

Rehabilitation of Urban Streams: Sustainable Urban Renewal Strategies for Kuncz Neighbourhood in Timișoara

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Abstract: Strategies to rehabilitate urban neighbourhoods represent main points on the local administration agendas in many developed countries. River streams are often used as central elements in urban renewal approaches. Based on an in-situ survey conducted by the Faculty of Architecture, this paper presents a theoretical analysis of the social, economical and environmental conditions in Kuncz, a segregated multi-ethnic neighbourhood in Timisoara. Starting from the transformation of a clogged local stream into a source of raw materials, several theoretical scenarios of urban renewal are suggested, that deal with topics ranging from Rroma social inclusion to economic revival based on traditional craftsmanship, all with the purpose of improving the living standard of the Kuncz inhabitants in a sustainable manner.

Keywords: river stream rehabilitation, depraved neighbourhoods, urban renewal, Rroma inclusion.

1. INTRODUCTION

The historical development of Kuncz neighbourhood has generated different identity shifts from the beginning, until now. Originally created in the 1920s with the purpose of housing the clay molders working in the brick factory owned by Joseph Kuncz, the neighbourhood did not suffer any changes during the communist uprising apartment block boom. Its rural character of that time can still be observed today. The once prosperous brick factory has been severely affected by the much faster building technologies promoted by the modernity (reinforced concrete), and was eventually closed, leaving a large number of trained people unemployed. After the fall of the communism, the Kuncz inhabitants' struggle to adapt to an ever emerging market economy had little results. In the present, the economical crisis forces people to commute in other parts of the city and even abroad, in search for jobs, leaving Kuncz depopulated during the day, a contemporary "ville-dortoir" (Figure 1).

The twentieth century industrial zone of Timisoara had a complex system of weaved water streams connected to Bega river, crossing a series of neighbourhoods including Kuncz, that used to gear watermills from the local factories. Nowadays, the system is no longer operational, resulting in still ponds or underground channels. The situation is

similar in Kuncz. The clogged stream bordering the neighbourhood has been constantly polluted and represents a threat to the inhabitants' health. Its insalubrious banks dispose part of the solid waste of the neighbourhood, making any recreational activity impossible (Figure 2).



Figure 1. Kuncz during daytime



Figure 2. The clogged Kuncz stream

The present article analyses the Kuncz inhabitants' perception regarding the quality of life in the neighbourhood and the stream, based on in-situ surveys, seeks to find measures for the stream rehabilitation and proposes sustainable solutions for the overall improvement of the life standard in Kuncz, using the stream as an urban renewal motor.

2. THEORY AND METHODS

Sustainability and sustainable urban development are subjects more and more discussed. One of the new development issues is the economical perspective of each area. The quality of life in the cities all around the world is a great concern, this because we are living in cities that enclose slums or ghettos, neighbourhoods with social problems. In order to make improvements in the way of rethinking and

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restructuring these slums, first we need to understand the issues that need to be resolved.

In India, cities like Mumbai, tried to solve the deprived neighbourhoods problem by relocating the occupants to social apartment building. The real consequence is in the fact that the authorities have removed their shops, their manufacture/repair workshops that gives them their income. This is just an example, but even in Europe, segregated communities are put aside and enclosed in areas where almost no person outside the community can enter.

In Timisoara, old neighbourhoods with industrial history, or with a work related past have developed in a different way, but the result is almost the same. The neighbourhood of Kuncz is an example: a community formed as a group of people that came to work on the brick factory, without any property or households. In fact they have occupied a certain land in order to make shelters, houses, to create an identity. When the factory bankrupted the majority were forced to find jobs on different location within the city. But the fact that they didn't had any kind of property made them stay in their new homes.

One of the biggest issues that authorities have is that there is no real data of the social, cultural, economical status of this community. The real question is how to make owners of the land and households when there are no legal documents to sustain their property. Without legal documents, there comes the problem of investments in the area: public utilities, public spaces, utilities infrastructure and so on.

Household dynamic

In order to find sustainable urban renewal solutions, we have to define the type of deprived neighbourhood Kuncz is. The most common classifications of neighbourhoods are based on the static cross-sectional characteristics of areas (street profiles, volume massing, street transects). However, according to Brian Robson, especially when characterizing the deprived neighbourhoods, categories need to take into account the dynamics of the household flows. Therefore, referring to the deprived population movements generates a dynamic typology. Kuncz neighbourhood can best be described as an isolate area, where households come from and move to areas equally more deprived. These neighbourhoods are unlikely to improve without intervention and, therefore, comprehensive policy interventions that improve the prospects of all households are needed. As shown in Table 1, the regeneration strategies applied should be full-on integrated policy interventions due to the fact that incoming population does not have the economic potential of improving the existing situation, varying from general to intense degree of intervention, depending on the level of residential churn (where there is less movement, there are less chances of improvement) (Robson et al., 2009).

Table 1. Isolated deprived neighbourhoods (Robson)

	Isolated deprived neighbourhoods
Dynamics of household flows	households come from and move to equally deprived areas
Regeneration strategies	Full-on integrated interventions
Degrees of policy intervention	General to intense

The stream – a local landscape element

Successful urban regeneration strategies have as central points the intention to generate a new identity for the place. Whether it is a traditional rooted identity or a completely different one depends from case to case. The new identity is usually connected to an important local landscape element. A landscape character analysis (LCA) is used in order to define the natural or manmade landmarks that give an area that sense of place (Hampshire County Council, 2012). In the case of Kuncz, the stream plays an important role in the collective memory of the inhabitants. Its particularity comes from the fact that it is the only industrial stream still uncovered, making Kuncz one of the only places in Timisoara where you can encounter a part of the history of the industrial times. Therefore, every urban regeneration strategy should refer to the stream as to an important local landscape element for Kuncz, with the potential of identity generator (Figure 3).

Water plays a fundamental role in peoples' psychology. People have a fundamental yearning for bodies of water. People should have unlimited, free access to water (Alexander et al., 1977). Even though Timisoara is crossed by river Bega, the inhabitants of



Figure 3. Even though the stream is currently in poor conditions, it is still used by the residents for different needs

Kuncz are set back from enjoying the riverbank promenades, due to the social differences between them and the upper class citizens. This situation consists as an opportunity for preserving the Kuncz stream and allowing it to become part of the life of the neighbourhoods. Paths for people to walk should be made, and foot bridges to cross it (Alexander et al., 1977a). The roads come at right angles to the stream which will bring people closer to the water. For a better connection of adults to the water, the stream should be transformed into a large swimming pond (Alexander et al., 1977). Urban water rehabilitation solutions refer to finding methods for water treatment. In the case of local, neighbourhood streams, contemporary biological water treatment methods are

preferred. These allow wasted water to be treated naturally, in waste-water lagoons. The treatment is based on root-bed medium formed of various reed and grass varieties. For shallow waters, 3-10 m² per inhabitant are needed (Hegger et al., 2008).

Community economic development

Besides the identity of the neighbourhood, urban renewal strategies for deprived areas should stimulate the Community Economic Development (CED). This approach to sustainable economic development is primarily based on community participation, integrating economic, ecological and social aspects of local development, with an accent on community strengths and resources, rather than differences and with the final purpose of building self-reliance (Roseland, 2009). This paper will analyze several scenarios that try to implement community development by reclaiming the stream and turning it into a central point of the strategy. There can be no urban sustainability without addressing urban poverty and inequality (Perlman, 2012).

Kuncz survey

In order to obtain a real image of the neighbourhood, the Faculty of architecture promoted the idea of an inquiry within the community with video/audio documentation. Several teams were formed and dispersed all around the community with pre-existing questions that covered all important domains: social, demographic, cultural, economical situation and more (Figure 4). Each street was photo



Figure 4. Students from the Faculty of Architecture in Timișoara interviewing the inhabitants of Kuncz

documented and for the people who agreed, their interview filmed. Even though the community has a negative reputation among the citizens of Timisoara, their response was positive.

The area concerned is composed by 14 streets, a sewage canal. The borders are composed of a residential area on the west side, on the east side the stream, on the north free land ready for residential projects and on the south side border by a city exit road and an artificial lake.

The following areas were inquired:

- Demographical structure: situation by genres, by group of age, ethnical affiliation, marriage status, period of establishment in the community, period of time spent in the neighbourhood, number of relatives that lives in the same house as the family members,

the reason of living in Kuncz, the degree of appreciation of the life in the neighbourhood;

- Public utilities: quality of life: noises, sanitation, property issues, utilities like gas, electric power, communication water and sewage, transportation, education, health, vegetation, safety;
- Security: police station, pharmacy, healthcare, school, kindergarten, income;
- Pollution;
- Education: number of children, age of the children;
- Healthcare: doctor, dentist, pharmacy, social security, illnesses;
- Infrastructure: roads, sidewalks, sewage;
- Property issues: old buildings vs. new buildings, property status, members associated with the property, number of rooms, density, building material, water source, electricity, position of the toilet within the built environment;
- Economy: employment status, average income, income by house number;
- Public spaces: market, park, playground;
- Public transport: itinerary, schedule, frequency.

All of these information were obtained in discussion directly with the members of the community and all inquiry completed was anonymous. The film documentation was conceived only with the agreement of participants.

3. RESULTS AND DISCUSSION

The discussions were focused on the discovery and identification of issues that are most important to the occupants that need to be attended immediately. This way we discovered that they are comfortable living in this neighbourhood, the majority came in this place for more than 30-40 years, and now they are at 2-3 generations apart. They have formed local traditions, local events, a new identity (Fig.5).

Real problems are identified especially on the lack of sanitation on streets, on the sewage canal (smell, wild vegetation, quality of water, pollution) and the lack of infrastructure, issue currently in process of resolving.

Even though the Roma community is seen as a problem because of criminality rates (petty-thefts, not serious felonies, but still present) and noise, they are integrated in this community, some of them legal owners of the land or house (Fig. 6).

The majority consumes what they can produce in their small gardens, vegetables, fruits, all other food products are procured from local shops in the community or at the edge. This is seen as an opportunity to produce and distribute products to residential neighbourhoods in the vicinity by means of an open market (Fig. 7).

Educational issues are generated by the long distance children have to travel in order to get access to schools, even though educational institutions are within the city and accessible by means of public transport (Fig. 8).

Based on the global image of Kuncz the inhabitants offered during the survey, several urban regeneration strategies have been created. They all propose the rehabilitation of the stream and its transformation into a development motor for the whole neighbourhood.

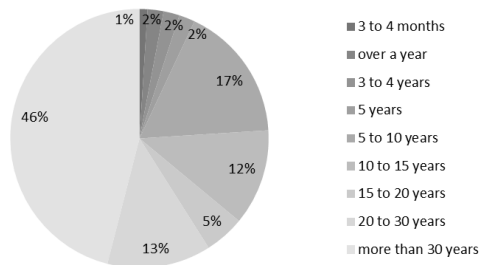


Figure 5. Settlements of households in Kuncz

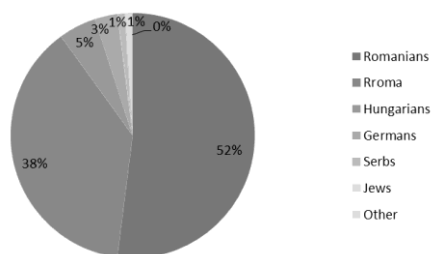


Figure 6. The distribution of ethnic groups

Although the results of the survey clearly identified Kuncz as an isolated deprived community (Robson et al., 2009), there were some groups of people that temporarily settled in the neighbourhood, with the desire of a new life. These behavioral characteristics specific to the transit type of deprived neighbourhoods support regenerating strategies that attract private investments from outside Kuncz. The project “Tennants’ street”, by students Roxana Bobârnac, Simona Ciupuliga, Ioana Iordan and Ruxandra Moldovan, proposes a series of ecological houses destined for rent, positioned on the bank of the stream in order to improve their market value after the stream rehabilitation. Thus, the positioning by the water banks have a direct impact over the investment by increasing the renting costs of the houses due to the quality of the environment (Fig.9).

Apart from the ecological and psychological effects the stream could have over the residents of Kuncz, an economic potential exists also. „The identity regenerator” project, by student Ioana Stancu, offers a solution for a sustainable community-based economic development. Having as a premise the streambank rehabilitation, it tries to revive the traditional craft of the once present brick builders, by using the existing clay soil beneath the water. This strategy allows the creation of a brickfield thematic park, bringing to the public the educational and cultural aspects of the specific Kuncz occupation (Fig. 10).

Community economic development represented the starting point of the „Made in Kuncz” strategy, by

students Roxana Șerbănoiu, Liviu Dârlea, Mădălina Sabin and Miodrag Popov. The alarming 37% unemployment rate present in Kuncz can be depreciated by means of local craft-oriented production centres, based on local resources the neighbourhood has to offer. The proposition appra-

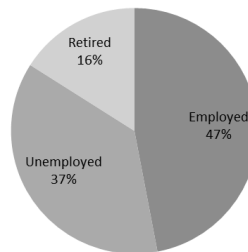


Figure 7. Unemployment rate



Figure 8. School dropout reflected daily in Kuncz

[Tennant street]



Figure 9. [Tennants’ street] – The waterfront residential street intends to score high on the real estate market



Figure 10. Reviving the traditional craft of brick moulding

ched the implementation of the strategy in three key steps. The first step represents the rehabilitation of the stream by cleaning existent solid waste from the water and treating the water by a waste-water lagoon based on a reed root-bed medium. This would offer the opportunity for the growing reed to be harvested a few

times per year and used as raw material for the production of craft-based items by the local carpenters (step 2). The Roma population, specialized in horse-breeding and currently engaged in collecting and selling iron, would assure the transport of the goods to the local markets (step 3). The “Made in Kuncz” brand, an integrated local productivity model, would generate the contemporary identity of the neighbourhood (Fig. 11).

The urban agriculture concept is applied in the case of the “Bio-Kuncz” strategy, by Mircea Sămânță, Diana Weidner and Laura Suci. Using the residual neighbourhood land patches for growing vegetables, in small resident associated entities and the stream for irrigation purposes, will result in agricultural products intended to be used by the community or sold on local marketplaces, thus generating revenues. In this case, the unbuilt agricultural land will constitute a flooding area (Fig. 12).

Although developed on a theoretical basis, and still subjectable to many improvements, the presented strategies present visions of a better life in Kuncz neighbourhood, starting from restoring a natural landmark of the neighbourhood, a local identity generator, the stream.



Figure 11. The stream, a source of raw materials and the generator of the “Made in Kuncz” brand



Figure 12 – Urban agriculture on the banks of the stream

4. CONCLUSIONS

Finding water in urban environments is becoming increasingly difficult. Apart from the ecological and psychological effects, rehabilitating an even small-scale urban watercourse can be significant to the development of local areas. Based on the conclusions of the conducted survey, the community needs have been identified, and solutions of improvement have been proposed. The selected strategies have had a particular interest in redefining the stream as a powerful community-oriented economic generator. Its significant potential lies in using the watercourse as a landscape element in housing strategies, an energy source in urban agriculture irrigation or a local resource generator in local productivity centres, all capable of leading to economic development, generating a new identity of Kuncz and improving the life standard of the inhabitants.

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