



Reshaping of Urban Open Spaces and Waterfronts in Post-Socialist Cities

The Case of Tbilisi

Davit Asanidze

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Supervisor: Eng. Pedro Luis Janela Pinto

Supervisor: Prof. Jorge Manuel Gonçalves

Jury

President: Prof. Maria Beatriz Marques Condessa

Supervisor: Eng. Pedro Luis Janela Pinto

Members: Prof. Maria da Graça Magalhães do Amaral Neto Lopes Saraiva

Prof. Ana Isabel Loupa Ramos

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ABSTRACT

Cities which have gone through the long period of integration in the ex-Soviet Union naturally incorporated a set of urban, environmental economic and social principles that are now under pressure. One of the issues that now need to be addressed is the relationship between city and river, now subject to a very different set of written and unwritten rules from that of a few decades back.

The early part of the 1990s was a very difficult time for Georgia. In its first few years as an independent country political and social turmoil hampered the transition to a new social structure, and led to severe economic constraints that lasted several years. At the turn of the XXI century the country was able to gradually overcome stagnation. In the case of urban planning, this period saw the introduction of new legislation which provided the foundation for a new era of urbanism more attuned to the reality of modern European urban legislation and the new political-economic reality.

At present, territorial planning, as a single system of state spatial planning, is highly unstructured and has very little practical influence, with several urban planning decisions being made with little regard for formal urban planning agencies. One of the key issues in the capital city, Tbilisi, is the lack of social recreational zones, which is also expressed in the loss of public space along the urban riverfront.

The dissertation explores the changes to the economic and social conditions and how this influenced urban policies and planning standards, during the Soviet-era and in Post-Soviet years. It provides international examples of riverfront interventions. An analysis of positive elements, problems to avoid, and opportunities identified in those examples is used as a basis to produce a set of recommendations that could influence positively the way riverfront interventions and Georgian town planning are conducted.

Keywords: Urban Space, Riverfront, Urban Rehabilitation, Post-Socialist City, Tbilisi.

RESUMO

As cidades da ex-União Soviética desenvolveram-se sob influência de um conjunto de princípios urbanísticos, socio-económicos e ambientais que estão, desde a mudança de sistema político, sujeitos a uma forte pressão de mudança. Num contexto onde diversas regras escritas, ou práticas informais, são hoje postas em causa, um dos aspetos que requer uma nova abordagem é a relação entre rio e cidade.

O início dos anos 90 do século passado foi um período muito conturbado para a Geórgia, Nos primeiros anos enquanto nação independente, a instabilidade política e social foi um obstáculo a uma transição mais suave para um novo modelo social. Esta transição foi acompanhada por graves restrições a nível económico que se estenderam por largos anos. Na viragem para o séc.XXI, o país foi finalmente capaz de progressivamente vencer a estagnação económica. Durante esta fase, foi introduzida nova legislação, finalmente capaz de servir de base a uma nova era de desenvolvimento urbanística em acordo com a realidade contemporânea na Europa Ocidental, e mais ajustada ao novo regime socio-político.

Ainda assim, o sistema de planeamento do território está ainda muito desarticulado e desadequado à nova realidade. A capacidade efetiva de influência do mercado imobiliário e mecanismos de desenvolvimento urbanístico, por parte do setor público, é ainda fortemente limitada, com várias decisões de desenvolvimento urbanístico a serem tomadas à revelia das entidades (teoricamente) competentes. Um dos focos deste problema situa-se precisamente na capital e maior cidade, Tbilisi, onde vastas áreas de espaço público têm vindo a ser transformadas, com criação de zonas privadas ou concessionadas e redução das áreas destinadas ao lazer.

A dissertação explora as mudanças das condições socio-económicas e como estas se podem relacionar com a transição das políticas e padrões urbanísticos vigentes na era soviética para a nova realidade pós-soviética. Através da análise de exemplos internacionais de intervenção em espaços urbanos ribeirinhos, procede-se a uma análise dos elementos positivos, bem como ameaças a evitar, identificadas nos diversos projetos. Pretende-se que as recomendações daí resultantes possam servir de referência à criação de padrões de desenvolvimento urbanísticos masi adequados à nova realidade socio-política da Geórgia e, em particular, à forma como as margens do Rio Kura, em Tbilisi, são intervencionadas.

Palavras-chave: Espaços urbanos, Frentes ribeirinhas, Reabilitação urbana, Cidade pós-socialista, Tbilisi.

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CHAPTER 1. INTRODUCTION

1.1 Problem Statement and Aim of the Thesis

Unmanageable growth of post-socialist city, expiration of the term of the last general plan, and ignorance of historical traditions of city planning resulted in an abnormal and complex problem of interplay between Tbilisi and River Kura¹. The river misplaced its architectural-planning significance, which is more apparent nowadays.

Interrelation between Tbilisi city and the River Kura constitutes complex and complicated urban problem. Kura, as an essential active element of the landscape, used to influence city's planning character. Moreover, throughout times, the River has become as one of the integral component of Tbilisi face.

In Tbilisi, since the late 1930's during sovietization, decline has become the predominant character of the relationship between urban centers and the water. Fast urban, demographic and economic growth alongside extensive land reclamation and the channelizing of the Kura River have progressively changed the nature of the waterfront. Currently, there are highways at the both banks of river. Time by time these barriers have become the main reason that city has problems with less public access and open space connections to the riverfront. Cities are growing at the same time also increasing urban planning problems. The city has undergone severe transformations to its urban landscape, losing much of its original character and becomes not friendly with citizens. Also increasing demand of society related with access to river, open public and leisure spaces. At the present time for Tbilisi this case is really actual and problematic. In the world many develop cities have equally faced similar challenges.

In Georgia, day-to-day urban development practice fails to address different requirements of riverside areas, with environmental and social benefits benefits being frequently side-lined. This lack of an adequate balancing of conflicting land-uses may be attributed to a recent and still not fully developed culture of contemporary urban planning. Therefore looking to this issue through the lens of international experience, introducing foreign principles and methodology of planning would doubtless support development of the city and resolution of town planning problems. Developed countries have experienced several instances where attempts were made to approximate river with the city and its inhabitants. Riverside spaces have been reorganized and transformed into recreational and leisure parks. Grounded on consistent and pre-planned urban policy of the city. These areas now attract more and more urban dwellers and tourists. Besides, this process largely contributes to the shaping up the overall image of the city.

¹ Kura- The name Kura is related to the name of Cyrus the Great, emperor of Persia, The Georgian name of Kura is Mt'k'vari

The banks along the urban stretch of the river can, and should definitely be utilized for advancing ecology in the city. Those areas should be reopened and brought closer to the various functions of city centre, in order to elevate the number of social spaces and upgrade the role of the river Kura riverside and its surrounding in Tbilisi make it possible to use its track for forming and further expanding the city.

The research is targeted to studying and analyzing methods of planning and design of interface zones between urban rivers and surrounding plots of land and means of connecting river stream front space with other urban spaces. Establishment of recreational systems in profit of population should consist of the following set of zones: river stream, waterfront and open space.

The main objective of thesis is to explore river and waterfront space designs as a sub-area of open space and makes it subject of this particular study. The background is the contemporary urban landscape of promptly developing metropolitan areas and large cities. Various set of rules, regulations or policy mechanisms play important role in affecting environment and also in determining public pedestrian zones and biking tracks. Only smart planning will enable creation of spacious structure of urban river oriented open zone, which will fully meet people's recreational needs. One of the specific objectives of this dissertation is to question the City of Tbilisi project in light of its attitude towards the waterfront greening programs, from an urban design and planning perspective.

1.2 Methods

This research resorted to the following methods: literature review, collection of thematic publications, observation and analysis of urban policies and programs, and the interpretation of inquiry method Google Trends.

Literature review was based on the gathering of information from different topics, such as urban history, land-use planning, waterfront redevelopment, or post-socialist urban transformation. A major document source was the National Parliamentary Library of Georgia, which includes the archival plans of Tbilisi, before and after sovietization. Books and articles related with the case of Tbilisi are mostly in Georgian and I have translated them by myself where appropriate. Moreover, important materials were obtained from online libraries and scientific journals, regarding riverfront development, urban design, International planning and architectural reviews and from the other thematic publications.

The method of observation helped to understand data collection through a comparison with the present state of certain locations with older maps, historic imagery and photography. This comparison produced a clear image of the evolution of certain locations that underlines the main

changes produced through interventions of those areas. Comparing historic documents, the evolution of certain locations, and the timelines in the implementation of urban policies and programs, allowed for an integration of information necessary to the interpretation, evaluation, and criticism of the different urban interventions and development patterns under analysis.

Inquiry method Google trends is a public web source, based on Google search, which produces as an output how often a certain term is looked for in relation to entered in the total amount of search queries in various regions of the world. It was used in identifying patterns of public awareness/interest regarding different case study related to the waterfront space design and interventions.

Case study method serves as a kind of strategy for probing into the different aspects of riverfront intervention and the transformation of land-uses and public spaces therein. The different case study subjects were selected based on its relevance to the Tbilisi main case study areas, but also as a transept of different solutions, based on the diverse scales and scopes of the interventions. This allowed the identification of differences in the implemented urban design projects and the analysis of existing practices, related to the planning and functional aspects of the reshaping of waterfront zones and recreational areas. Applying these methods will result in shaping different viewpoints on how to enhance the planning process and design quality, namely by foster accessibility with river and enhancing the allocation of different land-uses and public spaces in future waterfront interventions.

1.3 Structure of the Work

The following sections are structured as to enable understanding of main points and the role of open urban spaces designs and reforming of riverfronts.

Second chapter deals with the review of literature on transformation, restoration and research methods of the project related to the urban rivers and waterfront parks. Literature review provides proper stage for further developing remaining chapters.

The third chapter describes urban programs and projects, which had already been implemented through Western Europe and United States. This section also covers review of ideas and techniques available in the watershed management, objectives and planning, designation of present urban riverside restoration. Text also focuses on positive aspects of such projects, namely how the urban waterfront and well-being of population has been improved as per realization of projects.

Chapter four relays examples from soviet cities urban planning process, in particular development of planning in socialist age and its main problematic aspects. The section also touches upon the issue of alterations and revitalization of river embankment areas in former soviet cities.

Fifth chapter provides description of urban fundamentals in Tbilisi, difficult socialist transition period and post-socialist conditions, it also demonstrates critical viewpoint in relation to the interference by authority and misleading planning process of the riverfront parks.

Lastly, the final Sixth Chapter summarizes entire research and finds conclusive points for development of urban open spaces and for reforming of Tbilisi riverfront.

CHAPTER 2. CONCEPT OF WATERFRONT

Cities are often rediscovering their rivers which have been generally destroyed, neglected and separated from urban form, far away from relocated industrial facilities and usually blocked by the highways and walls. The main focus is the transformation of industrial and derelict land by rivers into new public areas that possibly may affect negatively on development of urban revitalization and intense new commercial, recreational, residential and tourist activities (Kashef, 2008).

These days it's hard to find the modern city that has river without open public space areas. Where citizens can relax from city noise after tiring and busy day. It also plays an important role for the city image. As the image is one of the main aspects for attracting people and for investment and tourism.

2.1 The Role of Riverfront

According to Harvey (1989): "Vast land use changes occur during times of difficult socio-spatial reorganization, all the economic, political, social and cultural changes of a globalized world have their connection to urban area". Changes like these, are frequently driven by globalization and urbanization. Reorganizations also have influence on water, air, energy resources and, particularly, on people (Baschak & Brown, 1995). And the demands of outdoor recreations are growing gradually. The recreation areas become the ultimate resource for human leisure activity. Rivers and riverfront areas are one of the most important parts of the urban open space and play important roles in affording urban resilience and health. This is true even where the rivers have been modified in urban areas, and instead of them have been built canals, dams and artificial levees (Junker, 2008). Therefore it's also urgent to study the urban rivers and waterfronts in purpose of becoming livable city and for the citizen's well-being.

Riverfronts play an important role in the process of development of cities. Number of cities are connected by them, by foundation and contributed to their further growth (Rigby & Breen, 1996). Authorities of the city would like to renew their urban waterfront zones and to strengthen the land along the river. As a matter of fact the planners of the project have to keep balance between variety of public and private objectives. They also have to be managed so as to resolve conflict and use the area in a rational way. Sensible planning is generally used to develop large area in an integrated way. It is necessary in order for the waterfront to be most functional and useful of the city (Weickmann, 2006).

2.1.1 Informal vs. Formal Riverfronts

People start building the towns in simple ways as they still lived in huts of the emerging world. There is the master plan that made the town more modern, streets are laid squares and blocks on the buildings are placed according to the planners' sense of order. This contrast requires a lot of time for research. That causes another contrast: between formality and informality. Whilst "natural" city tends to informality, on the other hand the planners would like to make decisions to their conscious show. Most of such kind of regularities in which the planners purpose to show is just human mind have been at work, but some goal of self-conscious irregularity is visually attractive (Broadbent, 1990). The regional development pattern, natural and cultural history, flood control and public access must be all considered in planning for riverfront revival. The following principles ought to be integrated into the master plans and must be implemented through the engineering standards and building zones, for planning the sites and designs. Renovating urban riverfront causes restoration of existing river system. New investments to a city can be drawn by environmentally sensitive redevelopment of riverfronts including parks and trails, commercial buildings and cultural attraction (Otto et al.,2005).

In words of Kevin Lynch (1960): "environmental images are the result of two way process between the environment and its observer [p.6] ". Environment offers relations and variety, and the observer with great adaptability and according to his own purposes selects and endows the meaning what he sees, on the other hand image has limits and brightens the way of the city, although the image may be the same it can be seen and described variously from different observers. The image might be analyzed into three components: meaning, structure and identity. It's very important to abstract these components for the analyses, whether it is remembered they will be appeared together in reality. The first thing that workable image requires is identification of an object that implies to differ from other things, its recognition as a divisible creature.

2.1.2 Riverfront Intervention: A Cost or an Investment?

Characterizing the expenditure of public funds for redeveloping riverfront is also an issue of particular concern. If we treat such expenses as an investment, then it is more likely that financial gains be expected, which will override initial investment fees. If we assume that this is consumption, costs for this process would serve of purchasing something valuable that may not be designed for bringing financial profits. The test for public consumption is whether the good or service is deemed valuable enough to merit the public expenditure. Value is actually set by states and leaders. For projects considered as public consumption, any future financial gain amount to a price reduction, not an investment profit. Overall, the main distinctive point between public

investment and public consumption is whether the project was deliberately targeted on fund rising from the very initial phase or was intended to serve economic development (Brown, 2012).

Generally, majority of disagreements among private owners and the society is a result of not applying Public properly in a real practice. When brokers are properly trained in the private and public needs, they will clearly explain to the future purchaser that the private property concerned lays at the end of waterline. Which borders public domain and that potentially public trust rights may be upgraded to the mean high waterline as well (Jackson, 2006). Whilst it's not so easy to evaluate the real state of future riverfront area development and related employment impacts incumbent to it (Faye & Nelson, 2013).

The main goal of the urban renewal is to develop the specific areas of the city that are underdeveloped. The renewal consist of the further rules: first it allows tax increment for gaining finances and with the money to finance improvement projects. Second it allows for special powers to buy the sites for their development or redevelopment whether that is necessary or desired. And the third it allows for the special flexibility in working with different parties in order to complete the project. Municipality is allowed to use urban renewal. In the case of United States, the main purpose of the municipality should be to establish an urban renewal agency and to adapt an urban renewal plan. The renewal agencies are generally created by state law but as a rule are "activated" by the government. The agencies are independent legal structures, but in mostly they are ruled from governing body. In order to undertake urban renewal project with the tax increment financing, project should be authorized by an urban renewal plan. One of the most common types of the project is infrastructure development that includes streets and utilities. The parks, plazas and pedestrian facilities are also funded by the urban revitalization project. The main targets of urban revitalization projects are making areas more pleasing and ready for private funding (Tashman & Johnson, 2000).

2.2 URBEM – European Research Project (Portugal)

An experiment project URBEM (Urban River Basin Enhancement Methods) that found out that the interdisciplinary knowledge related to be dimensions to be present in final process are linked to the attractiveness of urban rivers, was carried out by a large group of experts. Consequently the main aspect was, to identify the factors that could affect those values even theoretically without any real settings. As it was expected, the carried out experiment would come to the clearer understanding of the different spaces of characteristics, such as improving urban river rehabilitation scheme and related activities. It was considered that the subject should be discussed within the group of experts working and exploring on watercourse rehabilitation in urban contests. Flexible framework was founded on further words: “city-river-people” (see Figure 1) that was agreed to be very helpful to accommodate and get organized and elected by the participants (Silva et al., 2013).

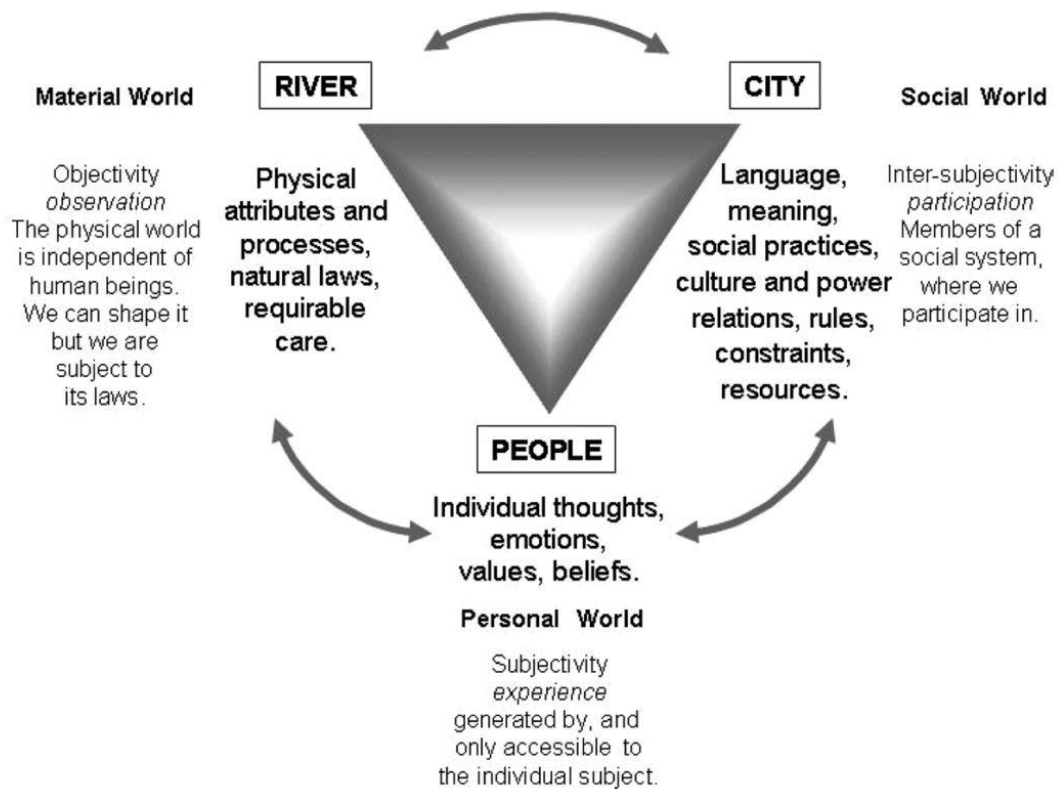


Figure 1. “River – City – People” Framework based on the “Three worlds” of Habermas (1984).
 Source: Silva et al, 2013

Five main standpoints were identified in the process of structuring. Including the huge variety of elementary concerns the important role of visualization of a city- river area:

- The “urban space quality” should be related to the visual durability of building area, the depth of the river and contact points with the water, the quality of construction is linked with the quality of built space in a river corridor, health condition, state of conservation and also existence of basic infrastructures, public utility expresses the

balance between public open areas that is given to the riverfronts and private open spaces. That could reveal the accessibility to aesthetic values;

- The “cultural heritage” architectural and historical monuments should have the great influence on the attractiveness and aesthetic view of the river and city zones;
- It is said that human “activities on the riverfront” has made a huge influence on the final factors as well intense human contact with the river increases the interaction between the people and the river;
- “Accessibility” is an one of the most important factor to get people involve and enjoy the process of value of the urban waterfront is the feeling of accessibility . bridges are the most common way to cross the water on many urban areas. There are two main functions that include linking and contacting points (Manning, 1997). Walking and biking are the soft modes of transportation which promote closer contact with the water and landscape;
- “Pollution” of water is the problem that causes ecological and biological catastrophes and damages the quality of people’s life .pollution, that is often caused by human involvement influences the attractiveness of areas. and should be considered by their physical result such as color or littering of water.

A river and its urban context should be addressed as a public space and considered as an open area. For understanding “public perception” of a city and river landscape it must be identified cognitions, behaviors, and feelings of its users and emphasizes the meaning of the project that bank on physical element in the this field. This approach was adopted in the framework of URBEM project and applied to five urban rivers in Portugal, one in England and three in Slovenia, as well in two more Portuguese cities within RiProCity project. The research project indicates that visual charm and interconnection get absolutely different emotions between participants of expert team (Silva et al., 2013).

CHAPTER 3. INTERNATIONAL MODEL PROGRAMMES AND CASE STUDY PROJECTS

Worldwide every country has a various legal systems of land use and planning. The laws defining the role and attitude of planning in governing bodies. Model Programmes and realized projects which are presented below have been created to improve the national frameworks for urban planning and support more effective planning practices based on principles of reshaping riverfronts (see Figure 2).



Figure 2. Location of Case Study Projects. Lisbon, Madrid, Portland, Paris

3.1 HORIZON 2020 (European Commission)

The Program Horizon 2020 includes the Europe 2020 strategy of promoting smart, sustainable and inclusive development. The program was established by the European commission in November 2011. The example of Horizon 2020 could be used for framing river restoration development projects, especially in terms how structure and inform the application to natural and international funding opportunities for those actions.

It's considered as the biggest EU research and innovation program ever made. It aims at encouraging more discoveries and innovations and being first taking innovative ideas from the lab to the market. By adding national and private investments, almost 80 billion Euros of funding is available over seven years between 2014 and 2020. The program support from members of European parliament, the investment in research and innovation is important for the future of Europe and for smart sustainable and inclusive development (European Commission, 2014).

Above mentioned program has gathered the scientists and industry within Europe and from all over the world to work out the decision of vast array of challenges. The innovations helped to protect the environment and improved the live and got European industry more competitive and more sustainable worldwide programme Horizon 2020 gives an opportunity for all researchers and participants to join for standard research projects, a consortium of at least three legal entities. The obligation of each intertie is to be created in EU member state or associated country. A Number of associated countries have established by agreement between the EU and individual governments, where in Horizon 2020 legal entities could participate on an equal footing to the EU member states. Coordination and support actions funding includes the coordination and networking of research innovation projects policies and programs.

There is only one funding rate for the all beneficiaries and all activities in research grant in Horizon 2020. 100% of illegible cost is covered by the EU funding for all researches and innovation activities. 70% of eligible cost is generally covered by the funding for innovation actions, but there is also possibility of increasing to 100% for non-profitable organizations. Indirect eligible cost (e.g. and infrastructure costs, and office supplies) are reimbursed with a 25 % flat rate of the direct eligible costs. Horizon 2020 plans to develop closer synergies that includes the national and regional programs, to encourage private investment including research and innovations and use Europe's recourses to tackle the challenges (European Commission, 2014).

3.2 POLIS Programme (Portugal)

The program was launched in 2000 by Portugal. It was established following the successful example of the conversion of a large industrial brownfield in eastern Lisbon a vibrant new mixed-used neighborhood, used temporarily as the grounds for the 1998 World Exhibition. It was thought as a different kind of planning instrument. The main reason of planning the program was improving quality of the life the citizens and users. The main aspect in achieving the goal of the project was planning urban re-qualification, depend on two positions: urbanistic and environmental issues (Almeida, 2010) by mentioning the Portuguese particular reality, traffic congestion in the city is caused by the migration to the cities. Understanding of past urban mistakes and increasing knowledge from citizens of what contributes to their quality of life, making importance of environment and public areas (see Figure 3) (Landeiro & Trigueiros, 2006).



Figure 3. Location of Park of the Nations. Lisbon, Portugal, scale: 1:15000

The POLIS program was established as a territorial management instrument and included also an important share of strategic planning for each of the benefiting cities. Central administration established the POLIS program on this basis, the program indicated: “A new strategic vision of the environment and territorial planning is one of the main political priorities behind Government action thus justifying the adoption of exceptional measures in the field of urban re-qualification and environmental enhancement of Portuguese cities” (Almeida, 2010).

The goal of the POLIS program draws up to improve the quality of the city due environmental and urban interventions, to developing the competitiveness and attractiveness of urban centers, that is an important part in the national urban system structure. The POLIS program which derives from the recognition of the city’s strategic role in the national development, with its crucial meaning for economic and social growth that connects with its meaning of global development (Landeiro & Trigueiros, 2006).

After discussion of the subject by the central government, it was decided that in order to set up the extraordinary territorial management instrument that can cause becoming urban life source of some preeminent environmental problems experienced by the citizens. The problem that was defined was the lack of public open spaces and leisure areas that was caused by heavy traffic and increasing the road jams and subsequent degradation of the air quality and high level of noise (Almeida, 2010) (see Figure 4).



Figure 4. Embankment of Park of the Nations. Lisbon, Portugal

Five entities: The City Council, Ministry of Environment and Planning, Ministry of Culture, Ministry of Finance and Ministry of Public Construction, together with the POLIS Society Administration, usually make up the Technical Commission. The first and the main aim of the commission is to make the legal and constitutional barriers less active, by uniting different entities that have jurisdiction over the project area (Landeiro & Trigueiros, 2006). Taking part in the project by the population has an important role for the program (Gonzalez, 2006).

For the POLIS program framework were chosen approximately 40 cities, out of these 18 cities were contemplated from the outset, rest of 10 cities in a second stage of the program and final 12 cities were covered by later, smaller scale interventions (Almeida, 2010). The POLIS program was financed by the III Community Support Framework (2000-2006) for about 28 cities, the financial support was approximately 50% at the national level, by the central government in 12%. The remaining 38% was shared by the local authorities 8%, private investment 20% and other financial sources 10%, which involve partnerships between private and public sectors. The structure where central and local government make the decisions of the capacity on important procedures is called POLIS interposes. The shareholding structure is created on that way 40% from local authorities and 60% from national government. The financial contribution level of each partner of the project is considered in the structure, the enterprises employ few staff members, including only a couple of technical and couple of clerical staffs (Partidario & Correia, 2004). The POLIS program leads to work out number of urban and environmental problems in the cities involved in the program to contribute their role in the national urban system.

3.3 Madrid Rio (Madrid, Spain)

In Madrid from the 1970's shores of the Manzanares River were used for the M-30 expressway. Demolished direct access to the river, covered all available spaces and splitter the historic connection between two main urban parks: La Casa de Campo and el Campo del Moro. Despite of being considerable urban barrier, during the traffic jams, the expressway is considered to be the acoustic and atmospheric contamination (see Figure 5).



Figure 5. Location of Madrid Rio. Madrid, Spain, scale: 1:10000

It greatly affects the life of citizens living adjoining buildings. Gradually the quality of water became problematic: The sewerage was constructed with expressway unitary, also thought two main underground collectors rain water was collected, according to all the above mentioned factors, the river lost identity and role in the urban environment, for all citizens of Madrid especially for downtown residents (Franchini & Arana, 2011).

3.3.1 Aim of the Intervention

The Madrid Rio project is one of the greatest examples of regeneration of green space and reclamation of the riverfront. Public space project and combined infrastructure aimed on improving the public realm (Miller & Kennedy, 2012). The main Objectives of project are: Design new riverside public open spaces, one of the most important issue is Madrid's residents Involvement in the development of project to give them sufficient information, improvement connection with central districts and river, Improvement quality of river and traffic problems (City Agency, 2012).

3.3.2 Planning Process

The city council started working about Madrid Calle 30 projects in 2004, “involving reform and enlargement of belt highway and to construct the 18 km dimension tunnels, collectors, hydraulic installations and underground parking spaces, the area is known as a river zone. The Plan involved the burying of 6 km of road and the liberation of 50 has for new green areas [p.4]” (see Figure 6) (Franchini & Arana, 2011).

A plan to reclaim the Manzanares River was launched in June 2008, by the Department of Urban Planning of the Madrid City Council, in order to restore the surrounding natural area for citizens and visitors (City Agency, 2012).



Figure 6. Embankments of Madrid Rio Project.

Source: Dobrick, 2010

The 3+30 concept based competition was also considered that 120 hectare site was designed in order to create new walking and public zone alongside of Manzanares river and attractive large park. The project also involves rebuilding urban assemble, that had been severed by the motorway near the palace in Madrid (Dobrick, 2010). International architectural competition was held for to create a master plan of Madrid Rio project. The winner of this competition became Dutch Architectural firm West8 within collaboration three Spanish architectural studios. The aim of the proposal was to create 30 smaller scale projects to be constructed in stages along the Madrid Rio corridor (Corkery & Hernando, 2012). Albeit, the opposition groups suspected that the Special Plan does not contemplate participative mechanism of control management (Franchini & Arana, 2011).

3.3.3 Result and Evolution

Significant number of changes had been made within Madrid Rio project in the streets, especially in those streets ending to the river, by giving them the areas for walking. 250 00 square meters were given to the new cultural health and social programming space, the street infrastructure has been installed including nine parking lots for inhabitants with 4.303 parking space (City Agency, 2012). 10km long M-30 the section of inner ring road has been moved out to underground area of parkland created to renew the area (see Figure 7). This change helped to city center to become closer to the river, before it was impossible due to hard traffic (Miller & Kennedy, 2012).



Figure 7. Tunnel and New Pedestrian Area of Madrid Rio Project.

Source: Idealista.com

Madrid and its neighbors were dividing between the break lines of M-30 highway. Neighborhoods became connected after completing the project that helped to establish new meeting points. Afterwards the quality of the city increased. Madrid and its neighborhoods were dividing between the break lines of M-30 highway. Surroundings became connected after completing the project that helped to establish new meeting points, according to the inquiry method Google trends, the peak of the popularity of this project was in 2010, on a horizontal axis of the main schedule it is presented years and a vertical as often the term was looked for in relation to total number of searchers, on a global scale (see Figure 8). After extraordinary surges in interest during the last steps of planning and during construction, perhaps linked to intense media debate, interest in the project has stabilized. Afterwards the quality of the city increased (City Agency, 2012). Implementation of a significant number of children's play zones has been given the importance by the planners of the project. Spanish and German companies took the obligation of constructing and the design quality was above Madrid standards.

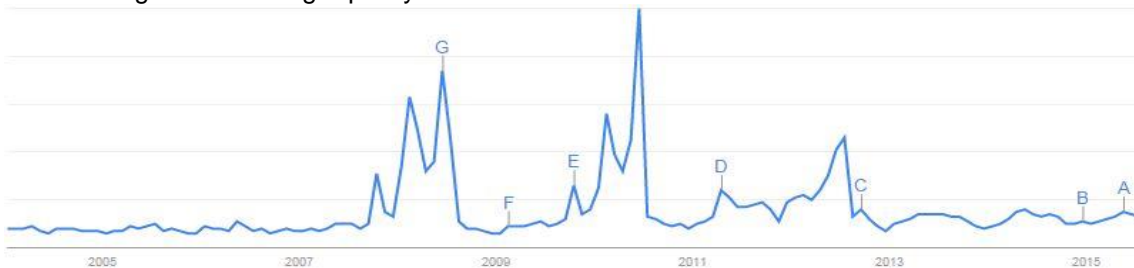


Figure 8. Dynamics of Popularity of Madrid Rio Project.

Source: Google Trends

3.4 Portland Harbor Drive (Portland, United States)

Portland Harbor drive that was built in 1942 was around five kilometer long ground level highway with Willamette river connected itself with industrial surrounding zones with Lake Oswego and areas south of downtown Portland (see Figure 9). The four-lane expressway carried 25,000 cars per day (Bocarejo et al., 2012).



Figure 9. Location of Portland Waterfront Park. Portland, United states, scale: 1:8000

In 1970's the city made a lot of first friendly planning steps regarding riverfront spaces (see Figure 10) (Lowry, Tidwell, & Rea, 2005). To decrease the harbor drive freeway and replace it with 15 Hectare park, the decision was made by the government of Portland and this made Portland the first city in the United States to devote the idea of freeway replacement with the park (City of Seattle, 2008). The act became a source of civic pride while generated the national praise (Lowry et al., 2005). The city built "Tom McCall Waterfront Park" instead of the highway that decision gave an opportunity to residents of Portland to be closer with river and enjoy with it (Bocarejo et al., 2012).



Figure 10. 1974 Portland Highway.
Source: City of Seattle, 2008

3.4.1 Aim of the Intervention

City greenway development plan is a hallmark in Portland's planning history. The main goal of the plan was the renovation of the river as a "central of focus ". To increase public access for surrounding zones, to conserve the riverbanks and habitants. The plan provided greenway establishment of paths that would provide recreation and transportation along the length of the greenway (Lowry et al., 2005). The master plan of Portland riverfront included further objectives: To make clear focus of the open urban space and Waterfront Park; Design paths for walking and cycling; Underline the historical grandness of the Portland River and make easy accessible waterfront, which would be attractive for public and also support for water activities and water transport (Portland Parks and Recreation Project Team, 2006).

3.4.2 Planning Process

The project stretched from September 2000 to May 2003. The city council accepted and agreed the task that was removing the highway and replacing it with park. The project was also included public hearing and were suggested the alternative plans for the harbor drive highway, none of them suggested closing the highway but the alternative was address as a result. The alternative of highway removal was made to the city council, and a convincing case was made that Harbor Drive's traffic could be absorbed by the parallel freeways of I-5 and I-405 (Bocarejo et al., 2012). Positive effects and welfares of the events were identified due to the planning process, including bringing new life to the park (see Figure 11), attracting tourists and residents, making the downtown as the center of the city metropolitan, the program of public involvement included several aspects: such as advisory committees, focusing group, meeting public displays , events, surveys and interactive web pages (Portland Parks and Recreation Project Team, 2006).



Figure 11. Plan of Portland Waterfront Park.
Source: Portland Parks and Recreation Project Team, 2006

3.4.3 Result and Evolution

After removal of the expressway was possible to build the new recreation area near the river Willamette, that give opportunity citizens and visitors of Portland to be closer with riverfront, the project helped the city to established the downtown urban revitalization zone (Bocarejo et al., 2012). The result of removal expressway had the minimal negative effects from traffic jams, in Portland.

In order to operate more effectively traffic and to use better a street grid, all streets in the downtown were transformed to one-way direction and traffic lights were marked in order that cars to travel in the downtown without stopping (City of Seattle, 2008). Replacement of expressway with a park helped to improve quality of life in the city (see Figure 12), within this action was created several recreational and public space for residents, which also played important role to reduce the crime rate in the downtown (Bocarejo et al., 2012).



Figure 12. Portland Waterfront Park.
Source: City of Seattle, 2008

Now, there is no division between different types of transport within park, bicycles, pedestrians and skateboards, etc. Everybody using the same pathway. As usual during the peak hours the park is full of people, but seven meter wide esplanade helps to avoid any kind of movement problem among pedestrians (Portland Parks and Recreation Project Team, 2006).

3.5 Paris Plage (Paris, France)

Below the docks of the Seine, in the center of Paris, between the Pont des Arts Bridge and Ile St. Louis, since 1967 runs the Georges Pompidou expressway (see Figure 13), crossing Paris from east to west, which is usually full of cars constantly (De La Pradelle & Lallement, 2004). The embankment areas, despite being “confiscated” by vehicles during the year, became an attractive leisure space for the residents of the metropolitan area in a period of one summer.



Figure 13. Location of Paris Plage Project. Paris, France, scale: 1:3000

The first real sensation that was created in 2002 by Paris Plage, once more proved that the city dwellers have a special attachment for the Seine. Paris-Plage placed on the right bank of the river Seine during four weeks, between in 21st July and 18th August of 2002, giving Parisians with daily access to the river (Atelier Parisien D'Urbanisme, 2010).

In the nine meter wide road, two sandy “beaches” along with two lawns, beach cabins, refreshment stands, restaurants, and several activity centers change the concrete and safety rails. Next to the water, on the pavement, people resting on deckchairs. Others, basically in bathing suits, laid on towels on the sand between the street and the embankment wall (De La Pradelle & Lallement, 2004).

3.5.1 Aim of the Intervention

By closing the highway in the summer, the city government addressed a lack of public spaces along the Seine. It gave more advance notice to drivers, when more Parisians were out of the city it closed the road a week and planned to attract more people by converting the highway's right of way into “Paris Plage” (Preservation Institute, 2012). By attracting around three million people it was considered as the world's first urban beach (Gale, 2010). Reconsideration of the relations

with the river Seine, itself means to imagine metropolis of future (Atelier Parisien D'Urbanisme, 2010).

Given this successful character of policy, the summer closure of the Pompidou Expressway Plage has become a regular yearly event and the municipality of city began to discuss the option of complete closure of the expressway (Preservation Institute, 2012).

In the new projects proposed by the city government, there are various steps for further development of the areas: Rethinking of the right bank traffic, give more free space for public zone and to make essay access with the river. Everybody will have easy access to installation for activities (Mairie De Paris, 2010).

3.5.2 Planning Process

Paris Plage was considered as a political act. New socialist Mayor and his public team worked out to fulfill the plan that actually contributed greatly to increase his popularity and helped launch his future political career (De La Pradelle & Lallement, 2004). The expressway was closed for the cars and reconstructed as a pedestrian zone. The right bank of the Seine was changed as a boulevard for pedestrians, and for cars 14 hectares of riverside was reconstructed for the project (see Figure 14) (Preservation Institute, 2012).



Figure 14. Graphic Visualization of Paris expressway.

Source: Atelier Parisien D'Urbanisme, 2010

The project includes the close connections between the city and the state. First of all state service submitted the project that considers the involvement of the police. That means the traffic rules enforcement, to control the riverbanks (Mairie De Paris, 2010). The project was designed for participation of actors, in defiant transfiguration of the area (De La Pradelle & Lallement, 2004).

3.5.3 Result and Evolution

The visitors activity was the result of Paris Plage, it would be a mere zone if the visitors were not so active. A lot of people visited the bank of Seine, (there was no limit to the number of visitor) the place became the perfect area Parisians meeting, for roller skaters, women and children were relating near the sandbox (see Figure 15). It also became the meeting place for the office workers at lunch time (De La Pradelle & Lallement, 2004). 66% of Parisians liked the project closing of the Pompidou expressway. The two main benefits of the projects were: The banks of Seine became more pleasant place, and it decrease the pollution of the air. The project was strongly approved by young people and by them who rarely used the cars. In fact, 56% of Parisians don't have cars. It was the fine reason to expect citizen's support for Delanoe (Preservation Institute, 2012).



Figure 15. Realized Paris-Plage.

Source: Preservation Institute. 2012

As there were agreement on one aim, Paris Plage worked so successfully, carrying all the activities in the place, that is generally filled with cars. By changing the original function of the bank for several period of time the result of all activity was that the place got unusually attractive vision. Like the area where the music fashion takes place. It became a place for all ages and tastes, According to the inquiry method Google trends, the peak of popularity of this project was in 2007, with noticeable increases in interest in interest every summer, obviously connected to the period when Paris-Plage is in Place. The apparent reduction in searchers from year to year may be indicative of the novelty-factor, or simply that people are now fully aware of what the project is and, as such, do not resort to google search to retrieve information on it. On a horizontal axis of the main schedule it is presented years and a vertical as often the terms was looked for in relation to total number of searchers (see Figure 16). The families sitting on the sand, enjoying their picnic, it was a place where everyone liked to spend their leisure time (De La Pradelle & Lallement, 2004).

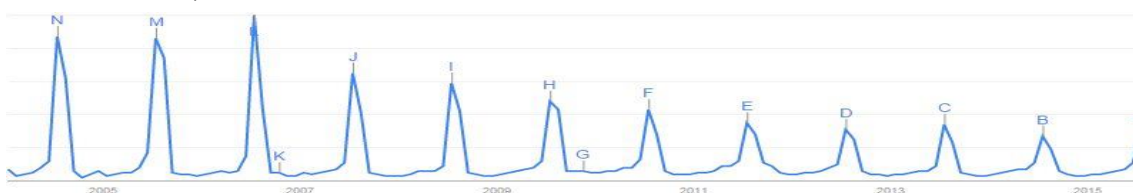


Figure 16. Dynamics of Popularity of Paris Plage Project.

Source: Google Trends

CHAPTER 4. URBAN PLANNING IN SOVIET AND POST-SOVIET CITIES

This chapter covers the issue of soviet urban planning impacts. State resources were largely intended for development of industry and the reconstruction of demolished cities (see Figure 17). Urbanization process was very intense during Soviet time. This process also covered transportation systems and highways, water, sewerage and various other infrastructural projects.

The Section also deals with the idea of post-socialist city, in which population and city have gone through dramatic economic, social and political tensions. Social inadequacy and poverty increased causing significant implications for city and its development.

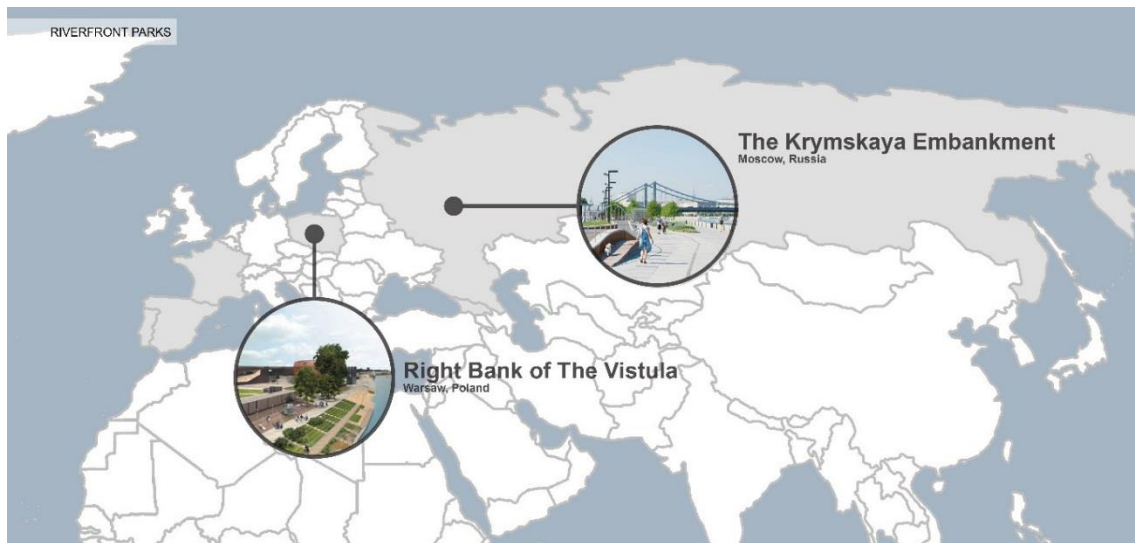


Figure 17. Location of Case Study Projects. Warsaw, Moscow

4.1 Soviet Planning System

Architecture and urban planning had crucial meaning in soviet system. For shaping the socialist's way of life, industrialization and urbanization of territories were seemed as a part of symbols of industrialization. Admitted by Domanski, the conception of socialism was quite different from modern industrial society (Domanski, 1997). With soviet union support for the soviet system was relatively poor to the national memories of ignoring political independence (Balockaite, 2010).

After creating for first five year plan goal, till the end of 1920's the subject became argumentative that made it clear description how the future of the socialist city would look like. A network of strip-settlement were suggested by the anti-urbanizes that would be neither city nor country. Unrealistic approach was denied and criticized by urbanists (Bilinkin

& Ryabyshin, 1985). Despite the vagueness of socialist dream, the cities considered to be spacious with the state ownership of land. Greenery and open space, was enough for all citizens. One of the main factor and goal of the soviet urban planning structure was also development of infrastructure. These were not concerns exclusive to Soviet Union, but were rather concerns shared across the European architectural Avant-garde that had been dealing with these matters throughout Europe in the 1920's (Cinis et al., 2008).

There was an intensive debate between soviet urban planners and architects after the revolution in 1917 regarding their vivid arguments and experiments (Kopp, 1970). Benefits of Soviet urban planning also had some practical results, until Stalin's leadership full industrialization and state led collectivization were trying hard by its success (Service, 1997).

The role of urban and regional planners was highly increased with special needs and consequences of economic development. New towns and cities were ordered by new industrial regions. In order to accommodate growth of collectivization, it became necessary to restructure existing cities and rural areas. "The USSR in Construction" published in 1932, was the high quality monthly soviet propaganda magazine (see Figure 18) at that time, that made to grow interest in the west, inspiration and gorgeous image of a union was created by the magazines striking photography. It was seemed like a massive transformation for building new soviet steel plants, factories and lows, for this western experts were hired (Kopp, 1990).



Figure 18. Propagandist Magazine - "The USSR in Construction", 1932.

Source: Englishrussia.com

It was appeared that soviet town planning was subordinate to economic planning, production requirement and political administration, identifying certain economic problems that were required from town planning organs. Including inadequate municipal facilities and sufficient employment system and looking for the solution of the problem appropriable for necessity of town planning. The towns could oppose to each other much better by cooperating with economic planning bodies (Osborn & Reiner, 1962).

It was often found in soviet planners writing that it was "complex organism" and comprehensive plan is required for modern town, but in fact most of the municipalities were without master plans or outdated documents were usually failed. Three years was enough to prepare plans for 100,000 inhabitant city (see Figure 19) (Svetlichnyi, 1960). In the 1930's established the institute of central town planning. The responsibility of this Institute was developing of overall standards, also numerous city plans that were ignoring the work of local planning officials. Most of municipalities relied on either institute or parallel bodies, whilst some of the cites made up their own plans (Kochar, 1960).



Figure 19. Picture Slogan: "Let's mobilize our efforts to fulfill Stalin's plan on reconstruction of Moscow. The plan signed by Stalin cannot be unfulfilled".

Source: Oginoknauss.org

As Enyedi (1996) argues: the practice shows, that complexity of social system could not be goaded and planned in a normative way. In fact the aim of planning was only to make some "corrections" to the spontaneous principles of urbanization. According to the planned system, it was impossible to start something new under two main aspects were managed the principal of social urbanization: planned urbanization and it was much more comprehensive to plan the countries in the soviet union than in the west. Planning occluded all the steps of urban development, was also under strict governmental control of the infrastructure and urban land. Various forms of infrastructure development was the decision of the authorities of central planning.

Large-scale reshaping of the territory canals, building roads, constructing dams and establishing new towns, were included in spatial planning in vicinity of economic resources. Design and location of the city were dictated by economic logic that meant the demand and needs of the people were objectified and quantified (Cattel, 1976). Although the planning were looking through carefully, there were many spontaneous elements in urban development, the system of central planning was essentially sectoral planning including: housing, communications, public health, education and etc. The planning was made by different ministers, to coordinate the development was the task of city council, but no power was

given to them for making their decisions (Enyedi, 1996). There were clear parallels between soviet planning experience and British during the early post war years. Both of these systems used the lands owned by the public, it was considerate a temporary phenomenon in Britain. Approximately 90% of new houses were built by the public sector in the 1940's and early 1950's (McKay & Cox, 1979).

The major change was brought to the soviet union with the death of Stalin in march 1953 and replace him by the Khrushchev. The better strategy and cooperation with west to improve the living standards, of social people and better relations were two important aspects that came with Khrushchev, for improving housing planning system deserved most of his attention (Ruble, 1993). In December 1954 he gave a speech about the topic of soviet architects and construction professionals that was known as an discriminating of Stalinists policies (Ward, 2012). In 1950's Increased productivity and modernistic in urban planning replaced the traditional street structures, that caused placement of building with freely, scattered buildings Le Corbusier's Arcadian dream of towers was better accomplished here than anywhere else. The most important is that they made their steps that of course is not officially known, to follow already built welfare in Europe. Oppressive but ample space was in Stalinist and also in modernist Soviet cities. At that time western Europe was the place where the authorities built the society mixing with British, French and Northern European ideas together. In Soviet urban space feature was visible lack of unclear public spaces. Even though the place was plentiful in Stalinists and also in modernist soviet cities the buildings were being built poorly and with undeveloped services (Cinis et al., 2008).

Accelerated decay of the system was the main line of soviet epoch. It was clear that the overburden of available resources was the reason of a deep crisis of a strong planned economy of the system. It was followed rigid prevention by the state of requirement for consumer goods and real estate that was causing the private capital arose through shadow economy. Ideology of soviet system was formalized high communist ideals and trying to denounce capitalist society. Had strongly connected of social intellectual life the result of all afford was the fact it became the subject of nihilism and irony. The strict international isolation of soviet union created distorted imagination of prohibited world. That was idealized in the soviet reality, on the other hand of creating the collective misunderstanding, western propaganda played its role perfectly. 1980's strong popular distrust of the Soviet Union was increased stagnation of the soviet system (Asabashvili, 2011). In consideration of social needs of community the planning is torn between the recognition of legitimacy of the choice of individuals and the desire to require certain levels of consumption. As a matter of fact, there is not a society ever has found reasonable method of widening choice for all social groups, or individuals at the limitation of one man's choice for the lack of the choice of another (Dyckman, 1966).

4.2 Transformation and Urban Reality of Post-Soviet Cities

The plurality of socialism and diversity of post-socialist transformations and experiences is rightly emphasized in the critical literature on the studies of Eastern European and former Soviet societies under transition (Hann, 2002). After the fact that state socialism was broken, central and eastern European cities were under the carried out changes, the process and mechanism of changes was strongly different from western cities. Legacy of socialism can be considered as a main aspect of structure of post-socialist cities. Changes in the national stages of transformation were different and influenced by not only the post-socialist heritage, but also by contemporary drivers. The current forces also contribute to establish new processes (Grazuleviciute- Vileniske & Urbonas, 2014).

“Post Socialist Urbanism” and its specific distinctions in (re)configurations of public places and its significance for residents, have rarely been discussed in the social sciences. Due to the privatization processes the citizens were uninformed about increasing significance of land value like shopping malls, cafes and restaurants in peripheral and central parts of the city (Darieva et al., 2011). According to the post socialist world, it was often introduced with new liberalism as a “shock of therapy” in the 1990’s. It included global network of transition industry and elite manipulation, in order to simplify the forms which were more neoliberal than it was planned by the “shock of therapy” (Hirt et al., 2013). Number of new players was populated in the urban planning in the 1990’s, in fact they were related to the distribution of spatial assets. Higher echelons did strategic planning but for the most part city planners were called upon by the central bureaucracy and handed down goals which they were to follow without debate (Stalinov, 2007).

The great changes started after the collapse of the Soviet Union. The economy was under strong control due to the soviet time, as widely begun free market policies by the new political leaders in post-soviet republics and Georgia was among them (Asabashvili, 2011). The cities of central and eastern Europe should not be approached from the perspective of the western urbanization. According to Sykora and Bouzarovski (2012) the main topic of argument is that the process of more fundamental restriction of urban morphology of the central and eastern European cities is still ongoing, while the transformation of main economic and political principles is formally over. Then, as Wiest (2012) interprets, western-centric spatial concepts are determined from certain semantic scope which may not belong to the specific social and cultural contexts of Central and Eastern European cities. Comparing to each other the cities of their regions, the Eastern European planners through shared observation and experiences arrived at two main principles: dispersal and multi nucleation. These were considered to be the key characteristics of modern urban settlement of twenty first century. The main problem of planning phases was the failure of planners that included public in meaningful ways though all places during planning (Stalinov, 2007).

There was neither direct translation of the term in Russian nor analogous terms for “free space,” “open space,” or “social space”. Given the fact that all land was owned by the state, Soviet literature did not make any distinction between public and private spaces (Engel, 2007). The first and perhaps main reason of the collapse of the Soviet Union was the spontaneous planning (Planning without general plan), the second - involvement of new consumer culture - “Arcadia consumption” (Czepczynski, 2008). By privatization public spaces, international migration and global capitalism the third part of post-socialist urbanism could be called as ethno nationalization of urban life and city imaginaries. By considering the trends a structure of Urbanism in Eurasia as the way of life, the urban public spaces served to show up the political power, not for the possibility of everyday meetings (Darieva et al., 2011).

The “socialist heritage” is contributed with many common elements. The extensively built up areas during the socialist period and vacant grounds basically in the peripheral territories allow densification construction of new types of housing within the limits of the city. Present days, the former industrial zones also provide a good opportunity for redevelopment. The future of the big residential estates still is a questionable issue as their quality dissents among the cities and countries (Gorczyńska, 2014).

The process of public involvement in planning, heritage preservation and urban regeneration in the countries, which are experiencing the post-soviet transitions often described by words like: “miscommunication, passivity, indifference, skepticism, unwillingness to listen and inability to formulate questions and opinions”. The obstacles concerned to public involvement, which is an important process for rehabilitation of historic urban centers and public-private partnerships is related to several characteristics of post-soviet societies (Grazuleviciute- Vileniske & Urbonas, 2014). In Soviet Union infrastructure and city planning government agencies particularly ordered the streets and the planning of the city surface by separating the socialist cityscape into monumental centers, industrial zones and peripheral “*microrayon*” marked by uniformed blocks of flats, housing schemes and green belts (see Figure 20).

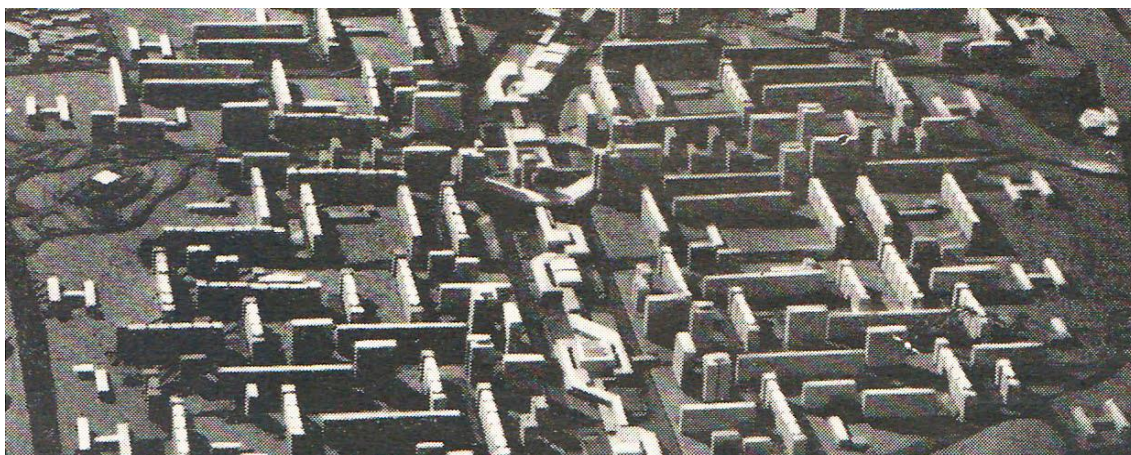


Figure 20. Model of Group of “microrayons” Gldani, Tbilisi, Georgia.
Source: Urbanreactor.org

Nowadays, in post-soviet cities is still visible this hierarchical spatial separation of city zones (Darieva et al., 2011). Due to character, the Soviet planning system was not applicable to the new reality, in a time when there were no alternative strategic plans created. Old soviet regulations were formally expanded, but given their inadequacy, they were extremely inefficient in the new reality. As the government mechanism, which was dealing with the housing construction was failed, the leading role was taken by the construction businesses, which were emerging quickly and took a privilege of the situation: no control system, prosperous corruption and crime in the country, all of these gave raise to uncontrolled developments in the town centers. The massive constructions in public parks, squares, without any primary norms of planning, design or construction applied. Today in Georgia, the legacy of the 90's is still visible. The development policy based on the Neoliberal market has just become formalized. Therefore, anyone who can pay a fee can build above the height and volume limits, against the rules (Asabashvili, 2011). Nowadays, it looks like the "unknown order" and informality of post-communist Urbanism of the 90's is turning into a new conjunction, inclusive the return to power of the strong leading state, a reduction of spatial regime imposed by state and neoliberal capital. After the collapse of the Soviet Union, all the planned socialist towns underwent the radical transformations. Some of them have successfully established in the new conditions, others have started shortening or have been re-separated and others became like "open air museums of socialism" (Balockaite, 2010).

4.2.1 Riverfront Transformation in Post-Soviet cities

The riverfront plays a key role in the process of development of a city. Given the main features: connection to the river and intricacy, the riverfront steers the space production on the river's edges (Marshall, 2001). But riverfront reshaping frequently problematically occurs between private and public, function and urban environment, heritage and new investments areas, there are "a lot of evidence collected in diverse cultural, political and economic settings to proof the revitalizing phenomenon of waterfronts" (Hoyle, 2000).

In Warsaw, Moscow and Tbilisi, riverfront areas are undergoing rapid transformation. Dynamic adaptation of new political and economic conditions strongly reflected on urban riverfronts. This was the reason why the industrial decentralization in post-socialist cities was delayed. Globalization of real estate market is changing the social spatial structure. According to these aspects the riverfronts became the conflict areas (Machala, 2014). Waterfronts are usually used as pro-growth strategies in the developing cities. Waterfronts are often tasks of experiments, therefore the number of geographers made their research on it and waterfronts are being analyzed by them from various perspectives, such as symbolic value of waterfronts regarding the city planning or the marketing (Short et al., 1993).

4.3 Renovation of the right bank of the Vistula (Warsaw, Poland)

Vistula is called the biggest river of Poland, it had the crucial meaning for transportation for centuries (see Figure 21), but the meaning and the usefulness of it however decreed after the nineteenth century, as the real transport and road as began increasingly used. The left bank of the river was filled with motorways between the riverfront and urban fabric (Bordas, 2013).

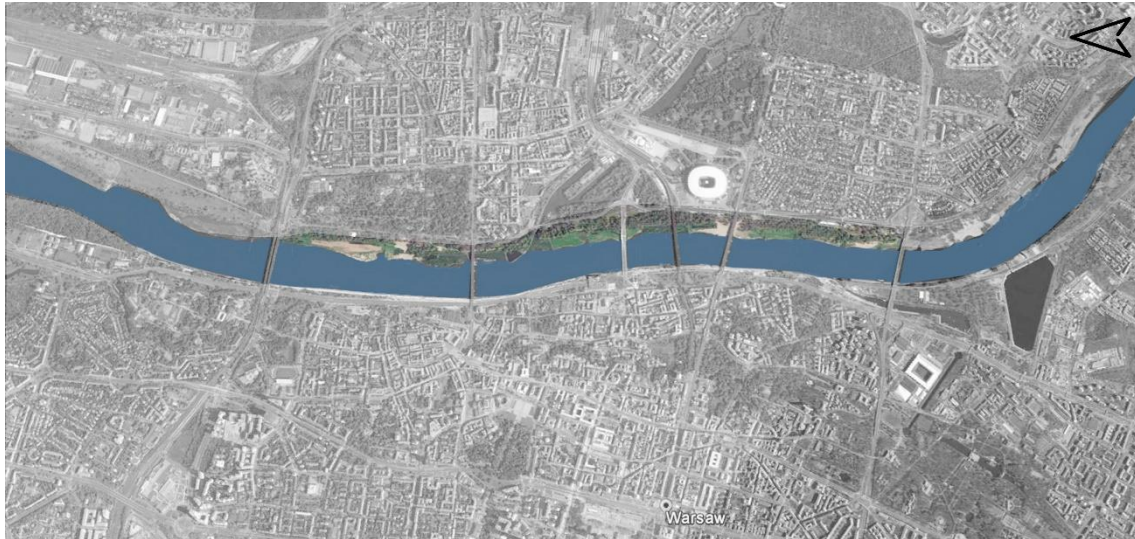


Figure 21. Location of Vistula Renovation Project. Warsaw, Poland, scale: 1:12000

The government of Warsaw was mainly concentrated on catching up with infrastructural development after the collapse of communism in 1989. The riverside renewed after the neglecting for many years and returned to the Vistula river to the city (Sobiech et al., 2015). Everything had been done for recovering the right side of the river bank and made it as a leisure space for citizens, the ecologists worked on the projects with other NGO's, to compose the strategic plan. One of the important aspect of the project was to ensure the frequent flooding would not damage new improvement of the river bank, also providing better access, revitalizing it by suggestion improvements, that would make attractive for residents (Bordas, 2013).

4.3.1 Aim of the Intervention

City marketing and strategic communications were not treated as priority spaces, for resisting the situation, the decision was made by the city hall of Warsaw in 2007. Within the framework of the municipal government a special department was created and the director of this unit acted as the mayor's proxy in any situation concerning the river. The Warsaw Vistula is considered to be one of the main open urban spaces of the city. The reshaping plan of the banks

of the Vistula River has been distinguished in 2005 in the “Strategy for the development of Warsaw until 2020” in several programs, as an important unit of city’s development include main interventions: Port revitalization; Renewal of abandoned Riverside Boulevard; Create path for pedestrians and cyclist; construct spaces for outdoor gym and other sport activities; Development of water transport (Sobiech et al., 2015).

4.3.2 Planning Process

Common development of successive image of Warsaw Vistula River was the main aim of the local planning. Four main actions have been identified by the local support group (Sobiech et al., 2015). Cleaning task was the first phase, to clean the riverbed, in order to minimize the risks of flooding, riverside forest had been cleaned up to provide easy connection with river (see Figure 22). Thirty-seven hectares of forest were cleaned during 2009-2011, by to help this work about eight kilometers path was opened along the river: The new track have been used by pedestrians and cyclists. Game areas, publish toilets, sandy beaches equipped with deckchairs are also made for visitors (Bordas, 2013).



Figure 22. Embankment of the Vistula River. Warsaw, Poland.

Source: Sobiech et al., 2015

“Action 1”: Aimed to formulate a common vision of the Vistula riverbank, to make research and evolution of territory for stakeholders and residents of the city. The concerns of “Action 2” was to create platform for stakeholders for communication and cooperation. “Action 3” included to make territory more attractive with organizing events for citizens and tourists of Warsaw due to promote the new public space. Within the “Action 4” were identified popular marketing activities (Sobiech et al., 2015).

4.3.3 Result and Evolution

The City Council of Warsaw was working with inner team, which supposed to help with coordination of activities at riverfront for the residents of the city. Non-governmental organization experts supposed to develop the cooperation principles of specific units of the city, that would help for renewing riverbanks on the Vistula to make more attractive place for inhabitants (see Figure 23).



Figure 23. Renovation of the Vistula River. Warsaw, Poland.

Source: Sobiech et al., 2015

As the surveys show after the renewal, the city life returned on the bank of Vistula river, which had been died down for the last few decades.

The fact of huge interest in the riverfront by the residents was amazing. It created the new opportunity and had the positive effect of the city life, various of nature also effected on open space and spatially cafes and clubs which are very beneficial by the river. The riverbank of Vistula is used by young people during the whole day, the action that makes the citizen's life more active and so called colorful is encouraging visitors to come to the river from nearby districts, it obviously created the positive image of the city (Sobiech et al., 2015).

4.4 The Krymskaya Embankment (Moscow, Russia)

An innovation revitalization program has been started by the government of Moscow which aimed to change the busy city center into attractive and free public place. The most important aspect was to create eight kilometer long green pedestrian path on the right bank of Moskva river connecting to Vorobyovy Gory. The Krymskaya Embankment became as show case of new city planning policy of city the Moscow. Renovation of Krymskaya Embankment was completed in September 2013 (see Figure 24) (Kereimova, 2014).

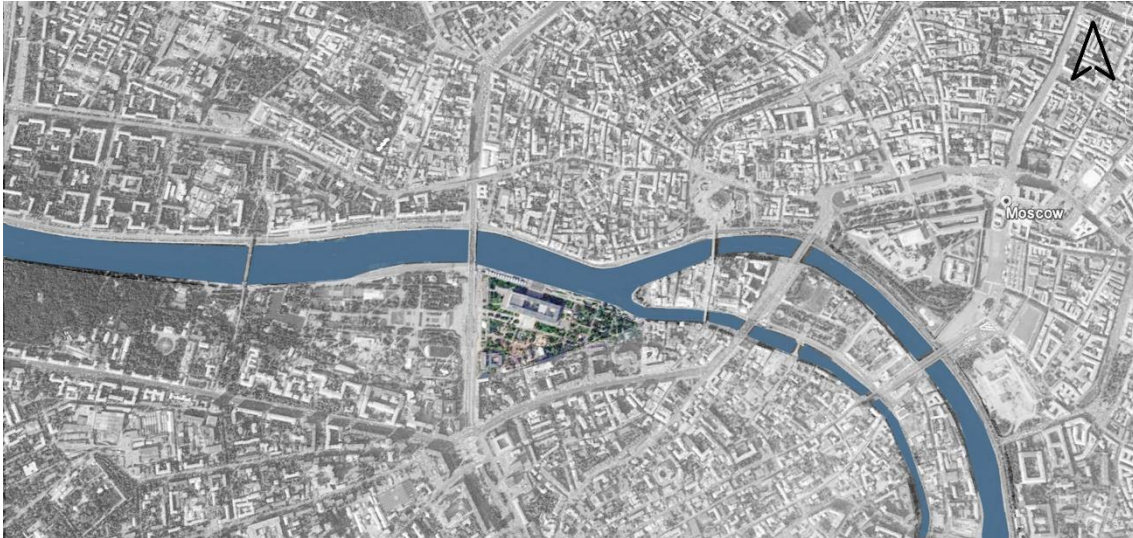


Figure 24. Location of the Krymskaya Embankment Project. Moscow, Russia, scale 1:10000

Until recently, this type of public space was hard to imagine anywhere in Moscow, let alone by the river. Known as the Moskva, the waterway has long been removed from city life. Basically, the river is a concrete-bound channel, with the embankments, used for roads, parking or industrial reasons. The Krymskaya Embankment is located near Moscow's historic center and just next to the Contemporary Art Exhibition Hall and Gorki Park. Before the renovation, the embankment was dominated by traffic routes and was not useful for public use. It also offer new transportation links on water as well as on land that put the river at the heart of Moscow's future perspective (Misir, 2015).

4.4.1 Aim of the Intervention

Architectural studio "Wawhouse" designed the renovating project that considered to create new leisure and public spaces, a fountain, promenade, walking-cycling paths and also one kilometer green line along the river (Kereimova, 2014). To change the Krymskaya embankment into public area and pedestrian zone connecting to the red October factory was the aim of the project (Krymskaya Embankment / Wowhaus Architecture Bureau, 2013). The project area

covered about 100 square km, the purpose was to make the place more accessible to connect areas close to the water. The competition was based on examples from riverfront reshaping projects in Paris, Berlin, Oslo, Hamburg and Bilbao as successful precedents of integrated river development (Misir, 2015).

4.4.2 Planning Process

The area of park has been made into four parks: the area in front of the bridge, art zone the “Vernissage” pavilion, fountain square and green hills (see Figure 25) (Krymskaya Embankment / Wowhaus Architecture Bureau, 2013). The local cultural environment was transformed very carefully by the architects while conserving the traditional informal contemporary art fair. Designed by architects, in pergola-style pavilion was possible for local artists to sell their works. Altogether, the minor size of the pavilion, the wooden deck and the fountain area make a space which is suitable for the visitors with scale. (Kereimova, 2014).



Figure 25. Reshaping of Krymskaya Embankment. Moscow, Russia.
Source: Wowhaus.ru

Improving transport facilities along of the river Moskva was one of the main goal of the master plan. During the project implementation was created corridors for pedestrians and cyclists. Also was changed the zoning of this territory. Instead construction of new pedestrian bridges the decision was made to develop the water transport (Misir, 2015).

4.4.3 Result and Evolution

The Krymskii Bridge over the Moskva River offers to the pedestrians a rain and snow shelter, therefore the infrastructure, like wooden platforms and benches were established under the bridge (Kereimova, 2014). The shelter is provided with the transit zone connected Gorky park and Krymskaya embankment near to it. There have been built two amphitheatres, 28 solid surface and metal benches had been installed, illumination from the Muzeon to Gorky park provide safe movement to the pedestrians and cyclists (Krymskaya Embankment / Wowhaus Architecture Bureau, 2013). Effect of night lightening street lamps gives shiny new look to atmosphere (see Figure 26).

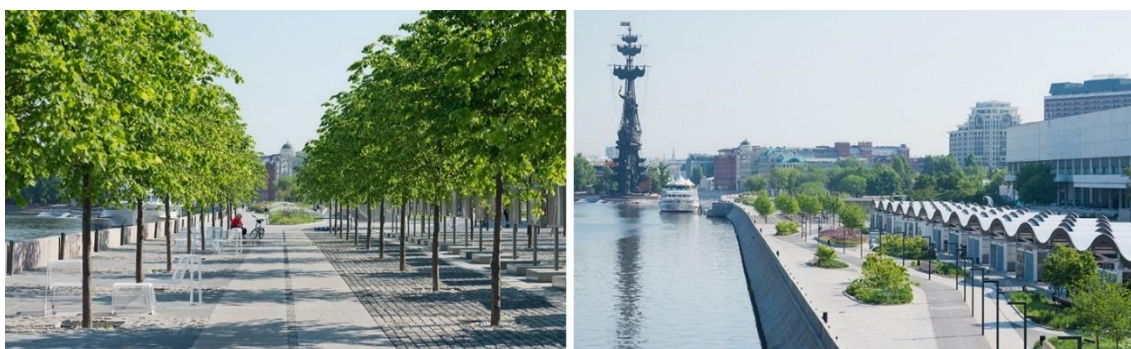


Figure 26. Promenades of Krymskaya Embankment. Moscow, Russia.

Source: Wowhaus.ru

A conservative decision in the selection of plants for urban projects has been adopted by the Russian landscape architects, annual plants and lawns were used for public zones but great variety of herbs and shrubs typical for native flora were used for reshaping of Krymskaya embankment. The main purpose of the project was to create modern and stylish atmosphere in the city center. The place has already gained the name of the most attractive place for visitors and residents of Moscow (Kereimova, 2014). The peak of popularity of this project was in 2014 according to inquiry method Google Trends (see Figure 27). The virtual absence of any online interest in the project before it was actually implemented is indicative of a complete lack of public debate during the planning stage and very little effort in raising awareness to the project before construction.

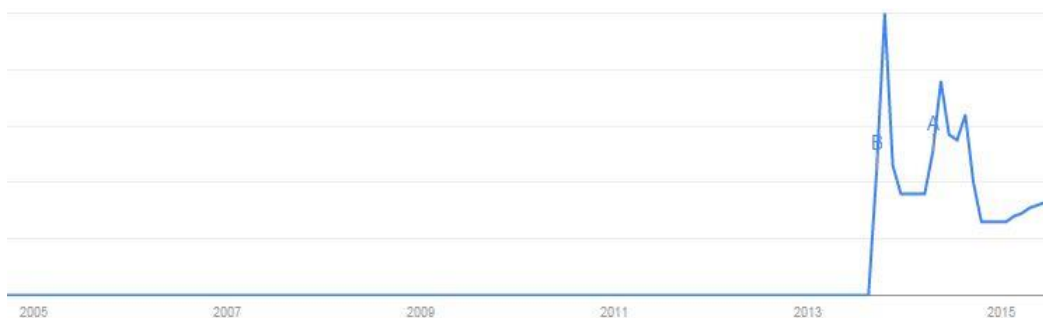


Figure 27. Dynamics of Popularity of Krymskaya Embankment Project.

Source: Google Trends

CHAPTER 5. THE CASE OF TBILISI, GEORGIA

Tbilisi already kicked-off redevelopment of riverfront areas. This Chapter describes the historical roles of riverfront and also touches upon the issue of recent investments, afterwards the section goes on through the precedents that reflect new relation between the city and the river. The dissertation, particularly spotlights on expansion of underused riverfront adjacent to the Old Tbilisi district from Rike Riverside Park until the Deda-Ena garden (see Figure 28). Previously developed projects in Tbilisi indicate the lack of proper planning and applying special approaches, which resulted in a dramatic change of the historic district's image.



Figure 28. Location of Case Study Projects. Tbilisi, Georgia

5.1 Fundamentals of Urban Development of Tbilisi

The Capital of Georgia was founded in the fifth century AD. From there on, it has been distinguished with multiethnic, multi-religious city throughout the middle ages. It was also one of the main junction point of routes connecting central Asia and Black Sea region (Lang, 1966). The name of the city is derived from the Georgian word “Tbili” (warm) and is connected to the mild climate. The place is surrounded by the mountains and lying along the river Kura (Meskhia, 1959).

Tbilisi was very densely populated till XIX century and almost all parts of the city were trapped between the city walls. The typical medieval planning structure was also characterized with irregular street patterns and high buildings, which was largely influenced by the local topography, its slopes, fields and meadows. In the aftermath of deadly Persian ruin of the city in 1795, almost all buildings were blazed and dismantled (with churches and some public buildings surviving the

invasion) and solely street layout was kept untouched. Notwithstanding the relatively small size of zones and districts with different functions, Tbilisi accommodated separately various cultural, social groups and communities (Salukvadze & Duineveld, 2009).

In all stages of city planning, the process was constantly influenced by the braided course stream of Kura. In the past Kura was vested with navigation functions also. Apparently, the downgrade of watercourse level throughout the periods was largely caused by the depletion of forest massive alongside its embankments. Nowadays, large and small islands between river banks are already vanished, whilst on the 1800 plan even gardens of such islands are depicted (Kvirkvelia, 1985).

The oldest among XIX century plans is 1800 plan (see figure 29), which precisely reflects actual circumstances due to the reason that it is first instrumentally drafted plan of Tbilisi. This plan provides graphical images of densely inhabited districts, network of the streets, particular buildings and parts of the city ruined by the last invasion of Agha-Mahmud-khan in 1795. Therefore 1800 plan mirrors also realm of 1795, which makes it trustworthy source to rely on when studying Tbilisi city planning in late eighteenth century (Beridze, 1991).

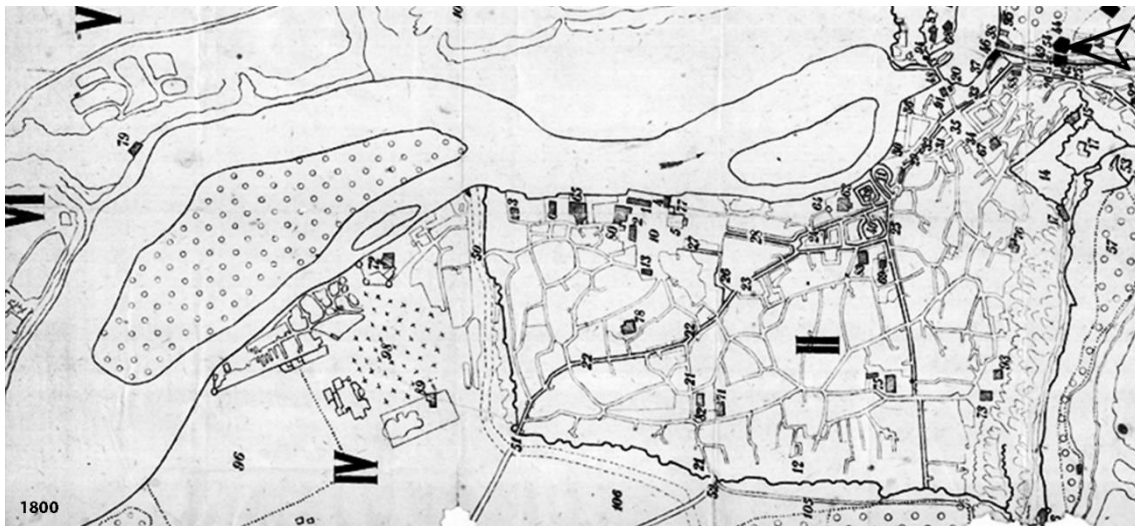


Figure 29. 1800 Plan of Tbilisi, Georgia, scale: 1:2500
Source: National Parliamentary Library of Georgia

In a late feudal age, Kura figured own unique structure of not only the coastal line, but due to the diminutive scale of Tbilisi, also cultivation structure of the entire city:

- The core living sector was laid down the meadow and thus all key administrative, commercial, sports and entertaining establishments and places of worship were situated alongside the river bank;
- Embankment was perceived as a prestigious part of the city, for the reason that representatives of nobility and upper social class erected their palaces and premises exactly on this spot;
- Tbilisi is typified with humid climate and the river bank was favorable space for aeration (Pochkhua, 1999).

The river stream of Kura powered four mills across the banks (see Figure 30). Different sort of factories such as: breweries, grape and fruit beverage plants lather and soap productions were actively operating together with tobacco, textile, lumber and brick plants (Suny, 2009). Whilst arranging recreational zones, the utmost and decisive importance has always been attached to the factor of river. This was a rather complex process, in its center appeared Kura as an axis with amusement and leisure places all flanking to it.



Figure 30. 1920 Mills in Old Tbilisi, Georgia.
Source: National Parliamentary Library of Georgia

Chronologically, the next plan is dated in 1802, which certainly re-shapes basic forms of 1800 plan; However 1802 plan is important because it depicts new scheme of Tbilisi cultivation (see Figure 31). If we perceive this scheme as a pre-determined plan for city enlargement, then presumably it should be deemed as a Tbilisi extension and development plan (Kvirkvelia, 1985).

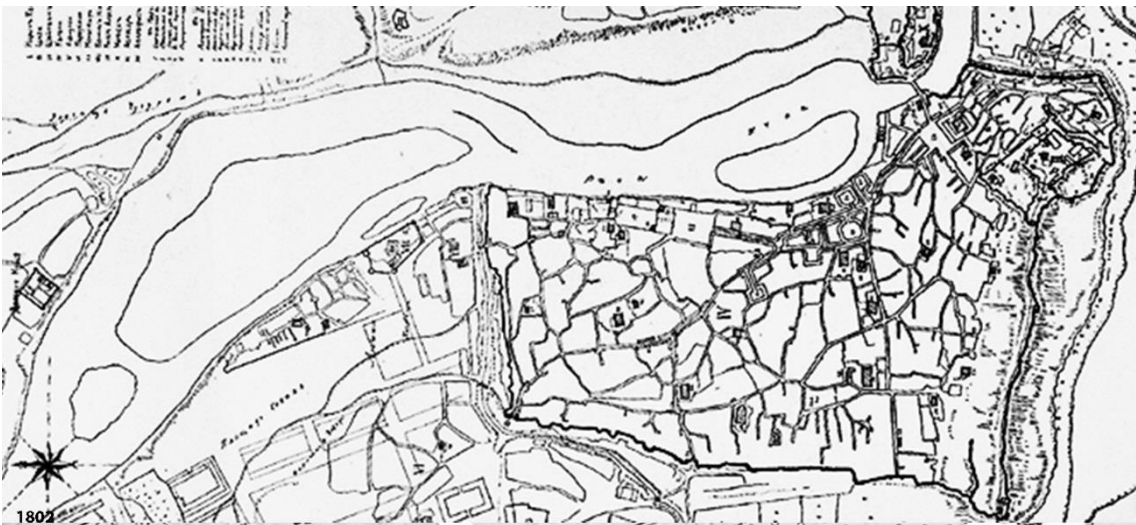


Figure 31. 1802 Plan of Tbilisi, Georgia, scale 1:2500
Source: National Parliamentary Library of Georgia

It may be noted that rectangle quarterly forms of the city development scheme, which was embodied in the 1802 plan by Russian officials, as well as indifferent attitude towards local natural conditions, historical principles of city building and well-established planning structures, are inspired by the idea of town-planning, which was widely accepted and recognized in Russia by that time.

Tbilisi City Plan of 1844: It illustrates construction through regular scheme existing by that time; (construction) was extended to the territory of Sololaki gardens alongside the right embankment and was also laid down the Ortachala island and the newly planned regularly quartered and left bank with steady street network (Beridze, 1991). Pursuant to the revelation of the 1844 plan (see Figure 32) the city is divided in three factions: suburban area, old town and Avlabari (Kvirkvelia, 1985).

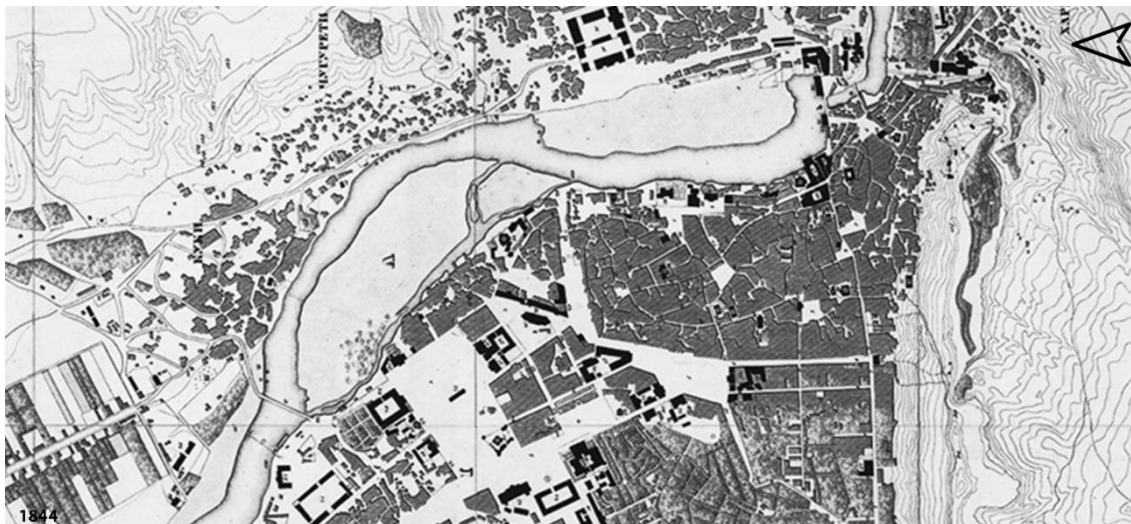


Figure 32. 1844 Plan of Tbilisi, Georgia, scale: 1:3000
Source: National Parliamentary Library of Georgia

Pursuing the political alterations in the early XIX century, new administrative center had been set up and developed through “Garetubani” and thus detached from Kura River. This caused loss of some positive impacts (such as: hygienic importance of the river and its effect on environment), which was appended to the royal center till the late feudal age (Pochkhua, 1999).

After repositioning Tbilisi administrative center from Kura neighborhood, all major buildings were constructed on sideways of Rustaveli Avenue. However, the ancient cultural monuments, which nevertheless did not lose importance but even retained more admiration, as images of reach architectural heritage and spacious installations of the historical surrounding, still remained in the old town, alongside Kura, where the stream of the river together with its tributaries was the definitive inception of the centuries old city structure. This fact itself required planning of special reconstruction programs, which aftermath was not taken into consideration by professionals, unfortunately (Pochkhua, 1999).

Despite this, Tbilisi was extended largely to the west areas and attained European architectural style, the city still continued to be a crossing point between culture and usages of the Middle East and the Western modes, introduced by its Russian rulers (Suny, 2009).

In studying and analyzing 1923-1934 first general city plan of Tbilisi, first and foremost we ought to take into account the role of Kharkov’s “GIPROGRAD”, which without a doubt had effect on the entire planning structure of the city and its image, as well as on the future fate of Kura and its

banks. Regrettably, the project not only prescribed proposed the relocation of most of the city's core functions to a new location, down the river, which was historically common for Tbilisi's planning, but it also refrained from proper analysis and research of the nature and purpose of the river, its composition and development perspectives (Pochkhua, 1999). Practical works, aimed at reinforcing river banks for subsequent construction of highways, commenced in 1928 (Janberidze, 1979). In the second half of 1930th, Soviet Authorities demolished watermills (Kardava, 2013) and after lowering of river level, embankments were secured and Rike district was constructed over newly emerged plot of land (Kvirkvelia, 1985).

Comparative analysis of the historical and contemporary written, photo and graphical documentation presented at our disposal enables to evoke functional-planning, motional-esthetical and landscape wise factual evidence of interplay between Kura and Tbilisi. This also allows exposing main distinctiveness, which as per environmental factors, social mode of life and standards, used to shape planning character of the embankment area throughout the century. Comparison of 1802 and 1904 plans reveals apparently the large extend of the makeover, which actually occurred in the city structure, especially in relation to Kura (see Figure 33).



Figure 33. 1800-1904 Tbilisi Plans Comparison, scale: 1:2500
Source: National Parliamentary Library of Georgia

5.2 Soviet Tbilisi

During Soviet time urban planning and design centered for a development of soviet republics capitals (French & Hamilton, 1979). But all urbanization process was under the strong control of Moscow, which had a main influence on implementation of different sorts and scaled plans (Andrusz, 1984). After the collapse of Soviet Union planning issues lost the importance because it was related with the Ex-Union (Andeusz et al., 1996) each country chose its own way of transition and development of democracy (Anderson, 1999).

In the Soviet Union Tbilisi, due to its rich history and cultural heritage, became an active tourist center (Suny, 1994). During the soviet era the action of industrializing and city expansion was in active phase (Salukvadze & Duineveld, 2009). That is the reason that the city has the structure of linear development which could also cause transportation problems along the Kura river valley (Gachechiladze, 1995). The “Genplan” - was the name of master plan (general’nji plan in Russian) which considered as a main planning development document (Pallot & Shaw, 1981).

In the period after the World War II, the works for alleviation of Kura banks had been actively launched starting from 1947. The left embankment was attributed with new transportation highway, in 1948-1949 the erection of load-bearing wall was finalized. Building of Ortachala dam amplified the stream level and consequently new bridges were assembled. This reconstructions was not only resolved transportation problems, but also modified significantly certain parts of the city, which laid alongside Kura and were visible from many points of the City (Aroshidze, 1950). Structuring the embankment was followed by the reconstruction of surrounding area. Marshes along the right tributary of the Kura had been dried, consequently new park was constructed as a substitute of old cabins on the former Orbeliani Island. And the bank street followed the trail of dried stream under the bridge (Janberidze, 1979).

The “Communist” paper dated 21 January, 1951 proclaimed that: “Many things have been changed. Previously backward part of the city nowadays shines with various novelties. There are no more watermills erected along the banks of Kura with large wheels. Instead, now the load-bearing wall follows the river and soon the new, beautiful embankment highway will be over stretched between the reconstructed bridges of Baratashvili and Marx.” However, the first secretary of central committee, Kandid Charkviani, who was among those, who orchestrated reconstruction of Kura banks, claimed that pulling down the watermills had nothing to do with the construction of banks and new bridges. Reshaping of Kura embankment and erection of river dams made it impossible to assemble watermills over Kura (Kardava, 2013).

The construction of embankment highways in the 1940th was greeted as a major improvement to the sanitary conditions of the city Tbilisi, but at once fostered estrangement process between Kura and Tbilisi settlements (see Figure 34). Those highways at some point unloaded traffic in long

streets on both sides of Kura, but the problem of transportation still remained unresolved (Pochkhua, 1999).



Figure 34. Baratashvili Bridge, Soviet Time. Tbilisi, Georgia.
Source: National Parliamentary Library of Georgia

As a consequence of the construction of main roads dictated by necessity, it's impossible not to bypass the deterioration of esthetic potential of historically shaped districts of Tbilisi as well as the shortage, which was followed subsequently to the construction. This phenomenon may be observed through the lens of comparative analysis among pre and post construction photo materials (see Figure 35).

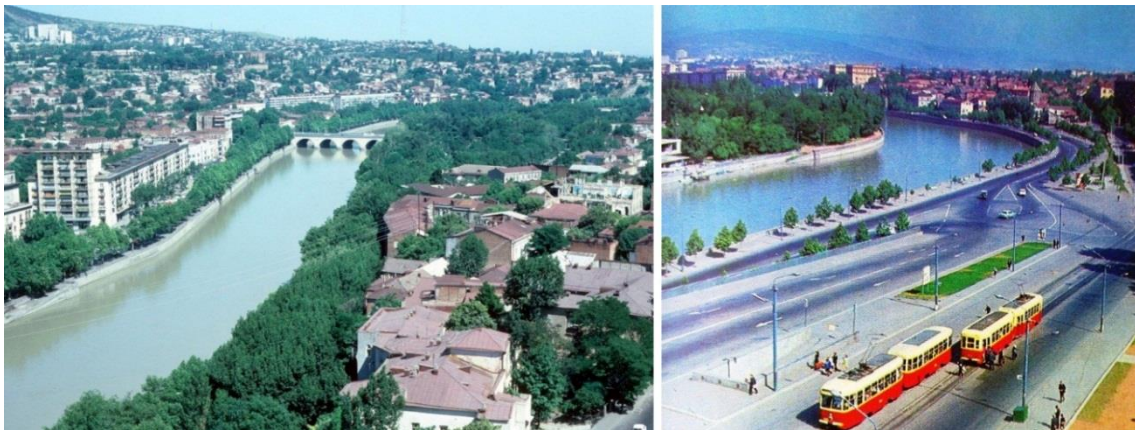


Figure 35. River Kura Embankments, Soviet Time. Tbilisi, Georgia
Source: National Parliamentary Library of Georgia

Construction of embankments had been continued constantly in Tbilisi. If in 1940 total length of the banks amounted to 3 km, in 1966 this data was increased up to 13.5 km. Kura was channelized and straightened through the city and its banks were transformed into the major highways. River banks unloaded Central Avenue from transport and played a key role in connecting Navtlugh to Saburtalo via freeway (Janberidze, 1979). Setting out the embankments triggered revival of the old tendency of Tbilisi development, namely properly linking city parts to Kura and amplify the importance of river zone. River Kura area, as a linear image of Tbilisi composition, also plays important role in the sense of city extension. Embankment is not used for reserving fresh air, which has direct effect on microclimate. However, the masses of air passing

alongside the Kura gorge has a best potential for ventilation of the capital. The rock routed tunnel serves the purpose of preservation of settlements over Metekhi hill and beyond as well as continuation of high speed freeway alongside the left embankment. Due to the narrow stream of Kura on the one hand and the rock itself on the other, construction of over ground highway appeared to be impossible in this particular fragment. Construction of the road would alter existing scale and cause loss of overall attractiveness of the area, which is characterised with beautiful balconies dangled along the rock, thus the highway under this section keeps on inside the tunnel.

In 1973, Rike area was dismantled of settlements and recreational zone was planned to be arranged in there. Meanwhile, Ortachala gardens also attracted Tbilisi inhabitants and constituted one of the popular social spaces for them (Kvirkvelia, 1985). Regrettably, “Ortachala Gardens” nowadays can be met only in old historical maps of Tbilisi, and this territory is distributed among private plots and is experiencing chaotic, disorganized cultivation. Historical map of Tbilisi of 1924 clearly depicts that river Kura used to separate in two tributaries along “Ortachala Gardens” creating an island. Branching started exactly on the same spot, where Ortachala Power Plant is constructed now (see Figure 36).



Figure 36. 1924 Plan of Ortachala Gardens. 1970 photo of this territory. Tbilisi, Georgia.
Source: Adapted from National Parliamentary Library of Georgia

In the Beginning of 1970, elaboration on master plan was commenced and various stakeholders were actively involved in this process, namely: union of architects, city architect's office, academic experts, institutions and universities. Networks of personal ties across the official administration and multiple roles of individuals in the official system, simplified on the one hand the planning process and made it more inclusive, but it also carried risks: old patron-client relations could be reinforced, and corruption could be fostered (Salukvadze & Duineveld, 2009).

During the soviet era, a huge attention was drawn to enhance the state of hygiene and ecology in the city as well as to arrange recreational places for inhabitants. To that end, in 1979, Institute “TBILKALAKPROEKTI” drafted “Master Plan of Greening and Watering of Tbilisi for 2000”, which envisaged four major points, namely:

- Both embankments of the river, also mountains and gorges, would have gone as green as possible;
- Green zones, which surrounded the city would have been linked to the inside recreational zones (existing and planned parks), which would attain the role of the main pillar in structural planning of the city;
- Kura banks would have been included in the city structure by transforming their functions to that of parks and boulevards;
- Both sides of Kura would be pursued by relatively small green objects as a part of the above-mentioned general elements' system.

Current circumstances in Tbilisi clearly indicate that after approval of the named Master Plan by the year of 2000, parks were deployed neither on Kura embankments, nor inside the city itself. And the number of green plants increased through the count of greening small parks and streets (Pochkhua, 1999). At the end, many ideas prescribed by the new master plan were not realized (Nodia & Scholtbach, 2006).

Unification process in Soviet Tbilisi transformed law and economy as complementary systems of politics, which had a direct effect on the planning system. As a consequence of the strong outdoor or internal impact of modernism on the planning process, this latter played an important role in the scientific system, and acquiring scientific status resulted in the separation of planning from political influence. Architects were given more freedom and their intellectual horizons became wider and broader, which subsequently was followed by new loads of ideas, fulfillment of which attached artistic influence on the planning system. As new separations occur, all relevant branches—law, economy, art, science and even politics—reshape and redeem their place in Georgian public. Consequently, planning is constantly being distanced from the decision-making process. Nowadays Tbilisi represents a Soviet city inherited from the socialist-era town-planning (Salukvadze & Duineveld, 2009).

5.3 Tbilisi in Transition

Break down of the Soviet Union caused dramatic changes in newly independent Georgia. The country and its capital were unstable, almost defaulted, badly administered and during the first decade of independence even dangerous (Steavenson, 2004). After gaining independence, Tbilisi went through periods of disorder and chaos. However, situation stabilized more or less by the end of the century and which gave opportunity to intensify development activities since 2003. New developments were followed with rising of new issues in Tbilisi as it was the case in many other post-Soviet cities. The situation was deteriorated due to the lack of housing systems, green zones, public spaces, inferiority in constructions and overall disorder (Van Assche & Salukvadze, 2013).

In the aftermath of Soviet Union, peculiarities emerged in terms of adapting 70 years old communist styled town planning with new reality. However, for architectural circles and specialists main objectives of planning development were obviously outlined: transformation of totalitarian and isolated regime of town planning and its integration into the single European, democratic values based space; pursuing efficient legislative and administrative as well as managerial and planning reform in line with European standards. Without organized reform in place, undertaking these changes would give a rise of chaotic development of urban processes and deterioration of city's environment. Experience gained through 1991-1993 clearly indicated that the Capital city would be target of such anticipatory threats as far as it is an urban centre of the country and fully reflects all key individualities of post-Soviet evolution and controversial developments. Post-Soviet development of Tbilisi may be separated in three major phases:

- Tbilisi town planning;
- Total ignorance of architectural-planning and legal principles;
- Efforts to overcome town planning challenges.

Thus, political-economic transitions occurring in 1991-1996 had an effect on overall systematic crisis (Makharashvili, 2008). There were lots of security threats in Tbilisi throughout 1992-94 years, when paramilitary groups roamed the streets and took control over certain areas, which at some point made authorities to engage in a deal with them (Steavenson, 2004). It is easily recognizable that in such a risky environment both developers and home buyers wouldn't dare to start up development businesses in Tbilisi and since this market was totally unregulated, main deals were made on black market (Van Assche & Salukvadze, 2013).

Urban problems of Tbilisi, emerged in the aftermath of independence, should be resolved through applying planning and urban design strategies. This latter, however, cannot constitute part of regular strategy without placing it under planning framework and planning itself may not be just without existence of democratic institutions (Kornai & Rose-Ackerman, 2004).

The development attempts were kicked off slowly in these years, but stepped up in new millennia and especially after Rose Revolution of 2003, when so-called “investor urbanism” started implementation (Ziegler, 2006). The idea of “investor urbanism” lies in collaborative decision making on large projects together with governmental authorities and well-off investors (Gallina, 2010).

2007 is marked with the open call for preliminary master plan contest, or more precisely for “General (Operative) Plan of Land-use of Tbilisi”. This plan should have been the ground for a fully-fledged master-plan. There was consensus among authorities as well as experts on the need of unified master plan or a similar document for Tbilisi; however opinions were differed on the design of such plan. Some experts submitted that old-fashioned master plan in a socialist style would be inefficient and unnecessary. After the distress surrounding this process, in 2009, new master plan was finally approved, but its implementing impacts seem least even from nowadays standpoint (Salukvadze & Duineveld, 2009).

5.4 Recent Changes and Problems of Tbilisi’s Riverfront

In subsequent years, environmental issues raised concerns in Georgian politics and thus had effect on Tbilisi planning. For a certain period it was perceived that every large project would be based on environmental impact assessments and green urbanism fundamentals would lead the planning process. However, very important green zones were turned to vulnerable spaces and parks and protected areas now become residential settlements (Salukvadze & Duineveld, 2009). Some forms of environmental planning were inherited from the Soviets, but largely lost in the nineties. There is the legacy of green cities (White, 1980), which is demonstrated in Tbilisi through the combination of parks, tree-lined avenues, hills, and valleys with construction bans.

The decrease of public space and overall shortage of public domain indicates government’s inability to organize special zones for public and common usage (see Figure 37). It also indicates that public good still exists, but is badly damaged due to the post-independence wild capitalism effect. Moreover, it also suggests that nowadays mechanisms are still lacking to redefine public space and public domain generally in a democratic way without applying strict power of capitalism or old fashioned Soviet solutions (Shavishvili, 2009). Besides, open spaces between historic part and newer Soviet period areas, are victim of “investor urbanism” (Gachechiladze, 1990).

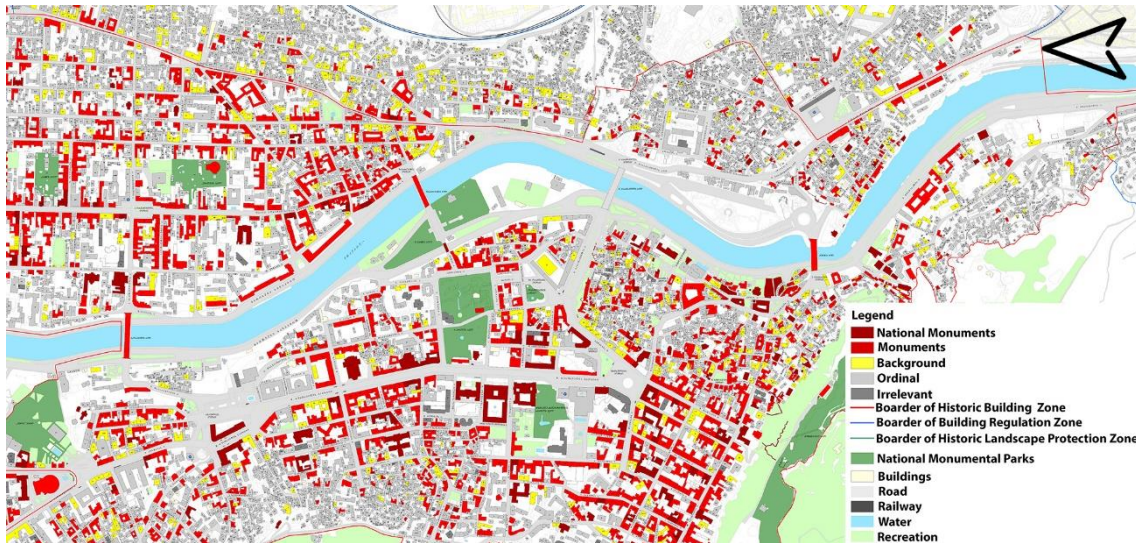


Figure 37. Historic- Cultural Map of Tbilisi, Georgia, scale: 1:4000
 Source: Ministry of Culture and Monument Protection of Georgia

During the last decades, visual perceptions of natural-landscape and architectural environment of Kura embankments, have been radically changed. Not only the bank highways and large dams, but also functional and esthetic inconsistency in surrounding settlements causes undesirable disintegration of bulky parts of Tbilisi from the river. One of the core issues is current situation on Kura embankments, alongside of which mostly petroleum stations, auto washing and reparation stands and other service objects are located. Apparently, the river plays significant role in organizing municipal places for relaxation. This approach is particularly notable in case of Tbilisi due to the lack of green plants. The ratio of recreational territories in close vicinity of central zones is unsatisfactory, while in suburban areas this index is lowered up to minimum. In light of the increased auto mobilization, municipal transport system, currently at place in Tbilisi, cannot meet the needs of transport flows (see Figure 38).



Figure 38. 1800-2007 Combined Maps of Road Structure, scale: 1:2500
 Source: Adapted from National Parliamentary Library of Georgia

Over the years, state actors involved in planning have been replaced by different actors in Tbilisi. Some people engaged themselves in the process, some left it, new faces have emerged and same applies to certain organizations, professions and disciplines. During the Soviet time, everyone knew that official plans for Tbilisi and its surrounding were factious (Salukvadze & Duineveld, 2009). Planning process becomes effective if people are involved in it and if they believe in it. This inclusive and stable system allows all interesting parties and stakeholders to make own calculations (Luhmann, 1997).

Tbilisi follows steps to democracy and rule of law, wish more diverse society. New changes in Tbilisi planning brought new approaches such as collapsing of fictional scientific planning, acceptance of equitable planning law, imposing central role on capitalist economy in planning. Since Georgian society is still experiencing transitional period towards democratic differentiation, the empirical data to not always show the equitability of actions of the planning administration, interest balance or securing rights (Salukvadze & Duineveld, 2009).

5.4.1 Water Quality of River Kura

In the beginning of XX century, the transformation of Kura functions was already obviously depicted; in this stage of development of the city, the cultivation mode was also changed a lot. Several functions of the river had been lost naturally (producing drinking water, defense) whereas some others had been empowered and even new functional characteristics were emerged (see Table 1).

Table 1. Typical characteristics of River Kura
Source: Gventsadze, 2013

Name	Kura
Location	Starts from Turkey
Length (km)	Total: 1515 km, 35km within Tbilisi
Tributaries	20 Tributaries in Tbilisi area
Area of basin	total: 188000 km ² , 500 km ² within Tbilisi
Flowing	Caspian sea
Debit (Average annual consumption)	443m ³ /sec, Typical character is floods during spring, lack of water in summer and winter

The population needed river with economic strength as well as with favorable climate conditions, also as an energy source and for producing local construction materials. In light of this, degree of disorganization of embankment and irregularity of its regime (due to which settlements along the

river suffered a serious injury as a consequence of floods), by the early XX century, was completely inconsistent with the general image of the city. Kura was assigned with the function of main collector as a result of its pollution with domestic discharges and industrial wastes. Despite of this, Kura area did not lose its prestige and attraction for inhabitants of the city with warm climate. (Pochkhua, 1999)

Through 1940-1950 the old tradition to set recreational zones, such as parks, along the river banks had been displaced. At the same time, utilization of river waters for technical rationales fostered the tendency to orient industrial zones around the river basin, which had a critical effect on esthetical image of banks and on ecology too.

Through the long term research it may be noted that pollution of Kura and its tributaries is getting higher and subsequently water quality keeps on down within the area of Tbilisi. This process is being continued even now despite the fact that overall produce and industry is lessened. Sewage and wastewaters still remain main source of pollution of Kura basin. Current circumstances in terms of pollution control of Kura and its tributaries are largely impacted by poor functioning of wastewater system. Existing situation is aggravated by the dawning of water cleaning equipment. (Gventsadze, 2013)

According to the 7 May, 1998 Order #59 of the Minister of Protection of Environment and Natural Resources of Georgia on Approving Statute on Protective Water Line, over water objects have own protective water lines, among them: coastal lines of rivers, lakes, reservoirs, alienation lines of major and other channels and whereas prevention of pollution, littering, wasting of water resources is obligatory for public agencies as well as natural persons individuals. Basically, parameters of rivers' protective water lines are established by the Law of Georgia on Water, while Article 17 of the abovementioned Order #49 provides that protective water lines in cities, towns and village settlements are set out by general plans. (Law of Georgia on Water, 1997)

Unresponsive attitude from authorities towards water cleaning units throughout the years had an effect of decline of the quality of waters, especially in the historical centre of the city, where the quality is on critical edge.

5.5 Rike Riverside Park

Rike, which lies along the left bank of the River Kura, is situated between Avlabari and Chugureti districts (see Figure 39). In the middle ages, Rika was name of the entire left bank area of Kura, but later this name was substituted by Chugureti. In XVII century Rike area was serving a competition field for wrestling and for other sport activities. The road Avchala leading to Russia started from here.



Figure 39. Location of Rike Riverside Park. Tbilisi, Georgia, scale: 1:5000

In the XIX century city fairs and markets were arranged here. As Rike is located in the lowest level of the city, on the Kura embankment, the area was usually severely affected by flooding (see Figure 40) (Kvirkvelia, 1985).

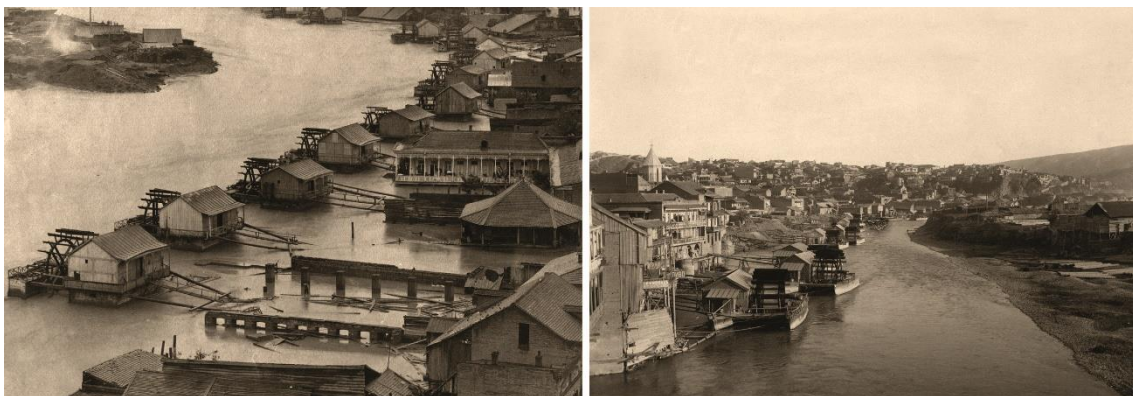


Figure 40. Territory of Rike before Sovietization. Tbilisi, Georgia.
Source: National Parliamentary Library of Georgia

5.5.1 Aim of the Intervention

In 2009 Tbilisi City Hall took up work on the idea of rehabilitation and development of city's historical part. The program united several large scale projects, among them foremost important renovation of Rike Park. The Park space is divided in three main factions with following functions:

- Restoring balance between residential and recreational areas inside the historical centre of the city;
- Filling the deficiency in greenery of the city;
- Enhancing living convenience for historical densely districts over the river;
- Transforming Tbilisi centre into important portion of the city;
- Creating opportunity for genuine link to the river (still not applied).

5.5.2 Planning Process

The project of the 7.5 hectare park was approved by the Tbilisi City Hall in 2010 without any prior public discussions (see Figure 41). Author of the project is a Spanish architect Domingo Cabo. The City Hall classified information on details of construction. Among others, interested urban specialists were also lacking opportunity to access the data on expenditures.



Figure 41. Rike Riverside Park. Tbilisi, Georgia.

5.5.3 Result and Evolution

The main shaping element of the Rike Park is a 3D moving fountain, which is interchange connection along main pedestrian circus from “Bridge of Peace” towards the promenades assembled over the roof of new sector of Avlabari tunnel. Tunnel over ground is used as an element of the park as is well integrated into the entire space. Hence should be noted the pedestrian zone left in between of the river and new segment of the tunnel, which continues embankment pavement and is overwhelmingly used as a parking lot. Here, the “Buda Bar” was opened alongside the promenades (see Figure 42). Particularity of this brand requires its isolation from the surrounding area. Consequently, inner space of the Bar couldn't be re-opened over the river bank. Therefore, this part of the park could not retain the function(s) of even service object and remained torn and artificially split from the rest of the Park area, which is basically located over the tunnel. Person, walking through this faction does not perceive the whole space: from the one hand she/he is close to the river embankment and from the other side tunnel and the wall besiege him/her and generate artificial and inhuman environment.



Figure 42. Promenade of Rike Riverside Park. Tbilisi, Georgia.

The well assembled parking lot for 350 vehicles is constructed under the Park. However during evening and night rush hours the space is half free even despite the fact that Gorgasali circus (which is very close from there in 100-150 m. distance) is tremendously occupied by cars. Presumably, this is caused by ineffective management or other more important reasons.

The new bridge and the Rike theatre constitute one single unit, but due to their scale and visual are totally exempted from the overall context (see Figure 43). Despite the smart location of the bridge, as if spaciouly tracery, but actually overloaded with the volume of glass, the bridge produced visual obstruction for perception of the gorge. This architectural gap should definitely be eradicated in the future. Rike theatre is particularly hardly perceivable for a person walking down the Baratashvili Bridge towards the Park, because the construction almost fully covers from the sideways the inner part of the Park.



Figure 43. New Bridge of and Theatre in Rike Park. Tbilisi, Georgia

Construction of the new coastal park doubtless was largely approved by everyone; however the project itself caused huge controversy among society, because Kura had nothing with this type of recreational zone. The territory was totally dismantled from the old ugly restaurants, which was a positive for sure, but the new buildings erected thorough the Park (bridge, theatre, tunnel and cable car station) were absolutely off the context of this historical district.

Therefore, criticism should be raised towards these new structures, currently dominating the area. Here, major shaping spots are Metekhi temple, Narikala fortress, Sioni Cathedral, segment of old Tbilisi settlements, which are harmoniously merged with the River Kura and the surface thereto and forming unique territory of Rike. All previous authorities were cautious in making concrete decisions in relation to these areas of the city. Numerous contests had been arranged together with public discussions, winners were announced for more than once, however Rike still remained untouched before implementing this Project. Inside the city center, this is the only place, which gave possibility of inclusion of River in planning of the center, but nowadays this is practically excluded due to the modern planning of the Rike Park and this tremendous giant scaled constructions (see Figure 44).



Figure 44. Bridge of Peace, Rike Park. Tbilisi, Georgia

5.6 Deda – Ena Garden

Notably, this turning green of this place (former Orbeliani Island) started in 1930th together with the construction of Kura embankments. The territory, previously utilized for agricultural and industrial purposes, was transformed into the recreational zone (Janberidze, 1979). Unfortunately, this green area (total 9 hectare) has been largely dominated by buildings during the last 15 years (see Figure 45).



Figure 45. Location of Deda-Ena Garden. Tbilisi, Georgia, scale: 1:5000

Public Service Hall (building of which sacrificed tennis courts) was successfully added to this territory. These Courts were of importance equal to Wimbledon for Tbilisi and currently above mentioned Service Hall complex occupies total five hectare area, 2.5 from which is allocated for parking (see Figure 46).

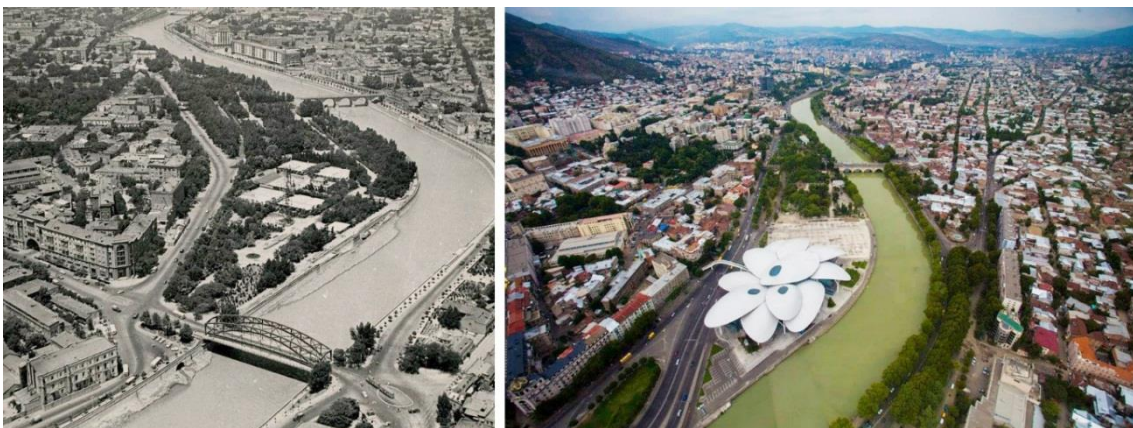


Figure 46. Comparison of Changes between Soviet Time and Nowadays. Tbilisi. Georgia.
Source: National Parliamentary Library of Georgia

5.6.1 Aim of the Intervention

The project aimed at constructing social iconic building in the city center along river side, which would attach new and interesting shades to the surrounding environment, similarly comparable to the Guggenheim Museum of Bilbao.

5.6.2 Planning Process

The project of Public Service Hall was continuation of the Rike Park project. The project of Italian architect Massimiliano Fuksas was unilaterally approved without preceding tenders or public discussions. Total area of the seven floor building is 2.7 Hectare. And it unites offices and service spaces. The building requires more special intercourses for suitable perception. Hence, it should be noted also that the architect didn't deem it necessary to visit the place study the impact factors of the space (see Figure 47).



Figure 47. Construction Process and Finished Public Service Hall. Tbilisi, Georgia

5.6.3 Result and Evolution

River performs important role in shaping the city. Development of river coastal infrastructure effects city's sceneries, which determines architectural image of this latter. Pedestrian pavements alongside Kura embankments define planning structure of the territories surrounding river. During Soviet period these pavements were much wider and assigned the role of boulevard; even today the city lamps can be met along the river dams.

Embankment highways were not so overloaded by that time with transport vehicles and thus in absence of traffic, access and walk through these pavements was way easier. In 2012, after

completion of the construction of Public Service Hall, the cars toll dramatically raised over these area and with the purpose to widen the highway, authorities cut off the trees sideways of the bank and tapered the pedestrian pavements (see Figure 48).



Figure 48. Comparison of 2010 and 2012 Changes near Deda-Ena Garden. Tbilisi, Georgia

Moreover, during the construction process, number of trees were additionally cut off for the building site as well as for the setting of car parking. Such actions create impression of indifferent attitude towards nature and environment (see Figure 49).

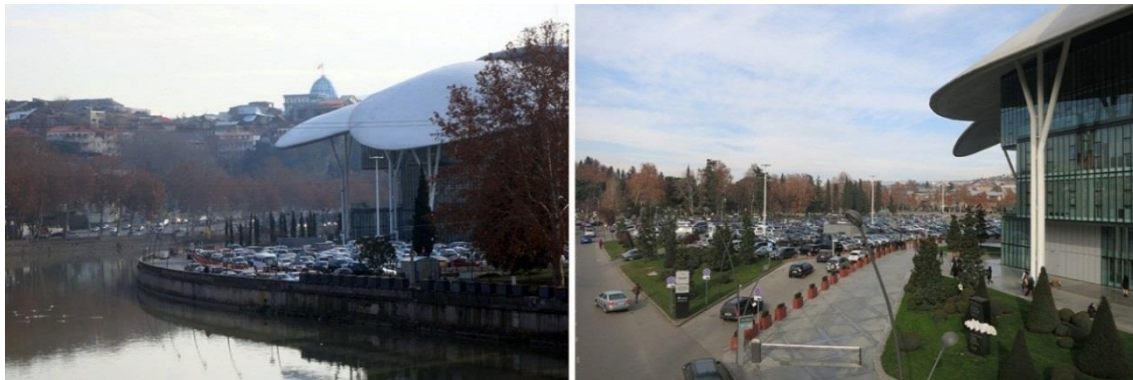


Figure 49. New Parking Lot Front of the River Kura. Tbilisi, Georgia

However, those responsible for transforming city's landscape declared that the entire process was well planned and there was no reason to point out on devastating consequences of it as such aftermath was likely unexpected. This negligent construction was resulted in loss of dozens of trees as the image of city's old park and its adjacent neighbourhood had also been sacrificed.

In order to further prevent such insensible decisions and events followed thereto, first and foremost purpose and objective of the territory alongside river banks should be identified and spacious-sizes expansion of the areas may be dealt with only afterwards.

5.7 Timeline of Tbilisi in the Case Study Areas

Below presented timeline of maps give us opportunity to see the structure to how have been changing and developing case study areas in all stages which located near the shoreline of the River Kura. On the map of 1887 and 1924 is marked Orbeliani Island, which today is a territory of Deda-Ena Garden (see Figure 50)

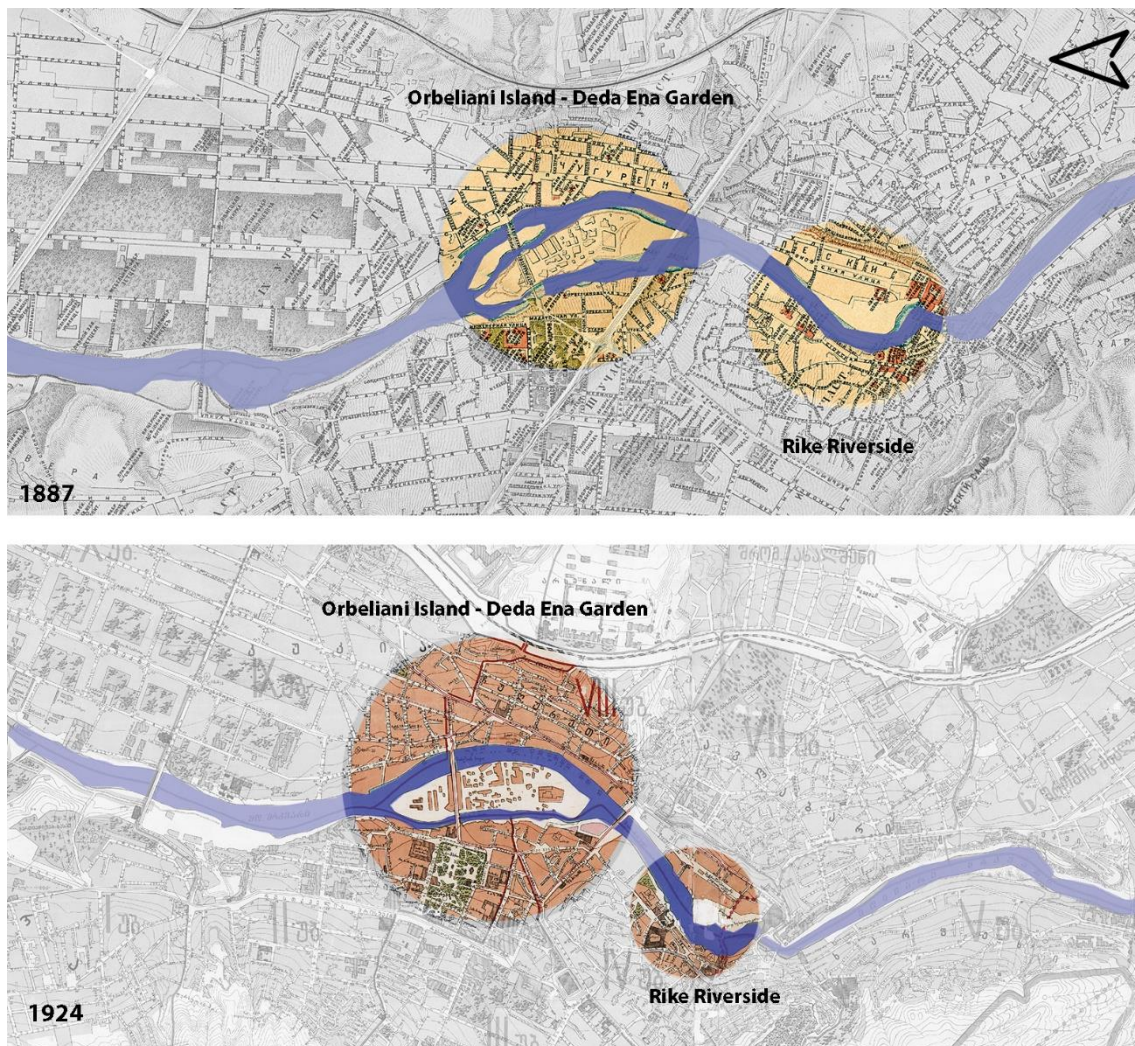


Figure 50. 1887-1924 Plans of Tbilisi, Georgia, scale: 1:7000
Source: Adapted from National Parliamentary Library of Georgia

In Aerial photography 2006 is visible that in the site of Deda-Ena garden were located tennis courts, which have been demolished at the end of 2010 during the construction of the new public service hall. On the other images it is easy to see construction and finished phase of both areas (see Figure 51-52).

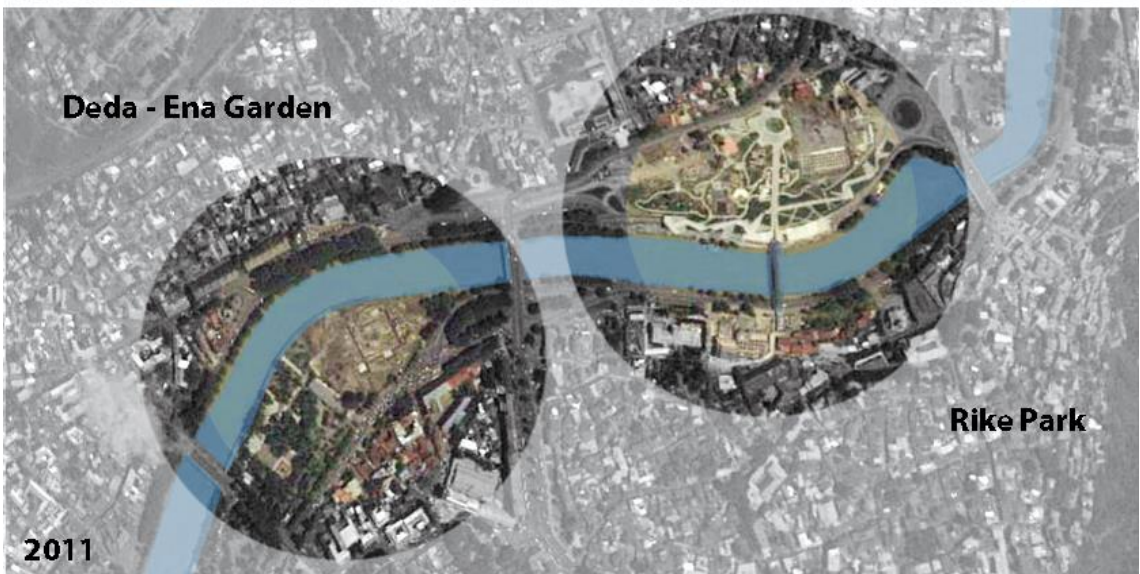
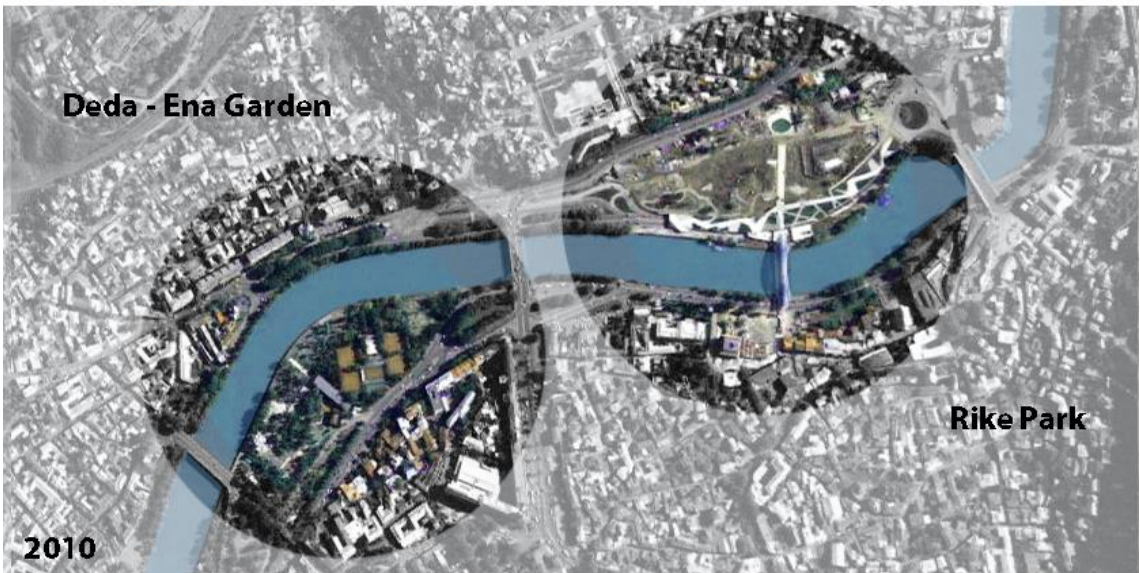
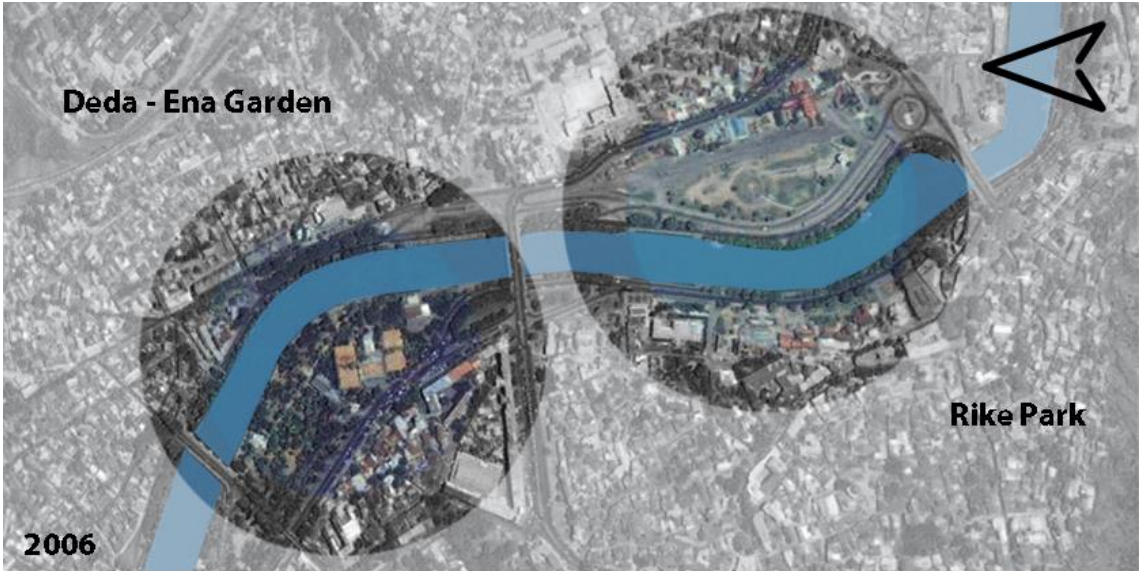


Figure 51. 2006-2010-2011 Changes in Case Study Areas. Tbilisi, Georgia, scale: 1:6000

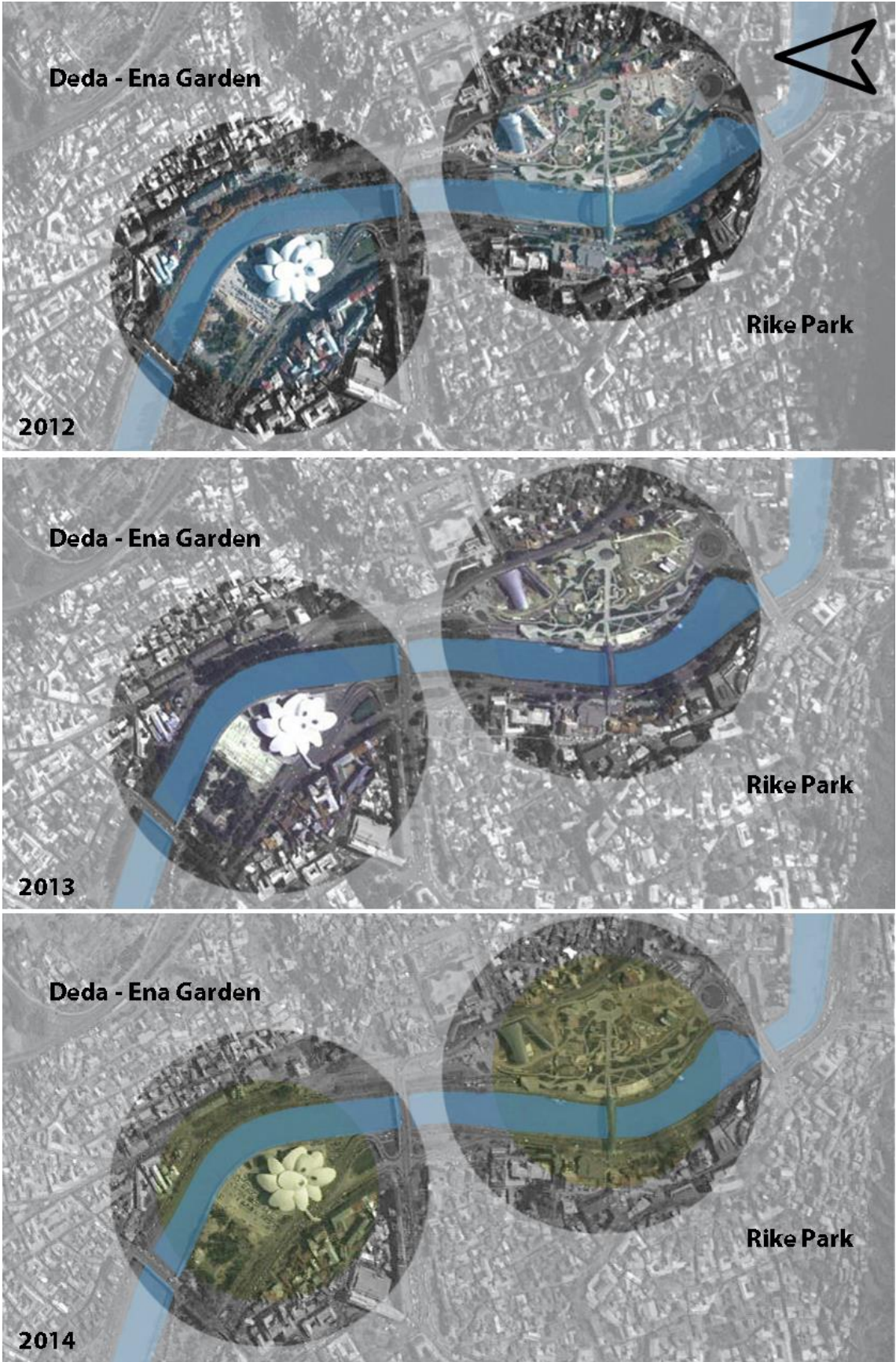


Figure 52. 2012-2013-2014 Changes in Case Study Areas. Tbilisi, Georgia, scale: 1:6000

CHAPTER 6. DISCUSSION AND CONCLUSION

6.1 DISSCUSSION

Pursuing international practice and experience it becomes apparent that projects aimed at development of riverside parks are typically selected through open competition for public debate and discussions, which is subsequently followed by approval and fulfilment. High developed countries have already realized the importance of such urban projects for suitable improvement of the city (see Figure 53). Despite diverse features and characteristics of these projects, analysing their methodology will enable us to beware of challenges and problems nowadays Tbilisi is facing with. Notwithstanding drastically dissimilar territorial and planning character of Tbilisi, points of convergence still might be identified in order to elaborate on strategy for riverside territories pursuant to the relevant methods and principles of regulation as to enhance state of ecology in the city and at the same time to meet the demand of society on more and well-arranged social spaces.



Figure 53. Location of All Case Study Projects.

Urban revitalization of Madrid Rio riverfront appeared very successful project in terms of picking up urban identity. About fifty percent of the whole project constructions are placed above the tunnels over the complex technical systems and large urban infrastructures. Project clearly demonstrates the necessity for coordination among the engineers responsible for lowering the motorway below ground and the landscape architects dealing with design of the public open space on top of it. The faded stream of water seems to have more attractive function and actual access to the banks of the River Manzanares. The key idea of this project entailed under covering and widening of one of the belt roads in the city. This process was accompanied with huge social, environmental and financial anxiety. All protesters expressed their dissatisfaction towards the high cost of the project.

Demarcation of major recreational facility in the city of Portland across the Harbor Drive is largely accepted as an important happening in urban planning, because for the first time the freeway was totally dismantled and not substituted. Establishing a waterfront park allowed the city of Portland to foster development projects around this park, which also brought economic benefits inside the city. Reducing of motor vehicle use caused decline of noise and air pollution in this zone.

The Paris Plage project was widely considered as a successful “urban experiment”, which provided transformation of urban boulevard used for car traffic to the attractive and accessible river bank, which draws lots of tourists and travelers. The idea of creating real summer beach with imported sands, live music and activities in the middle of Paris, later turned into a worldwide phenomenon. Development project of the Seine banks that Paris has probed highlights firstly a method by which it establishes long-term exchange of ideas between the users, designers, builders and the administrators who will be in charge of the installation and maintenance (see Table 2).

This thesis mainly focuses on how conceptions of the public and public space riverfronts are being discursively reworked today in Western Europe and also in post-socialist countries. Also discusses altering stream of River Vistula and extension of Krymskaya embankment in Warsaw and Moscow (see Table 3). These developments served to cause changes in public space and the post-socialist urbanism in both cities.

These cities formed by the river, underwent through the long past of development, and reflected the effect of the river and its renewal as their territorial development, as well as formation of architectural planning structure and especially the nature of the riverfront construction which changes citizen's social-psychological relationship with river and city.

Warsaw authorities conducted reshaping program of River Vistula basin and attached utmost importance to the development of this area. The project primarily aimed at reconstituting of the riverfront to create recreational zone and to emerge public space, which would give the place more attractiveness for population and tourists. The project is co-financed by the European Union, which covered expenses for the first phase of the project, while the City of Warsaw is expected to bear the rest of the costs related to the second stage of the work. This zone became more than the place of rest, it is also attractive for artistic action.

The City Hall financed Krymskaya embankment project, it is important and interesting at the same time in terms of analyzing the consequences of the closure of the site traffic. The project entailed the risk of collapsing auto traffic situation. In general, development of waterfront spaces and parks in Moscow is one of the key points for further improvement of the city.

Above described projects aimed at giving the places spirit of fashion, which would attract youth and elderly people as well. Recreational zones give opportunity to both generation to enjoy walking or taking other activities.

As mentioned previously, all discussed examples are unique and can't be directly linked to the situation in Tbilisi embankments, all these cases just share common structural pattern (see Table 4). Therefore, external experience would only serve positive developments in future regulation of Kura banks, actually there is ample opportunity for improvement of the existing interventions, by increasing links between the different areas and reducing the total area devoted to parking. Also pros and cons of all these projects should be properly analyzed and only afterwards be transposed in Georgian realm. For example: the scale of Madrid Rio project is impressive, but in light of the current worldwide economic crisis it is completely impossible to raise funds for such a huge project in Tbilisi, however its planning obviously suggests the ways how to tackle similar problems. The creativeness of the Paris Plage project definitely should be acknowledged, it stresses that re-connecting society and river may also occur even without high budget.

Table 2. Detailed Info of Projects in Madrid, Portland, Paris

Name	Madrid Rio	Portland Harbor drive	Paris Plage
Location	Madrid	Portland	Paris
Context			
Type	Replace	Remove	Temporary
Urban design goals	-Develop new public space instead old highway	-Increase pedestrian access to the waterfront	-Create a new landmark, develop new public zone
Open space goals	-Demolish highway and replace with boulevard	-Develop new linear park	-Create new open space and provide access to waterfront
Transportation goals	-Replaced road structure with underground tunnel	-Provide alternative route	-This project made no changes to existing highway configuration
Coordination	City council	City Planning Commission	City Hall
Beginning of the project	2008	1970	2002
Area	80 hectares	14 hectare	15 hectare
Cost	€ 3,7 Billion	\$ 20 Million USD	€ 2 Million
Strengths	Improved connectivity with river and design quality project area	Recreation and rest availability near the river	Filing property, identity of area and community
Weaknesses	There were problems in achieving the projects goals, due to the complex engineering required. Criticized for the high costs involved.	Harbor Drive connecting two states, had to absorb the traffic of the removed freeway.	Available only during the summer

Table 3. Detailed Info of Projects in Warsaw and Moscow



Name	The Right Bank of the Vistula	Krymskaya Embankment
Location	Warsaw, Poland	Moscow, Russia
Context		
Type	Reshaping	Remove
Urban design goals	- Increase pedestrian access to the waterfront	-Create a new landmark, develop new public zone
Open space goals	- Develop new linear park	- -Create new open space and provide access to waterfront
Transportation goals	This project made no changes to existing highway configuration	- Demolish highway and replace with boulevard
Coordination	City council	City Hall
Beginning of the project	2007	2013
Area	6,2 hectare	4,5 hectare
Cost	€ 1,5 Million	2 Millard Russian Ruble = € 27 400 00
Strengths	Healthy enjoyment and good environment	Develop park near the Muzeon area and create more artistic place
Weaknesses	Poor ecological management	Lack of parking place for visitors, poor quality of implemented project

Table 4. Detailed Info of Projects in Tbilisi

Name	Rike Riverside Park	Deda-Ena Garden
Location	Tbilisi, Georgia	Tbilisi, Georgia
Context		
Type	Reshaping	Replace
Urban design goals	- Develop new Public space	-Cut down trees, demolish part of recreational zone
Open space goals	- Create new park	-Create new public Iconic building
Transportation goals	Replaced road structure with ground level tunnel	- Construct new overpass, make street wider and create new parking space
Coordination	City Hall	City Hall
Beginning of the project	2009	2010
Area	7,5 hectare	5 hectare
Cost	€ 2,5 Million	103 Million Georgian Lari = € 35 000 00
Strengths	New recreational area in old city center	Modern iconic building
Weaknesses	Lack of access to the river, scale of new buildings too large for site.	Disappeared tennis courts, worsened traffic congestion, especially in peak hours.

6.2 CONCLUSION

This paper stresses inclusion of the surrounding context to have impact on the re-programming of the riverfront. The landscape should be ready to support existing programs for linking neighbourhood with the riverfront. Therefore, riverfront is no more deemed as a separate faction of the city, but constitutes integral part of larger unified arena of different such factions. Moreover, the thesis emphasizes gradual steps on how existing land use programs might be extended and mingled to the riverfront. Additionally, it also provides efforts in diversification of the range of uses through letting, or even reinforcing, opportunities to renew stream circulation.

All above mentioned practical case study examples were mostly characterized with expanding over the large programmed areas. Spaces, demarcated under these projects, with plain accessibility to the urban fabric and the waterfront, could meet loads of cultural needs. At present, these areas are utilized as recreational zones and places for different events. Open public spaces are usually flexible and consequently changing urban conditions and preserve the riverfront as a large communal storage. Best practice in this regard are exposed through the practice described in the previous sections of this Paper. Most of the sources applied for this research, suggest that the marginalized riverfront area might be used more effectively. Bearing in mind these ideas, new models of riverfront for Tbilisi may have been sought. To that end, the researching this entire project was targeted to indicating how the marginal sections along the urban riverfront can be organized to create a more consistent riverfront, which would be better incorporated with the community and would have a positive effect on the city's image.

As Otto (2005) argues: "Rivers provide habitat to many plants and animals. These habitats consist of benthic, aquatic, and terrestrial components. These three zones are the most important river habitats that should be considered when riverfront plans and development and restoration decisions are being made. Restoring ecological systems such as riverbanks and stream buffers contributes for activities such as fishing, boating, swimming, and wildlife watching. Urban riverfront planning must reconcile development, flood control, and recreation with environmental designs and strategies that enhance the river's ecological systems [p.151]." During the planning process planners are obliged to take in account this aspects, which are growingly being considered in riverside interventions in Europe, North America, and elsewhere.

Urban planning analysis of Tbilisi city and Kura River certainly implies possibility to draw interesting conclusions and to work out all necessary steps for proper reconstruction, but notably, keeping in bounds of only architectural planning ways of solution and, especially disregarding the existing urban context, would serve a little purpose. Efforts should be made in drafting complex program following inclusive discussion with and participation of various stakeholders and civil society. Such attitude not only provides the creation of required material base, but also significantly reinforces the esthetical image of Kura banks, functional consistency, efficiency and

prestige, which traditionally used to characterize the river throughout the different historical ages and is instrumental in gathering public support and awareness of the project.

The fact that Kura cannot be the strong hub for transportation due to the non-profitability and hydro conditions had been hold yet back in 1932-1934 while drafting first general plan for Tbilisi development and reconstruction; However, relatively small sized means of transport may be introduced in the municipal transport system, mostly serving tourism purposes, especially in the area of historical center.

Current reality stipulates inevitable necessity for empowerment and improvement of links among territories of Kura basin and their use for transportation and pedestrian widths. Suitable utilization of transportation potential is crucially important for Tbilisi, as a linear developed city, whereas both embankments of the river are mantled with large living settlements.

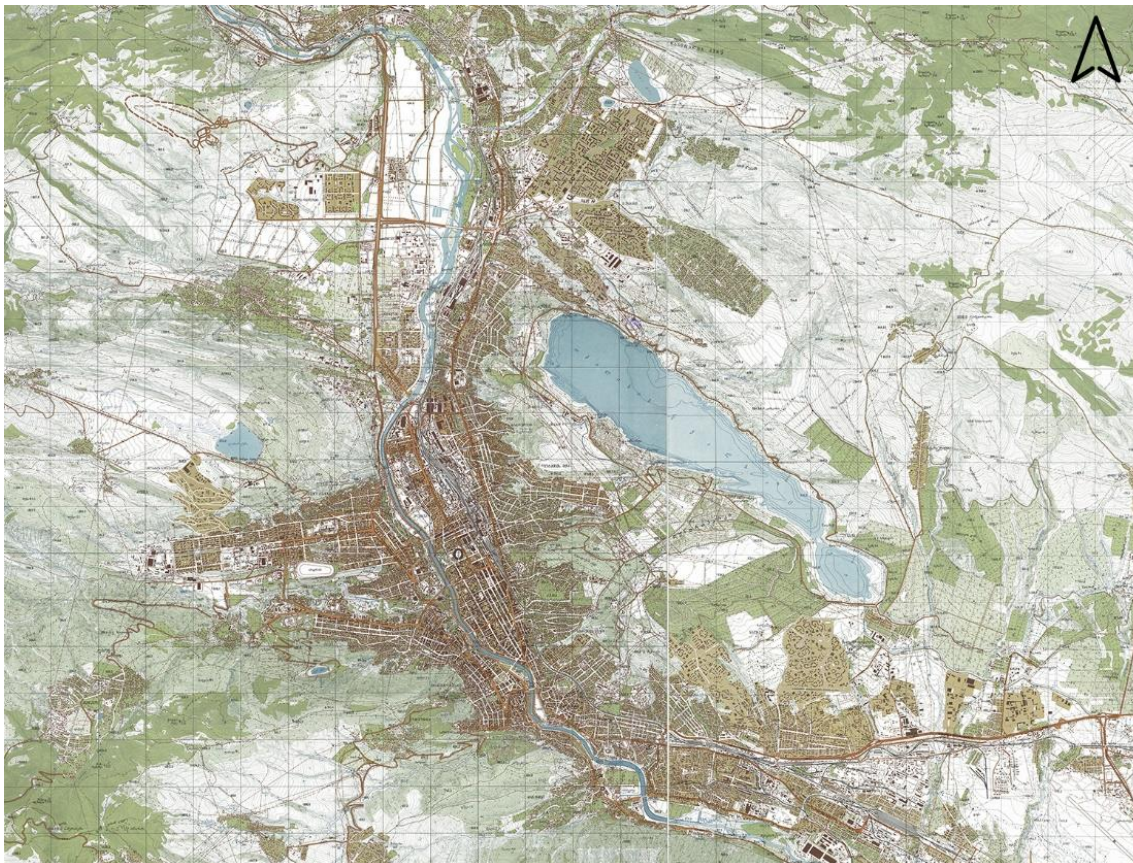


Figure 54: 2006 Map of Tbilisi, Georgia, scale: 1:45000
Source: National Parliamentary Library of Georgia

In further advancing embankment line of Kura following considerations should be taken on board: establishing proper ties between bank highways and other districts of the city; analysing green dressing and territories adjacent to the river and identifying agenda for further actions; likewise inclusion of river banks, as important recreational reserve, into draft general plan of Tbilisi. The issue is rather multipart requiring complex resolution. Essential point of the General Plan, such

as functional zoning of city and transportation schemes, should be focused on own key issues as well as on planning green social areas and consequently enhancing state of ecology in the city.

Whereas, many cities around the world spare no efforts to make large investments in establishing high class riverfront experience for the benefit of citizens and tourists, Tbilisi is not yet ready to take an action. A good opportunity was missed during reconstructing the Rike embankment in Old Tbilisi. Waterfront parks requires rather different approach than other parks; riverfront areas should be intended for people and other activities to a larger extend. Rike Park has failed to connect with the river, the surrounding populated area lies alongside the riverfront, but lacks any kind of bonds with the River. With a stunning rich history, currently it doesn't fully rejoice its heritage.

It is a pity that everything is going to be sold mainly without urban documentation. Government as well as local government structures ignore this important (urban) constituents of the project documents. It is supported, to some extent, by the fact that there is no spatial - territorial or regional development contemporary planning documents of the country. Also some of the city's land use master plan is ignored. The country does not have a comprehensive and fully-staffed urban areas of legislation which would allow a more transparent and coordinated effort from the planning authorities. Such large-scale constructions must be regulated in accordance with the recognized project documentation of the urban planning. Because of the development of Georgia the goal of which is fully, unconditional and non-alternative integration with Europe, such laws or acts in accordance with European standards should be harmonized.

The current faded role of Tbilisi's town planning was largely dominated by established malpractice of investment, which is inconsistent with planning documentation and is adapted to the rapid commercial gain. Therefore the momentum to undertake efficient legislative, institutional as well as managerial and planning wise reform in line with European standards, peaks its crucial importance.

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