much of it rests on the two huge rivers. Across from the Belgrade Danube amphitheater, which on the southern bank follows the river in the length of more than 7 km, with widths up to 2 km, it is possible to find suitable land for the development of new, north part of Belgrade, the third in a row in the history of the city. On these soils it is possible to situate the new development concepts that could see the solutions already obtained in similar areas of other European cities like Barcelona, Berlin, Bilbao, Bordeaux, Prague and Vienna, but Curitiba, Dongtan, Masdar, Ras al Khaimah outside Europe as well. Forces that resist change of this kind in the city of Belgrade are still numerous, and some are not different from those which were against reasonable progress many decades ago when the idea of New Belgrade, on the left side of the Sava River seemed as unnecessary as this one today. That will make possible to stop still almost completely spontaneous urban development in that vast territory of Belgrade, which is of a first-class importance for sustainable development and full balance of the city as a whole.

Intention to direct the development of Belgrade toward and across the Danube emerged on several occasions over the past decades, but has always remained hampered, disabled. That was the case after a successful regulation of the Danube and other rivers and canals on that side of the big river too. And not only that a proper city has not yet crossed the Danube, until now, but it is not released to the river, although its center in some places stays less than one kilometer away from the coast of the river.

This distance increases downstream but nowhere too much, and remains, together with ways of the land used along the Danube coast, durable barrier that is maintained and still maintains almost complete alienation of Belgrade from this mythical river. Very similar situation is with Sava side of the city, except for New Belgrade which is long enough pretty sustainable and a very successful fact. This confirms the fact that the normative power of latent logic of the urban development and the actual situation is usually stronger than any kind of fashion in urbanism.

If the city had an opportunity twenty or thirty years ago to see works from never envisioned and therefore never done urban competition under the title, for

example: “North Belgrade”, “Third Belgrade”, “Danube Wreath” or similar, with the task to the competitors to offer their visions on this part of the territory of Belgrade, the present comparison of these possible works with the situation in that territory as it is now, where the real regular city does not exist yet, would be probably amazingly striking.

Designs from the seventies on this given topic would be certainly completely different from the situation as of today, but probably not far from the desirable situation. Organizers from the seventies would probably fill the whole space with high-rises and megastructures of different sorts, characteristic for that time and not much different from what one expects around today. Designs from the eighties on this given topic would be also completely different from the current situation, but most probably from the situation that would be desirable today too.

Planners in eighties of the last century would probably imagine and design parks and greenery with buildings in the low strings scattered throughout, a sort of garden cities with close connections to main highways (Campbell, 2003). But today the place is still occupied almost entirely by buildings made out of the imagination of those who are not very good standing builders, not architects, and especially not urban planners. But in their place, probably, in accordance with the time in which the city lives now, one should expect skyscrapers and other highly sophisticated buildings of various purposes, mostly commercial, and residential, hotels and other, in high density. This is what Belgrade needs today, and this is what citizens expect from Belgrade here and now, but not those who keep still their rigid way of thinking.

However, the displacement of the focus of interest of the city’s and Serbian political structure from the current city center and accelerate the development of neglected Sava amphitheater, as well as its much larger and potentially more worthy counterpart on the Danube, Danube amphitheater, and especially the entire northern trans Danube urban periphery still has not happened.

Anyway it would be a phenomenal change in relation to planning ideology of the eighties of the past century, which is for the relevant structures probably still valid. It should be noted that the tourism potentials of the urban core and other parts of the territory of Belgrade are still not fully adapted to the needs and used. But outside of these “sacred” zones, and above all on the outskirts where both banks of the Danube in Belgrade today still belong, everything is still going on in the ways that are completely different from nor-



mal, that is to say without idea and design. One should see whether the recent intentions of the Danube amphitheater give birth on the spot, and how. But, regardless of the official Belgrade, the displacement of the focus of urban development from the overpopulated west and much more overpopulated south to the north of the city, to trans Danube Belgrade, has been happening for decades and will continue, because it must naturally be so and not otherwise. All this takes place very quickly and effectively, and there are still very few bright examples of building on that side.

All that fast and visible changes would be quite normal, and faster and more evident providing proper idea and sustainable design as the basis (Kronenburg, 2007). This primarily refers to the necessity of a valid use and expansion of city railways network on this side of the Danube, and elsewhere in the territory of Belgrade. This expansion should be supported by intelligent planning and followed by local urban centers associated with the means of mass public transport (Kenworthy, 2006). Completeness of the metro system would not only enormously increase the importance of the distant suburbs, but the city center itself as well.

Construction began on March 22, 2006. The shopping mall is managed by Delta City, owned by Delta Holding, a Serbian conglomerate. Designed by Israeli architects MYS, the project cost €74 million. It opened its doors to public on November 1, 2007. With floor area of 87,000 m<sup>2</sup>, it is the first shopping mall of its size in Serbia. Its total gross leasable area is 30,000 m<sup>2</sup>. The mall also includes 15 restaurants as well as 3 restaurant chains. Austrian Cineplexx operates multiplex cinema with 8 screens. There is also a bowling alley, cafés, fast food courts, children's playgrounds, and 130 other retail units. The largest tenant is Super Maxi. In total, there are over 1,700 parking places on five decks above the ground, and one underground. The mall is located on the same block as the University Village that was home for thousands of athletes for the 2009 Universiade. Delta City can serve 200,000 people within a 10 minute walk, and 600,000 within a 10 minute drive. Although it is the first true shopping mall in Serbia, Delta City will probably have lots of competition in the near future. Ušće Centre as part of Ušće Tower is larger than Delta City; it opened at the end of March 2008.

Another important factor is a long ago implemented construction of canals and river regulation on the north side of the Danube, including embankments along the mighty river, but still not along the great



Figure 7.

New stadium Belgrade Arena in New Belgrade is an indoor arena designed as a universal hall for sport, cultural events and other programs. With a total space that covers 48,000 square metres, and an official total capacity of 20,000 seats (for handball, volleyball, basketball and other events), it is one of the largest indoor arenas in the world. Maximum capacity can be up to 20.000 - 25.000, depending on the event being held. Its cost was estimated at €70 million



Figure 8.

Delta City is a commercial, office, and entertainment complex in the center of New Belgrade, located next to the New Belgrade Railway Station and Jurij Gagarin streets, in Block 67

lake. Landscapes for recreation are very uncommon in most large cities, but not in Belgrade. One of these, with huge dimensions, could relatively easily be arranged and fully equipped as a kind of “buffer zone” between future metropolitan areas in the north part of Belgrade and the river which separates it from the south.

The necessity to design both banks of the Danube, partly built and partly as a promenade, existed in Belgrade long ago, but have clearly been observed by the authorities only recently. It is hard to expect modest dimensions of construction in this region. Case of Vienna, where the Trans Danube territory is in many ways similar to the Belgrade's one, can be very encouraging and useful (Stadtplanung, 1998). The needs of the city, as it is now, require certain measure: high rises and high density of buildings. It will



require some change in Belgrade's architectural typology: the traditional almost odium toward skyscrapers will have to be overcome at least in the relevant places, in the interest of development of the city and the whole country (Jabareen, 2006).

Building land on that side of the river, currently covered by illegal settlements and slums, is simply crying out to be taken into consideration, because it is for Belgrade what Defance is to Paris, or what UNO-City to Vienna and Docklands to London. These cities' and states' governments are surely very aware of their respectable material and other incomes for the benefit of these European cities and countries. What Belgrade now almost desperately needs too, is certain very determined and even spectacular step forward. The plan that would meet the future needs of the metropolis at the confluence of the Sava and Danube, the one Belgrade still does not have, must provide very certain axes of future development and areas of future construction, which are acquired in areas of future urban centers all three around the confluence, and determined in accordance with the guidelines of sustainable city development in emerging transitional and future living conditions, work and recreation. Such a plan would contribute to the future development of Belgrade with very much needed stability, which would be based on a clear set of directions of its growth and development in quite certain directions. "Green wedges and belts" placed between these axes, as in concentric circles around the center, would penetrate the whole metropolis, and as such would represent almost the core of the city urban policy and urban planning, which would have allowed the development of instruments of a very much needed "gentle urban renewal" (Milošević, 2006).

Trans Danube Belgrade, as the best response to the Danube orientation of the city and the whole country, already has systems that have provided protection from high waters of the river, including streams and canals. That can only add to the charm of the future northern third part (actually a half of the city's urbanized territory!) of Belgrade, and turn it into a sort of Pannonia Amsterdam.

Future construction activities in this area have not only great commercial value in the areas of retail business, residential and manufacturing buildings and units, as well as certain "green-field" shopping center complexes that there already exists, but to Belgrade as a whole they would enable significantly better protection from floods. In addition, in certain places, mostly along the current and standing waters,

they would create giant recreational areas in the vicinity of densely developed metropolis. Significant contributions could come from the city and state bodies, and organizations of large events in economics, culture and sports, facilitating new capital investment in this and other areas of Belgrade (i.e. Olympic Games, World Exhibition – Expo in the sphere of ecology and environmental protection, or even Disneyland, research and technological industrial parks and exhibitions). Such efforts would certainly have a decisive influence on the development of all kinds. Such "projects of the century" would be very appropriate to the title, which not very long ago the city acquired for the southeast of the continent.

From this point of view, the spaces along the river Danube on both its banks in Belgrade in the near future can and should have more important and much different use than it is now, as huge city's backyards. In this framework, in the present moment, the amphitheater area of the Danube, to which belongs the whole area has an essential significance. In fact it is not much different from the one on the other side of the city center, which has been called Sava amphitheater. But unlike the Sava amphitheater, this natural amphitheater along the Danube as such until recently was rarely mentioned, certainly not because it equally does not deserve, as potentially quite valuable space, not only for port, industrial and various commercial activities, but for the purposes of housing and entertainment as well. Danube amphitheater is much longer than its Sava counterpart and deeper towards its background, thus the area several times larger. That of course increases its total potential in the development of the metropolis.

As Sava amphitheater with its two sides, on the two banks of the river, connects west and south east parts of Belgrade, so the Danube amphitheater connects south and north parts of Belgrade. That later part must emerge in a proper sustainable outlook as soon as possible. For some time behind us were the circumstances in which the construction of the "Third Belgrade" on the north side of the Danube was not there "due to the possible threat of the Warsaw Pact countries". That might be an important reason to determine state of neglecting and dilapidation in which today Danube amphitheater still exists, located directly along southern shore of the Danube, across the river from the city. Another reason of neglecting surely enough is a huge toxic waste area that stretches down under a very thin layer of the ground, covering fourth part of the Danube amphitheater.

#### 4. FUTURE RESEARCH DIRECTION

One of the key priorities of our globalised world is to build and transform our cities in a coherent way (Williams, 2000). Citizens are also convinced of the important role and great responsibility that city leaders and urbanists around the world must assume. There is a growing need for creative urban management and leadership, and a platform for cooperation between city leaders and urbanists to share their own experiences in building and transforming their cities. Planners are not alone in this endeavor, and they need to cooperate with city and state administrators. Of great importance for planners is the dialogue and cooperation with elected members and in particular the mayors of cities who alone can guarantee the legitimacy of planning decisions.



**Figure 9.** Tašmajdan (Stone Quarry) Park in Belgrade, founded in 1958, covers an area of 11 ha. It was recently reconstructed by Azerbaijani and Serbian Government. Today appreciated as an excellent outdoor recreation public space, frequently visited by Central Belgrade inhabitants

The 21<sup>st</sup> century was turning into a global world of cities in a global economy and that competition was increasingly taking place among cities, not much between countries (Waiken, Ryser, 2005). Cities are also the predestined spaces for social cohesion and prime potential contributors to the sustainability of the country, and the planet. Democratic societies have established the necessary political leadership to sustain city management. Political proponents are key assets of cities and city-regions.

Urbanism and urban policy are surely not a zero-sum game. Sole reliance on the bureaucratic administration of a finite municipal budget has a very limited effect on the transformation of cities. The most attractive cities are those not only endowed with geographic and historic advantages and attractions, but those with a strategic vision for their future, like Vienna (PlanSinn, Imlinger, 2010). Cities with intelli-

gent projects for their future, committed leadership and the capacity for dialogue and inter-institutional collaboration are the ones experiencing a real urban sustainable evolution. Stunning changes with long lasting positive effects depend on the power of leadership beyond usual boundaries. What is needed is magnetism to mobilize both the state and private sector towards a shared vision for the future of their cities. Cities should become better places to live, work in and enjoy (Group of Authors, 1996).

Consensus is vital for the implementation of any strategy. However, the devil is in the detail, contained development inside the city core created enormous conflict especially with those whose property lies just outside the border. These property owners would like to see their area included in a development zone which would enrich them considerably. Strategic plan aims to catch up with years of neglected and underdeveloped infrastructure: a new half-ring road and a railway to link the airport to the city, for instance. Belgrade has an existing public underground transport to certain extent (three lines currently, but much underused due to the pure railway management), and would be able to afford to build it further on to make transport system fully operational and entire city people-friendly. It will civilize the urban environment, create a more attractive physical setting and lead to a better use of public spaces (Gastil, Ryan, 2004). Belgrade's natural and urban environment impresses visitors. Its current tourist success is partly due to its complex historic mix. But still its transport system mostly relies on trams and buses which make the city streets and squares congested.

Economic growth brought problems such as rising house prices. Housing is pretty expensive in Belgrade because of the housing shortage and declining household sizes, which have dropped dramatically with increasing affluence in recent years. There is also a legacy of social housing problems. Developers should be obliged to set aside certain percentage of every development for controlled housing, half affordable and half social housing. This is the way to stop any ghettoisation within the city limits.

Another problem of economic success is immigration, prevalent in most recent decades of the civil war in Yugoslavia. There is an estimate of some 300 thousand refugees from other former Yugoslav republics settled in Belgrade since 1991, another 400 thousand in the rest of the country. But the city administration keeps concentrated on the hearth of the city and the river banks should be rejuvenated to add value rather than detract from Belgrade. Each regeneration area

taken or not has its own personality in the core city. The heart and soul of the city is considered sacrosanct. Fortunately enough, Belgrade has never had enough money during its expansion years to completely destroy the fabric of its historic districts. Thus, it is still able to restore its heritage, of which citizens are protective and proud, and which visitors cherish.

The docklands on Sava and Danube have not yet been regenerated, but the jewel in the crown of the city would be a new financial and information technology center to attract a large number of well-paid jobs back to the city. Belgrade is still to develop a number of public spaces, a science, digital and media center, some sort of digital hub in cooperation with the industry and universities. That would be a contribution to evolve the city from a run-down to one of the most desirable locations for residents, companies and tourists. If decision makers are getting it right, Belgrade is potentially one of the finest European cities.

Creation of infrastructure can prevent the city from bursting out of its seams despite its continuous rapid growth, and make Belgrade a pride of city planning. Contributions to the improvement of cities have to overcome the distrust which citizens harbor against major urban changes (Keiner, 2005). But every city, regardless of finances, physical state and scale can make significant and even substantial changes. In Belgrade, overwhelmed with traffic congestion, pollution and other urban problems, decision makers often lack hope and vision in making proper solutions happen. The current non-desirable state of the city should be changed, with necessary ingenuity that is surely possible. On the other hand, what might be the case here and now is also that too much money leaves little to imagination of both politicians and planners. But it is also important to believe that change has to start now, and that still is no case in Belgrade. It is now necessary to make a start and show citizens some real steps and concrete sustainable and eco-solutions, allowing for corrections later. With 2.5 million inhabitants in Belgrade metropolitan area and 1.7 million in the city itself and despite its growing population and size, the city and its region must be able to make important changes (Allen, Massey, Cochrane, 1998). First of all, it needs focus on mobility, but it should be keen to solve other problems alongside its transportation initiatives, such as improvement of its environment. Every urban action should be approached with full awareness and co-responsibility in mind.

Belgrade still does not have enough funds to complete its full transport system; hence it faces impor-

tant transportation problems. Many of them are likely to be self-inflicted by previous policies. Its development is still based on the private car. The city is not yet fully cut up by roads, but even then the question is asked whether the city should adjust to car or the car should adjust to the city. In recent times, the city has reversed its policy of demolition of historic buildings to make space for new roads and is restoring the historic buildings. Another example is the removal of the trams inside the so-called "circle of tram number two", which were five to six decades ago considered to hinder road traffic. Nobody yet considers reinstating tracks that were removed long ago to give way to a car-based modernity.

Thus Belgrade still looks forward to envisage some forms of co-responsibility within the country and abroad. The city might decide on the itinerary and system's design while the private sector might take care of the rolling stock. The strategy should be a high-quality transport system which would be paying for itself without requiring any subsidies. It must be achieved by pegging the tariff at an affordable level without compromising quality. The project must be conceived as an inherent part of the city structure and its growth, integrating land use and transportation throughout the city, and incorporating mixed development for living and working (Dubai Municipality, 1999). Ever since the first project for the underground in Belgrade in 1982, high-rise buildings were permitted only alongside the public transportation system. The operational capacity of a proper frequency must be guaranteed by a special boarding system. No two systems should compete in the same place, and only a very integrated transport system can achieve desirable door-to-door transport. This meant partnership agreements with other modes of transport, mostly on the surface, to prevent them from competing with the existing and future metro-system, together with proper alternatives to accommodate private car user needs in the very limited public city space. Belgrade, as other big cities, must be able to curb car use by maintaining good relations with drivers while preventing them from dominating life as it now still happens (Newman, Kenworthy, 1989).

Another initiative to make the city more livable is to remove railway tracks from the rivers and make both of them, Sava and Danube, accessible to pedestrians. Speed is of the essence to circumvent bureaucracy, avoid political problems, and combat and win over-critical minds. The city relies on individuals to improve the environment by providing alternatives. The convenient public transport system helps reduce



car use. People should be taught waste separation for recycling. Together with a country- and city-wide campaign, these would produce staggering results (Group of Authors, 1996). Determination that no place in a city needs to be redundant and ugly, Belgrade might fill its “wounds” and reinstate them into attractive public open spaces. Reinstated landscapes over waste filled sites might be inaugurated back to the city life as university campuses and science parks, for instance. Events, like international theater and music festivals, can be used to kick-start change.

The drive to continually improve quality of life is a permanent challenge for innovative city management. What is generally needed is a combination of speed with imperfection and flexible adjustment to overcome the decision makers’ own insecurity, and to produce better results than long drawn-out projects and decision-making processes. Solidarity might be a key driver of the future. Value of the people and people’s needs should prevail over the value of the money and financial speculation itself.

Research, projects and designs made so far by the author are actually a small but important contribution to what citizens now need for Belgrade as a metropolis. Those are to be marked mostly with 4 “e”: economy, environment, education and ecology. They should be asking for realization of all sorts of sustainable eco-development (Sorensen, 2004). This approach includes cultural and natural resources protection, healthy and stable (economically and socially balanced) affirmation of the environment. The city, by its natural characteristics, richness of culture and historical heritage and international significance offers ideal possibilities for sustainable and ecologically intense projects like “small-scale” eco-cities, “adaptive” eco-cities and even master-planned eco-cities (Rapoport, 2009). But these projects, within and outside “Third Belgrade”, would be only possible if the city and state’s governments adopt a strategy of massive investment into clean and smart technologies, and provide massive incentives for ecological design, and ecological retro-fitting, of Belgrade and other cities in Serbia. This has not happened yet.

There is still an ongoing debate about the urban development of Belgrade, although the city, after many turnovers in its urban tectonics, possesses an effective main act in this sphere, i. e. the “Master Plan of Belgrade 2021”, since 2003. Globalization, intense transition and the development of the city however, accelerate changes of many aspects of the plan, the fact that has not been seen and properly

considered on time by its authors (Slatis, 2004). Three fundamental issues essential for the time and circumstances in Belgrade, are completely omitted.

First of them, “Project Metro Belgrade”, i.e. an underground railway network for the growing metropolis, despite its necessity to Belgrade, remains in abeyance and still outside the official legislation (Jovin, 1982). Ever since it was officially dropped out in 1982, there is a persisting awareness that Belgrade must turn back to this capital project and further investments. The misunderstanding of the essential determinants of development of the metropolis in our management structure is still ongoing. And that applies to both, the city and state government, ever since breaking years of 1992 and 2000. Second one is a network of rapid urban roads on the ground that should as much as possible follow the network of underground railway. And the third one, Belgrade on the northern coast of the largest European river Danube, but a real highly eco-urbanized and not just mostly “illegal” existing close-to-slum city as it became in a socialist society of the past, should become a capital destination for European and other international and domestic capital investment (Register, 2006).

There are some issues of the development and other topics that are particularly important for the main Serbian (Yugoslav!) city as, more recently, the “City of the Future of Southeastern Europe”, such as housing, urban renewal and war immigration.

## 5. CONCLUSIONS

Danube oriented Serbia and its capital city should actually mirror their desirable development in the two rivers as essentially more than two “water boulevards” in the central zone of metropolitan Belgrade, located between three regions of Serbia (Stojkov et al, 2004). With this approach it is possible to stimulate reorganization of existing coastal industries and technologies, environmentally favorable orientation toward technology, and real and sustainable development of cultural, nautical and weekend tourism all along the Danube (Commission of the European Communities, 1990). Such a solution would ensure not only a sustainable spread of the city on the northern coast of the Danube, but the descent of Belgrade on the river throughout its southern coast, use of valuable building land, the integration of different purposes, harmonized various forms of transport, preserved and protected environment, enhanced existing and additional new greenery, and establish-

ment of major new parks and recreation areas. Access to both banks of the Danube is not only easier, but finally it seems very attractive for all.

What citizens of Belgrade need now is a proper answer to a range of fundamental questions of their sustainable future in the city, that were raised long time ago: what sort of the city they would like to have, what sort of changes they would like to support to improve their lives, what should be the main perspective of use of their natural resources and eco-technologies within the built and natural environment for the people but for all other species as well, what sort of engineering and construction support to eco-design and planning should work better for human economic, social and healthy development and sustainability, and how to improve market performance through trust. There is also an issue of a more valuable and sustainable development, intelligent use of smart, green and sustainable technologies, resilient communities of all sorts and ranges, smart and persistent application of eco-technologies at all levels of management and government in the fields of legislation, planning and design.

Possible benefits of the sustainable eco-design and planning for Belgrade and other similar cities in the future are many. They are various kinds, including: economics benefits (such as benefits and incomes from and for tourism industry all around the city and elsewhere in the area, also as benefits and incomes from and for the residents who serve the facilities and use a recreation in open space, and substantial increase in real estate values); environmental improvements (such as aesthetic values of ambient, also as quality of environment); education impacts (such as educating people in the direction of proper use of their own natural and cultural environment); ecological impacts (with a distinction between local, short-term effects – notion of the environment – and non-localized long-term effects – notion of ecological balance; such as a reduction in dependence of energy, saving non-renewable resources); cultural values promotion (such as emphasis culture heritage); social advances (such as democratization of people's mobility, greater autonomy and accessibility of all facilities to both young and elderly people).

Fortunately enough, there is a growing use and impetus of all sorts of new eco-technologies in architectural, urban/rural and spatial design and planning on our disposal. That applies to the environmental, information, geographic information and communication technologies.

The realization of the projects of sustainable eco-

design and planning for the future of Belgrade implies few steps: mapping existing needs; researching existing planning documentation; identifying possible connections; creating eco-designs and plans, of which there are just few strictly eco-technological, and not a single one retro-fitting with eco-technology yet, and last but not least creating complex all-inclusive sustainable environment.

There is an issue of scarcity of space and livable land on human kind's disposal, in as much as the one of a number of negative effects of development and more intensive exploitation of land resources in all areas of societal and economic life of the communities. We are now facing a challenge of sustainable settlement, land-use and transportation, energy scarcity and saving, in as much as fast ecological, technological but social changes (Todaro, 2000). Looking at spatial, urban and architectural design and planning that shows us a number of arbitrary and inappropriate paradigms, unrelated and unbalanced connections between physical appearance of architectural and urban planning and design, landscaping structures, capabilities, capacities and possibilities, one must notice an urgent need to correct and properly direct that entire range for the benefit of local and global communities.

## REFERENCES

- [1] *Allen J., Massey D. & Cochrane, A.*; Rethinking the Region. London, Routledge. Ajuntament de Barcelona (2003). Urban Renewal in Poblenou District of Activities: 22@bcn. Barcelona, Ajuntament de Barcelona, 1998
- [2] *Augé M.*; Non-places: An Introduction to Anthropology of Supermodernity. London, Verso 1995
- [3] *Batten D.*; Network Cities: Creative Urban Agglomerations for the 21<sup>st</sup> Century. Urban Studies 32(2), 1995; p.313-327
- [4] *Breheny M. J. (Ed.)*; Sustainable Development and Urban Form. London, Pion 1992
- [5] *Campbell, S.*; Green Cities, Growing Cities, Just Cities? In Fainstein, S. & Campbell, S. (Ed.), Urban Planning and the Contradictions of Sustainable Development in Readings in Planning Theory. Oxford, Blackwell 2003; p.435-458
- [6] Commission of the European Communities. Green Paper on the Urban Environment. Brussels, European Commission, 1990
- [7] Dubai Municipality. Dubai Urban Area – Structure Plan. Dubai, Planning & Survey Department, Planning Studies Section, 1999

- [8] *Frey H.*; Designing the City: Towards a More Sustainable Urban Form. London, Taylor and Francis; 1999
- [9] *Gastil R. W. & Ryan Z.* (Ed.); Open – New Designs for Public Space. New York, Van Allen Institute, 2004
- [10] *Graham S. & Simon M.*; Telecommunication and the City: Electronic Spaces, Urban Places. London, Routledge, 1996
- [11] Group of Authors; Spatial plan of the Republic of Serbia. Belgrade, Institute of Architecture and Town Planning of Serbia, 1996
- [12] Group of authors; The Master Plan of Belgrade 2021. Belgrade, Official Gazette of Belgrade, XLVII, 27, 2003
- [13] Group of Authors; The Regional Spatial Plan of Belgrade Administrative Area. Belgrade, Town Planning Institute of Belgrade, 2004
- [14] *Jabareen Y.*; Sustainable Urban Forms: Their Typologies, Models and Concepts. Journal of Planning, Education and Research, 2006, p.26:38-52
- [15] *Jenks M., Burton E. & Williams K.*; The Compact City – A Sustainable Form? Oxford, Oxford Brookes University, 1996
- [16] *Joke B., Mulder A. & Martz L.* (Ed.); Transurbanism. Rotterdam, V2\_Publishing, NAi Publishers, 2002
- [17] *Jovin B.*; Project Metro Belgrade. Belgrade, Architect's Documentation 1982
- [18] *Keiner M.*; Managing Urban Futures – Sustainability and Urban Growth in Developing Countries. London, Ashgate 2005
- [19] *Kenworthy J.*; The Eco-city: Ten Key Transport and Planning Dimensions for Sustainable City Development. Environment and Urbanization, 2006, 18(1), p.67-85
- [20] *Kronenburg, R.*; Flexible – Architecture that Responds to Change. London, Laurence King Publishing Ltd. 2007
- [21] *Milošević P.*; Belgrade, City of the Future of Southeast Europe – New Guidelines on the Management of City Development. In A. Kostić (Ed.), International Conference on Modern Problems in Construction, University of Novi Sad, Faculty of Civil Engineering Subotica: Vol.15. Architecture and Urban Planning, 2006, p.580-595
- [22] *Newman P. & Kenworthy J.*; Cities and Automobile Dependence: An International Sourcebook. England, Gower, 1989
- [23] *Padison R.*; City Marketing, Image Reconstruction and Urban Regeneration. Urban Studies, Vol.30(2), 1993, p.339-350
- [24] *PlanSinn & Imlinger, B.*; Vienna Know-How: Urban Technologies and Strategies. Vienna, Tina Vienna Urban Technologies & Strategies GmbH, 2010
- [25] *Rapoport E.*; Engineering Sustainable Living: Masterplanned Eco-cities and the Power of Design. Paper presented at Eco-city World Summit, Istanbul, 2009, December
- [26] *Register R.*; Ecocities: Rebuilding Cities in Balance with Nature. Canada, Gabriola Island, New Society Publishers, 2006
- [27] *Sassen, S.*; (Ed.); Global networks, linked cities. New York, Routledge, 2002
- [28] Stadtplanung Wien. Werkstatt Metropole Wien. Wien, Stadtplanung, 1998
- [29] *Slatis P.*; On Sustainable Urban Development: Challenging the Paradigm Economical as a Global Model for Urban Change - Human Rights and Urban Vision: An Architect's Manifesto. Department of Built Environment and Sustainable Development (BESUS), Chalmers University of Technology, 2004
- [30] *Sorensen, A. et al.*; Towards Sustainable Cities. London, Hampshire and Burlington, VT: Ashgate, 2004
- [31] *Stojkov, B., Vučićević, A. & Đumić, A.*; Regional Spatial Plan for Administrative Territory of Belgrade. Belgrade, Territorium No.1, 2004
- [32] *Todaro, M.*; Ecomic Development. Essex, Addison Gate, 2000
- [33] *Waikien, Ng & Ryser, J.* (Ed.); Making Spaces for the Creative Economy. Madrid, ISoCaRP Rewiev, ISoCaRP, 2005
- [34] *Williams, K. et al.*; Achieving Sustainable Urban Form. London & New York, Spon Press 2000