

## **EXPLANATORY FACTORS OF THE EXPANSION OF RECREATION FUNCTION ON THE BANK OF DANUBE RIVER IN BUDAPEST**

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### **Abstract**

In a city's development a river and riverbank played important role, however in recent decades the functions of them have changed, transformed, especially in major cities in the more developed countries, so the city administration was faced with a new phenomenon and geographical space: the changing riverbanks, and the utilization, development, revitalization of them has become a key issue. The various real processes showed the direction that these areas should be provided to the people, and the recreation service will be important for the local residents and tourists. Overall, the urban waterfront development is an increasingly important researched topic and policy. The question is: can we realize it in Budapest also nowadays? In recent years, those processes took place in Budapest, which resulted in an increasing utilization of the Danube and its banks for recreational functions. On the one hand, local social and economic processes have led to the waterfront sites released, on the other hand the needs of the residential population and tourists using the river and the riverside for recreational purposes have increased, and thirdly, the new city administration decided to renew the banks of the Danube, mainly to create new recreational areas. In this paper, we analyze these three factors, focusing on a past short period, because there is an exceptional cohesion between the processes, the needs and the new development goals. Two case studies are in the paper also: the Margaret Island as the oldest traditional recreational area in Budapest, and the Kopaszi-dam, as the newest and successful recreational area of Budapest. The analysis of the processes is based on data and literature, the analysis of the needs is based on a survey, and the analysis of the goals is based on the different development documents.

Keywords: recreation function, urban waterfront development, Budapest

### **INTRODUCTION**

"The direct relationship between river and man interrupted in the course of urban development, therefore, there is a need a more closely integration, between the man and the water, and between the river and the city. The Danube with islands and banks should be to take the special and integral part of everyday life, and to increase and strengthen the community use is important in the strategy." These sentences can be found in the development concept of Budapest city (2014). In recent years, those processes took place in Budapest, which resulted in an increasing utilization of the Danube and its banks for recreational functions. In our study we analyse this situation.

A river, a lake has always been an important factor in the development of a city, both local (drinking water, fisheries, energy sources, transport, irrigation, industrial water etc.) as well as potential "energy" (crossing, protection etc.) (Mendöl, 1963). It is a special factor in the life and the development of a city (Malone, 1996). However, over time, the role of water in the life of a city changes, some functions of the river and its bank are weakened, or cease to exist, and new ones can be formed. In the past few years these processes in a number of large city life appeared, thus a lot of city governing bodies faced a special type of geographic area, the metropolitan waterfront ("bluefield") and its development issues; it is called urban waterfront development (see eg. Craig-Smith, 1995). The large cities try to redefine their relationship with the water and develop now defunct harbour sites and other brownfields into new, high-quality urban districts (Klopf, 2008), and designers and planners tried to turn waterfronts into places in which people want to live, work and play (Butunel 2006). It is generally observed that the classic features of water and banks have decreased, and more experts see that the revival is connected to the tourism and recreation (eg. Craig-Smith, 1995). (However, this is a complex phenomenon, since the various functions are different in scale (national, regional or local importance), and the use of the river and its immediate surroundings so different interests and conflicts may occur, but in our paper this aspect is not analysed, we focus on the factors of recreation function.)

Waterfront areas are undergoing rapid transformation in many post-socialist cities (Machala, 2014). While in the more developed cities there should be more financial options of the waterfront development, in the less developed cities there are fewer tools to develop the "bluefield". But in all cities the administration had to respond to the new needs, mainly the needs of local population for the increasing recreational land use. These may be illustrated by the capital cities of Danube. In the case of Vienna the "waterside areas include very diverse parts - Danube, Danube Canal and Old Danube represent different aspects of the Viennese waterfront. Large scale projects like the Danube Island, the hydroelectric power plant Freudenu and the DonauCity have accelerated the dynamic of urban development alongside the main river bed and created new infrastructure for recreation" (Klopf, 2008). In the case of Bratislava, the main goal is to develop the city centre on both sides of the river, and the river plays an important role in the topic of the sport and leisure, and there are targets to create new areas for the recreation (Balasova, 2013, Machala, 2014). In the case of Belgrade they think the Belgrade Waterfront takes urban renewal to new heights - a smart city for a future that combines commerce, culture and community. There are plans for the recreation area, for

example the Belgrade Park will be the green lungs of the development, as well as providing a place to relax, unwind and enjoy (<http://www.belgradewaterfront.com>).

These issues are important in Budapest also, where the Danube was and will be dominant in the life of the city. The characteristics of the Danube are varied in the capital: the Danube is 30 km long, 4-6 meters deep, 270-570 meters wide, and has high average rate of discharge ( $2266 \text{ m}^3/\text{s}$ ) in Budapest. The river splits into several branches, and has some islands, bays on the area of Budapest. The long riverside and the bays, branches gave possibilities to the emergence of different functions. The banks have been used by the local population long ago (and a wide variety of recreational features were presented), but in the last years a lot of functions have changed, transformed in Budapest (Beluszky, 1992, Izsák, 2003 etc.), and some of them had an impact on the river and the land utilization of the banks. We can analyse three factors: on the one hand, local social and economic processes led to the waterfront sites released, on the other hand the needs of the residential population and tourists using the river and the riverside for recreational purposes have increased, and thirdly, the new city administration decided to renew the banks of the Danube, mainly to create new recreational areas. Our questions were: what are in the background of the changes? Which factors can strengthen the recreation function, and which ones can weaken?

## METHODS

The utilization of the Danube and its riverside was analysed by three methods. First, the local social and economic processes which affect the utilization were analysed; it was based on the literature and various statistical data. Second, we explored the needs of the residential population, which was based on the analysis of a questionnaire survey. Thirdly, we examined the development goals of the city government which was based on the analysis of the related development documents.

### 1. Different and changing functions

First, we give a brief overview of the changing functions of the Danube and the banks in Budapest, highlighting for the possibilities and restrictions of the land use.

In recent years the quantity of the drinking water which are coming from the Danube (from bank-filtered wells) has declined continuously (the amount of water supplied to households was  $119 \text{ M m}^3$  in 2000 and  $85 \text{ M m}^3$  in 2012; [www.ksh.hu](http://www.ksh.hu)), but the areas of the banks are closed for securing the water base, and it will remain in the future also. The fishery has

disappeared a long time ago, but in the last decades the urban fishing has become significant (see below). Between the city conditions the agricultural production and irrigation is negligible nowadays. The energy of flowing water was benefit, mostly through the riverside and floating water mills, but this function has disappeared.

In the XIX<sup>th</sup> century the manufacturing industry has increased in the capital and it resulted the growing demand for industrial water use. In the XX<sup>th</sup> century it still existed, even in the time of socialism some new plants were build on the riverside which used the water of the Danube. After the transition in the life of the capital the services took over the lead role, and many industrial plants were closed (Barta, 2002). This resulted in a continuous decline of the use of industrial water (annual production of industrial water was in 2009: 2.761 M m<sup>3</sup> and 2012: 2.25 M m<sup>3</sup> ; <http://vizmuvek.hu>) and a demand has been made to reuse of the old industrial waterfront areas (brownfield) (whether to give them new economic function, for example: Graphisoft Park with modern R&D units (<http://www.graphisoftpark.hu>)).

There are some functions that are not closely tied to the riverside, but used to be the utilization of free area, and recently the view of the river as an attractive factor motivated to build residential buildings, institutions, office buildings in the bank of the Danube. Nowadays there are investments also (e.g. Marina Gated (<http://marinapart.hu/>), Lágymányosi Infopark (<http://www.infopark.hu>)), although it is not justified by a lack of area in Budapest, even the number of the metropolitan population is decreasing (1989: 2.1 M and 2011: 1.73 M; [www.ksh.hu](http://www.ksh.hu)), and the number of metropolitan enterprises is stagnating (2002: 188 434 and 2010: 189 882; [www.ksh.hu](http://www.ksh.hu)), and a number of new non-waterfront office buildings, residential parks are half-empty in Budapest. From the point of view of the recreation the problem is that the creation of waterfront private areas precludes the most of the residents from the use of the Danube riverside (see below).

A special feature may be to maintain, protect the natural environmental conditions of the riverbank, which are wetlands. This is an important aspect only a few decades, so today there are only some little original natural areas in the metropolitan riverside. Four types of green areas exist in the capital: the rarest is the original protected habitats (excluding the population, e.g. Háros island), and there are some partly converted habitat area (e.g. Római riverside, Margit island) and some artificially designed natural environment (manicured lawn, planted trees etc., for example Kopaszi dam), and there are some neglected, but polluted areas in the northern and southern part of Budapest. From the side of the expansion of recreational functions the latter three are appropriate.

That is important in 2000s the brownfields and unused green area along the main branch of Danube occupied nearly half of the total length of the coast (Izsák-Probáld 2007).

Finally, we can analyse the transport function, which is a complex issue. The shipping was important element of the development of Budapest (Hardi 2012). In the capital the freight water transport on the Danube is average in European level water transport, and the transit is important. In Budapest there is only one international port (in Csepel), whose turnover has decreased in recent decades (in 1978: 1230 ships, in 1993: 424 ships; <http://www.ulicska.iweb.hu>, Szalkai 2013). This function has weakened in the life of Budapest. There are different forms of the passenger water transport in the capital. On the one hand there is public water transport: there is scheduled boat service on the Danube, but the volume of passenger traffic has decreased in recent years (in 2000: nearly 2 M, in 2010: nearly 0,25 M; [www.bbk.hu](http://www.bbk.hu)), and it is only 0.3% of public transport (Development Study Plan of Budapest, 2013). But the tourist boating service in Budapest is successful, many private firms operate ships.

In Budapest there are 12 road and 2 railway bridges on the Danube (and two subway lines are under the river), and the across the river is extremely important function in the life of the capital. (Some experts suggest to built new bridges, while others think the capacity is available.) The main problem is the transport along the Danube. On the banks of the river there are traffic routes: there are roads and lines of tram, suburban railway, which pass through the capital, and link the northern and southern part of the city, and there is a transit traffic also (because the ring road is not fully completed around the city). These routes lie directly along the river, which results conflicts: the roads and lines use the riverside, and separate the people from the Danube and its banks. The city management is looking for solutions to the problem a long time ago, but so far without success. (Some experts suggest to foreclose the road transport, which in turn would increase the traffic of the city, while others suggest to introduce the traffic to a tunnel, or incorporate into the top of the roads, which in turn would require a very substantial financial investment.) There are international examples to change this utilization of riverside (Soós 2013).

Finally recreational functions are viewed which are the subject of our study. According to the statistical data the free time of Hungarian population increased to the 2000s, and has decreased slightly in recent years (1986/87: 230 minutes/day, 1999/2000: 280, 2009/2010: 266; <http://www.ksh.hu>). Within this time the recreation is presented in different forms, and it is difficult to separate the categories to indoor and outdoor activities (e.g. stationary bike and mobile internet), and there are only some activities in the categories of the system of the

Central Statistical Office, which can not be carried out on the Danube riverside; but the weather can limit the activities. It can be assumed that the population recreational activity has increased, partly related to the river and riverside.

The increasing demand arises from the tourists also. Number of nights spent in commercial accommodation in Budapest increased from nearly 5 million (2000) to 8 million (2013), with smaller fluctuations (<http://www.ksh.hu>). It is known that in Budapest the Danube riverside is a World Cultural Heritage Site, with numerous famous buildings (Buda Castle, Parliament, the Danube Promenade etc.), and these are featured destination for the tourists. Thus, we can assume an increasing demand for recreation areas from the tourists.

The Danube area offers many recreational possibilities, which are related to the river or to the riverside. Long time ago it was possible to swim in the Danube (grid-bottomed wooden swimming pools were on the river), but this option disappeared due to poor water quality, and nowadays the regulation prohibits swimming. Returning this function due to the clearing water of Danube raised nowadays. The water sports are popular in a long time (for example the long Római bank is one main centre of it in the northern Budapest since XIX<sup>th</sup> century (Izsák-Probáld 2007)), a lot of water sports associations are in the capital, and operate boat houses, small ports (e.g. 50% of the Hungarian rowing clubs are in Budapest (<http://www.hunrowing.hu/klubok>)). Typically, however, that more of the smaller branches of the river and the bays are preferred, but the use of motorboats are becoming popular on the Danube. There are a lot of tourist boats also, with increasing number of passengers. On the metropolitan riverside the number of anglers are growing (street/urban fishing) (<http://www.mohosz.hu>). Former vessels and other structures anchor on the Danube, which are used for recreational purposes: restaurants, clubs, museums (e.g. Kossuth museum and restaurant (<http://www.venhajo-etterm.com>); A38 club (<http://www.a38.hu>)). In the last years a new function is appeared: large river cruise ships dock in the capital for several days.

The banks of the Danube functions as a recreation area a long time ago. The riverside walking, relaxation coupled with the view of the river is a major feature. This is served on many places by different service units (restaurants etc.) which settled here. The other main recreational function is the sport: running, cycling, roller skating etc., and the demand for this type of area has increased in recent times due to the population working towards a sportier, healthier life. A number of events linked to the Danube and its banks in Budapest, such as the firework of National Day (August 20), occasionally water and air parades, as well as the famous international Sziget Festival. Other forms of recreation (not related to the water) appeared also in the riverside: the new National Theatre and the Palace of the Arts were built

on the eastern bank, and recently the Várbazár (castle garden) is under renovation on the western bank of the Danube. Some hotels were built on the riverside for the tourists. Overall, it can be said that in many places the banks of the Danube function as a recreational area, and there is demand for new areas.

At the end of the chapter it can be mentioned that the local social and economic processes resulted the transformation of the functions of the banks of Danube, and there are new areas to the potential territorial expansion of the recreation, and in some places there is need to change the functions in the riverside.

## **2. Needs of the local residents**

In August 2014 at eight locations on the bank of Danube we carried out a survey (Fig. 1.) among people living in Budapest (n=1035; male: 44,3%, female: 55,7%; age: <30: 42,8%, 30-60: 42,1%, 60+: 15,1% (answer=987)). We focused on their relation to the river Danube, their usage of the riverbank (and the Danube itself), and their knowledge and assessment about the future plans.

Our presumption is that inhabitants of Budapest have been actively using the bank of the Danube as a place for their free-time activities so the existence of areas with these special functions are not new, and due to the growing demand their number have increased. Our survey was carried out at eight different places on the bank of the river with the aim of focusing on the usage and the judgement of them by the people. Beyond that, we made special attention to and detailed research on two areas: the Margaret Island (Margit-sziget) with long-standing recreational function, and the recently opened Kopaszi-dam (Kopaszi-gát) with the Lágymányosi Bay (the oldest and the newest recreation area) (Fig. 1)

### **2.1. Recreation function on the bank**

One question of our survey referred to the main usage function of the Danube river(bank). Most of the people asked signed walking (792), relaxation, sitting and sunbathing (704). Cycling (322), running (321) and going to a public catering place (282) were marked by many as well, and they were followed by rowing (116), fishing (70) and bathing (57), which are directly attached to the river itself.

According to the answers we ascertain that the riverbank plays greater role in spending the free-time of the population: the first five marked activity is connected to the bank. However its worth noting, that while the abovementioned functions are popular in the inner city as well;

in the case of the Danube (and its riverbank) the aesthetic experience is one of the most important factor. Furthermore, this latter place with its long and straight stretch and without level differences is more comfortable for cycling or for walking. There's another key point in relation to the activities connected to the river, namely, that because of the bad water quality, most people kept off from the Danube as a place for recreation or for leisure time. But it could be changed by better water quality, and as moving away from the city core, the northern and southern parts of the riverside could have greater opportunities for recreation in the future.

Another question was connected to the judgement of the different developing plans of the Danube and its bank (very important (3), important (2) or less important (1)). In connection with the objectives, the preservation of the natural parts of the Danube got the largest number of positive marks (2.59). This was followed by the aims for creating more places for walk and cycling (2.28), and later by the enhancement of public usage of the riverside (2.23). Through „big city life” most of the asked see the riverside as a recreational green area, rather than a pleasure ground, while the publicity of its places and their easy accessibility retained its significance. To sum it up, there's a need for grand green places with relaxation and mental recreation functions.

## **2.2. The oldest recreation area - margit island**

Our first case study covers the Margaret Island, which has a long-standing recreation function. It was covered by landscape parks in the era of Árpád-dynasty, but for the mass became available only in the 19th century. Thanks to its richness of mineral water (which was found in the late 19th century) medical baths, hotels, villas and many restaurants were established, but this time the island was only accessible by boat. In 1900 this latter problem was solved by a link from the Margaret Bridge to the island. Several new establishments were built during the first half of the 20th century as well, e.g. Palatinus (first outdoor beach in Budapest) in 1919, the Hajós Alfréd National Sports Pool in 1930, or an outdoor stage in 1938–39. After the World War II the Margaret Bridge was detonated, but rebuilt in 1947–48, and from 1950 it became accessible from the North by the construction of Árpád bridge (<http://hu.wikipedia.org/wiki/Margit-sziget>). The island previously was addressing by the XIII. district, but from July 20, 2013 came under the direct administration of the metropolitan municipality.

The whole island could be considered as a big green area with only some buildings. For tourists and residents several opportunities exist for relaxing: walking ways, benches, catering places hotels, and sport establishments (athletic centre, pool etc.) and jogging tracks are



located in the island. In addition one can find here many cultural sights as well: the Japanese Garden with a mildly thermal fish pond, the „Music Well” which is a small pavilion originally built for open-air concerts, the “Music Fountain” where music is played and light shows are performed in summer, the Water Tower with its octagonal form, which today is functioning as a lookout tower, or the Saint Michael chapel and the ruins of a Dominican nun cloister. The island is accessible from two directions by foot or bicycle, and on the island bicycle, electric scooter, etc. can be borrowed. In recent years there were some investments on the island (renovation of fountain, swimming pool etc.) supported by city government, the government of Hungary and EU funds.

The main results of our survey carried out in the island are the following (n=214). Among the asked people the most popular free-time programs were walking (161), relaxing, sitting (130), and as a sport function, the running (68). Many marked the importance of catering places (43) and opportunities for cycling (49), while rowing, bathing and fishing were regarded as less important functions. From these answers the recreational character of the island stands out: for the inhabitants the island functions as a green area, where one can relax, or get some exercise, rather than a place for doing sports in connection to the Danube.

From other answers we emphasize that most people are satisfied with the opportunities of the island (1-very bad, 2-bad, 3-average, 4-good, 5-very good): its attendance (4.3), accessibility (3.9), the neat riverside (3.5) and the exploitation (3.4) were rated up to the average; possibilities for shipping were marked as average (3.2), but the water quality (2.6), the prices (2.5) and the opportunities for bathing (1.9) and were judged negatively.

One question connected to the development plans of the island (very important (3), important (2) or less important (1)). Results show, that the objectives for improvement of the green area (2.4), and for sport recreation are (2.2) the most important in the view of the inhabitants, while the tourism development is only important (2).

From these result it seems, that the island contents the demands of people functioning mostly as a recreational area, so there is no need for other functions on the island. The improving and development of the local infrastructure of the recreation function is important, because the answers show some negative facts: the need for the reconstruction and widening of the running tracks, or the establishing separate places for dogs, the small number of public toilets and their prices are key points for the inhabitants. Other necessary things, such as cycle path, taps, playground reconstruction, more dumpsters were played an important role in the eyes of asked people. It would be crucial, whether the island in its present form are able to function irrespectively of the Danube, because as we’ve seen most of its characteristics are

not related to the river. Beside, the congestion would be another problem, which can be solved by opening new recreational areas on the banks of Danube.

### **2.3. The newest recreation area - kopaszi dam**

Our second case study represents the recently opened recreation area, the Kopaszi Dam (and the Lágymányosi Bay) located in the southern part of Buda. The half island was built up after the flood in 1838 in order to protect against flood for the nearby industrial buildings and factories. The place in the early 20th century had been popular amongst people as a fishing, bathing and sporting area, but its condition later started to deteriorate. In the 1980s and 1990s it was rarely visited, and only some houses and small restaurants and a port were located in it. In 2007 the Öböl XI. Kft. started to adjust the 56 ha area. In 10 hectare a recreational park was constructed with different service establishments (playground, restaurants, boathouse) ([http:// http://www.obol.hu](http://www.obol.hu)). The bay is opened in the southern part of the Kopaszi Dam. Its rights situation is complex: formally it's a private area opened for public objectives, with restricted public usage, financed by private capital.

The plans for the future are twofold: on the one hand there will be a recreational objective, while there's a need for building offices, hotels and dwellings on the other. In the plans one can find water park, wellness hotel, ice hall, restaurants, cultural and art places, sport camps, a water stage, yacht dock and a walking bridge as well, therefore some parts of the area would be opened for the mass, while the other only for the workers and residents.

In our survey we asked more than 100 persons (n=109). The main motivation to come there for them is walking (83) and relaxing (83), but cycling (58), running (36) and going to a catering place (58) were also emphasized. Fishing, bathing and rowing were less important. It's interesting, that the Kopaszi Dam was created on the bank of Danube, but it functions as a normal recreation area (like a landlocked park). The reason for this is that the bathing and fishing are forbidden, and there is no possibilities to rent a boat.

To the questions related to the condition of the riverside and the Danube we got the following results (1-very bad, 2-bad, 3-average, 4-good, 5-very good). Neatness (4.3), huge number of visitors (4.0) and accessibility (3.9) were marked as a positive phenomena, such as free-time activities (3.8) and catering place density (3.6). In the opposite, the shipping (2.3), water quality (2.3) and possibilities for bathing (1.9) were considered negatively. The reason for the problem with the shipping is that there is no stop for the public water transport and harbor for the private boats. The results show, that in the view of the asked, the Kopaszi Dam is a nice, green place with appropriate service functions.

What about the deficiencies and the problems? The results made clear, that the Dam can be divided into two parts: the eastern part with catering places (on the dam), and the western grassy and woody part (on the bank), and the bay separates them. As in the case of Margaret Island, the lack of enough public toilets is a common problem for many (on the bank), and they also marked the need for a walking bridge which would connect the two sides (the dam and the bank). The people asked also need more free sport opportunities, but it could easily be a main point of conflict, because the investor is closed for more non-profit investments. The lack of more playgrounds is also a little problem. Another problem relates to the transport situation of the area, because there's only one bus line with which the Kopaszi Dam is accessible, and the ship port is not operating. The lack of party places (which operation is forbidden) is also a crucial point especially amongst young people. The answers show the users of the recreation area are varied, therefore there are different demands.

Answers to the questions related to development plans of the wider area (the whole riverside of Southern Buda; very important (3), important (2) or less important (1)) show us, that constructing of new free-time places (2.6) and development of the „green economy” (2.1) are favored most, while the construction of the “urban riverside” (1.5) and science, education parks (2.1) the least. So the need for more green areas is evident, but its in contrast with the plans (hotels, wellness, offices etc.) of the firm who manages the Kopaszi Dam.

To sum it up, the Kopaszi Dam is a well-functioning new recreation area is, but it is not related to the river actually. The other important feature is that it is a privately owned area, therefore there are different limitations. Its recreation function, and the preservation of its condition play an important role in the view of the people, which are in opposite with the new ideas of the investors. However it's a fact, that the Kopaszi Dam was built by private capital, so the firm wants profit from the new development. It is a way of creation of new recreations areas, if there is no enough money of the city for it, but it results loss of area.

The main question is (seeing the social and economic processes and the demands of residents), that what the city government wants to do (development plans, programs) and what it can do with the reconstruction of the Danube riverside in different places of Budapest.

### **3. New development strategies for the banks in Budapest**

The urban development in Budapest is divided: after the transition, since 1990 there is the metropolitan municipality and there are 23 district municipalities, and they had own development strategies. Since 2010 there is a new mayor of Budapest, who is supported by

the party of new government (since 2010), and there is an aspiration to simplify the operating and development of the city, and it results a stronger metropolitan municipality. That is important element in the waterfront development in Budapest, the Danube River as seen from the administration and planning, the Capital Municipality and 12 district municipalities (from 23) are affected. Therefore, it was a great importance when the 2012 CXC. law put the metropolitan municipality for the manager of the property (buildings, berths and port infrastructure) along the river (which was previously in the hand of the districts and state), because it established implementation of an uniform development plan for the banks of the Danube.

If we look at the waterfront development in the past shortly, we could emphasise that the protecting defense and regulating the river was always important, and nowadays these goals are also important. (In the XIX<sup>th</sup> century after the river regulation and the buildings of quays the banks have incorporated.) In the past the recreation function was important in the life of Budapest, there were plans and investments (e.g. Margit Island, see below). In the socialism there was not much attention to the Danube zone, and due to the increasing volume of traffic this function has occupied the banks, so the area of recreation function reduced. After the transition, in 1990s and 2000s, Izsák-Probáld (2007) state the municipalities of the capital and districts have not been able to give that directions for the development of the banks which are appropriate for the public interest; the plans of the utilization, functions etc. were flexible, and the private investors' interests prevailed often. The investors were interested in the economic functions, not the recreation, and the budget of the city was low, so there were only some plans for the recreation area. In 2010 Budapest got a new mayor and the waterfront development, including to create new recreation areas has become more important.

In recent years due to the complex Hungarian regulations and the administrative status of the capital and the new strategies of the new city government, as well as preparing for the new EU budget period, more official development documents prepared for Budapest. In January 2015 the following documents are available:

- Budapest 2030 - Long-term urban development concept (2013)
- Regional Development Concept of Budapest (2014)
- Integrated City Development Strategy (2014)
- Integrated Regional Programme and sectoral developments of Budapest 2014-2020 - I. and II. (2014)

The priority of the development of the Danube riverside reflects that in these documents there are separate chapters about riverside, even a specific analytical working paper prepared:

"Development Study Plan of Danube area of Budapest" (2013), and based on this document a strategic document also prepared: "Coordinated development areas along the Danube - thematic development programs" (2014). In the following, we examine this key role in the documents, especially the development issues of the Danube River related the recreational functions.

The Development Study Plan of Danube area of Budapest is based on the situation report and concept of the capital (2011, updated in the summer of 2012), and this document focuses on one key element of the target system of the city, adopted by the Municipal Assembly: "city lives with the Danube". It appears in the target system of concept (2012) in such a way there is a need for a balanced urban spatial structure, including restructuring, renewal of the impassable, neglected areas, expanding of green areas, maintaining open urban areas on the one hand, and on the other hand in order to create the symbiosis of the city and the Danube there is a need for maintaining and development of the natural environment, the regionally differentiated land use and the availability of the riverside, and there is need to fill banks with public functions and to expand the functions.

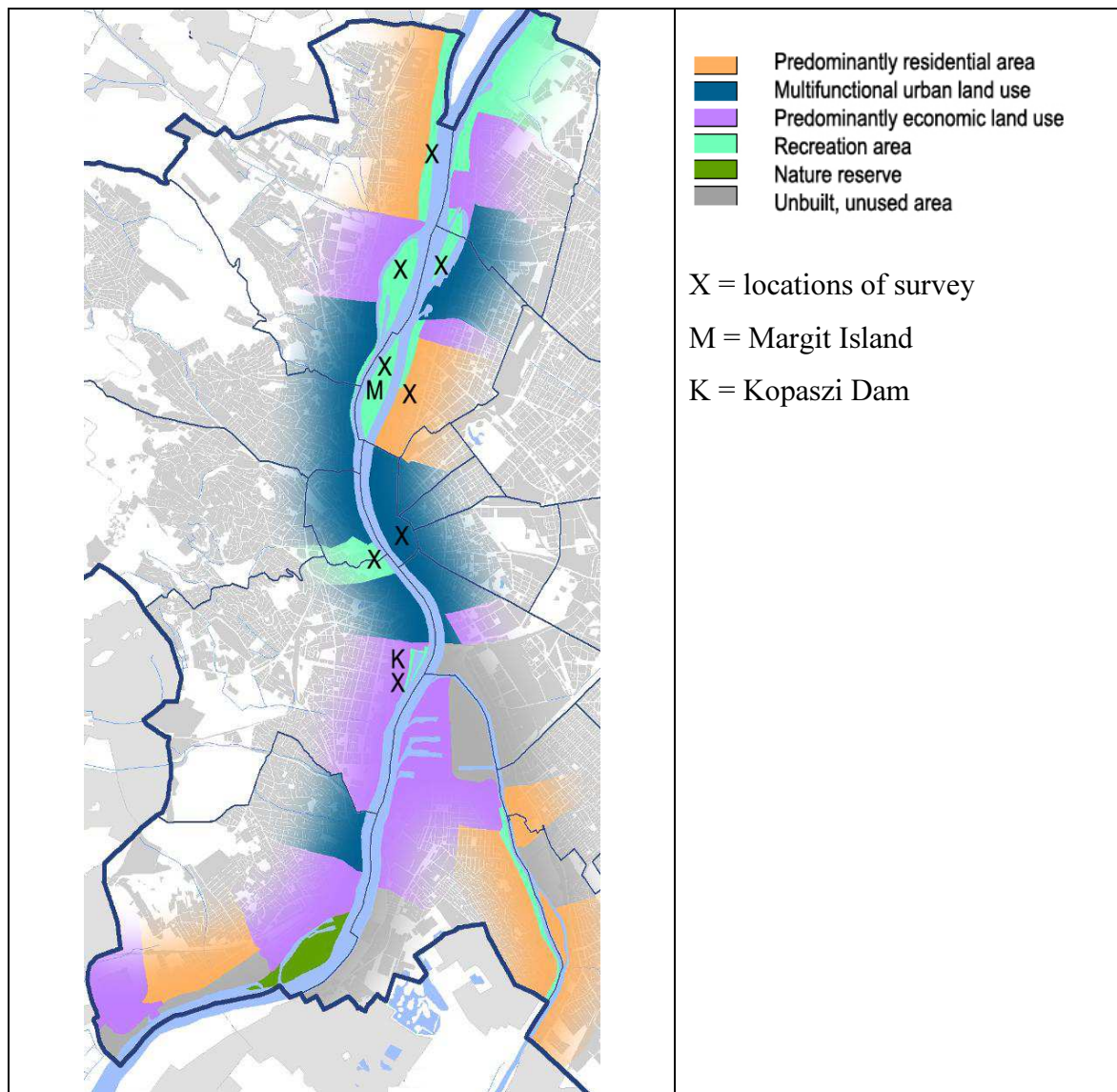
The document refers to that the spatial plan of the capital (2005) gives special attention to the Danube and the riverside. According to the plan the primary task is to open the riverside from the residential areas, and to provide opportunities for recreation features. According to the document there is a need to develop the Danube zone - together with islands - to a characteristic element of the urban structure, focusing primarily on the recreation and tourism, and new green area can be created on the site of the current industrial and underutilized areas (6 p.).

The Development Study Plan of Budapest based on these targets states that we have to make the Danube with islands and riverside for an integral part of our life, and increasing and strengthening the community use of it has strategic importance (59 p.). This, however, can and should be done differentially, because of the land use of the riverbank is mixed, and there are explicitly recreation areas, but there are some areas where this function is unrealistic now and in the future also (Fig. 1).

In the long-term urban development concept a separate chapter deals with the riverside. Here we can read again the main objectives (described above), and eight themed tasks were formulated, from which some tasks serve the recreation: expanding functions on the riverside, including recreation (for example on the site of brown fields); in the framework of utilization of natural endowments they emphasise that the islands would be recreation areas (excluding Csepel), respected to the natural protection, and there would be some new recreation areas on

the banks; in the framework of public use they state that the riverside must be accessible, and on the unused areas must be created the possibilities for the recreation, sport (for example rowing), and bathing (if the water quality improves later); in the objective of development of the recreation areas in the riverside the growing of the length of visited bank must be achieved, and to promote the riverside is important. In addition, the improvement of the pedestrian and bicycle traffic on the riverside is also planned. The regional development conception of Budapest includes these targets also.

**Figure 1** Different land use in the riverside of Danube in Budapest



Source: The Development Study Plan of Budapest (2013)

In the "coordinated development of the areas along the Danube - thematic development" program there are eight medium term targets also, but these are partly different from the previous targets. From these targets the exploiting of the potential of recreation and tourism is

related to our topic, but to ensure the pedestrian accessibility of the banks, and the development of brownfield sites is also connected. The main objective might include a wide range of interventions: utilization of under-utilized areas, creating new recreational functions, making up for the lack of playgrounds, parks etc. To develop the watersports, to protect the priority parts of the riverside from the disturbing boat traffic, to develop the water tourism (ports, infrastructure), to improve the quality of water are very important also. The more items are to make connections between the isolated recreation areas, to present the architectural heritage, and to renewal and develop spas. To the eight objectives project proposals were prepared, most of them concentrated to the improvement of accessibility of the riverside and the exploiting of the potential of recreation and tourism.

To the implementation of the plans the integrated urban development strategy and later the integrated regional programme was prepared. The previous document states these development objectives for the Danube area: to ensure the accessibility of the riverside for the pedestrians, to develop recreational and green areas, to strengthen the attractions, and to make a package of tourism products (related to the Danube).

The integrated program specifies further the development objectives: six ITP packages were created, of which the first is the "Coordinated development of the areas along the Danube". The problem is that, however, only some projects can connect to the EU 2020 policy (to the No. 4 objective: supporting the transition to low-carbon-emission economy in all sectors, and No. 9 objective: promote social cooperations and the fight against poverty and social co-discrimination), and more projects are not related to them. To the package 53 project proposals were received from participants of the planning process. All of these previously 70.6 billion HUF demand for support have been calculated, and from the bulk of which should support to improve accessibility of the recreational areas, as well as renovation of old recreational areas and establishing new ones, and developing different facilities, improve or develop various recreational features. According to the plans the projects may be financed by VEKOP (Operational Programmes of Central Hungary), or two other Operational Programmes, and by the budget of the capital and budget of the government, and there are some projects on the list where is not a named source.

In summary, the city administration has been committed to expand the recreational area, enhance the recreational functions on the riverside of the capital, and all of these beyond the development objectives, strategies, specific projects are planned for the next EU-cycle. The question is that, which goals will be realized, because the budget of the city is unable to finance the investments, therefore there is a need for the support of EU and the government,

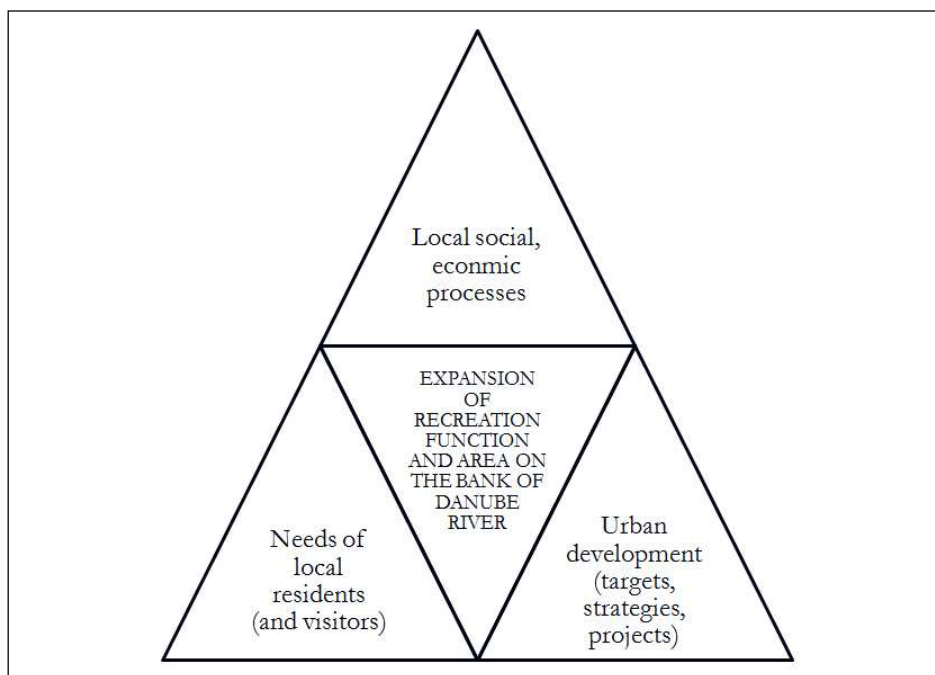
and there is always a chance for the change of planning, because there are a lot of important participants in this issue (government, municipalities, companies etc.).

## CONCLUSION

In the past decades in a lot of large cities the waterfront areas have changed or are changing nowadays, and the revival is often connected to the tourism and recreation because of the changing functions of the cities. One important geographical result is the changing land use of the banks of river. In Budapest these are also observed, and the results of our analysis show that in 2010s in the city the local social and economic processes, the need of residents (and visitors), as well as the development goals of the municipality point in one direction in the case of the Danube riverside: to increase the recreational land use, to protect the existing recreation areas, and to expand the recreational functions (Fig. 2.). That is important the achievement of these goals are prepared in the development documents, and specific project proposals have been created. The problem may be the financing possibility, because of the lack of money, but there are different ways to achieve the goals: there is a chance to get money from the EU funds and from the government, and the private capital is interested in the utilization of the riversides how the case of Kopaszi Dam presents it. The problem is that the plans and investments depend on the actual political and financial situation, and in the utilization of banks are important not only for the residents.



**Figure 2** The harmony of local processes, needs and targets in the case of the recreation area on the bank of Danube in Budapest



Source: Author's own construction

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