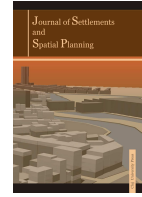




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Urbanisation and Restructuring Procedures Proposed by Cluj-Napoca's General Urban Plan: Observations and Discussion

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ABSTRACT

This study analyses Cluj-Napoca's urban territory, the municipal built-up area to be more precise, which has been set by the General Urban Plan. The article examines the content of urbanisation and restructuring procedures of municipal areas, as they appear in the General Urban Plan of Cluj-Napoca, pending for approval. The territorial indication of such areas within the city, their main spatial characteristics, and the urban organization approach are being presented. The main purpose of this paper, however, is the evaluation of the content of these necessary, commendable, and beneficial efforts of urban construction and reconstruction. There is also a strong emphasis on aspects regarding the actual application of these procedures which, once the Plan is approved, become local laws. Based on a case study, we established the necessity of the "urbanisation" procedure for the area surrounding Câmpului Street. In order to do so, we used data from cartographic and topographic sources, from the General Urban Plan itself, from legislation and from different scientific references. The obtained results indicate that these procedures, extremely valuable for the future development of the city, must be backed by a clear and coherent legislation at central level, by future actions in order to clarify steps within them, and by a more efficient collaboration between local authorities and citizens.

1. INTRODUCTION

Urbanism is not an ensemble of projects, theories or norms, it is not even a fully fledged discipline, as it is generally perceived. Some theorists of urban planning consider urbanism "a set of practices that intend to continually and consciously modify the state of territories and the state of cities" [1]. It involves geographers, geologists, topographers, engineers, historians, economists, architects, sociologists, and urbanists, frequently together, but sometimes separately and antagonistically, thus awarding it a profound interdisciplinary characteristic. Therefore,

urbanism is not a science, but a sum of the knowledge from all these domains. Urbanism is also a community serving art as well as an applied science.

Law no. 350/2001 on territorial planning and urbanism stipulates, in Art. 10, that "Urbanism primarily aims to stimulate the complex evolution of settlements, by creating and implementing short, medium and long term spatial, sustainable, and integrated development strategies" [13].

Urbanism in Cluj-Napoca had several frail attempts to manifest itself in 1933, 1938, and during 1940-1944, "coordinating actions that did not transcend their status as zoning, local regulations,

interventions at the street network and did not put the urban organism in a certain context" [6]. In 1955, a preliminary systematization study appeared, while during 1959-1960, the Systematization Outline was developed, representing the first attempt of a global urbanistic vision for the city, followed by the more complex project of 1969. The 1969 systematization sketch is still considered a feasible concept, anchored in the reality and the options of those years and which can be found in the city's future development.

Then the Sytematisation Sketch of 1976 came, which imposed, until 1990, a strict observance of the built-up area. In 1991, the first General Urban Plan for the City of Cluj-Napoca was created, its main provision, as a reaction to the 14 year restraint, being the extension of the urban built-up area which remained static for so many years.

The General Urban Plan, according to the current legislation, "is both strategic and directive in nature, as well as having a regulatory function, and represents the main operational planning instrument, being the legal basis for development programmes and actions. Each administrative-territorial unit must update its General Urban Plan after a period of maximum 10 years, depending on the evolution of their social, geographical, economic, and social factors, as well as based on local necessities" [16].

After 1993, Institut Proiect Cluj-Napoca began preparing the preliminary works for a brand new General Urban Plan, while the final project was elaborated by a team from Bucharest, which led to the approved Urban General Plan of 1999, in effect to this very day. During this period, the project was continuously undermined by derogatory Zonal Urban Plans, thus disabling the local authorities' ability to control the process of urban development in the City of Cluj-Napoca.

The New General Urban Plan is now in its final preparation and approval stages, being created by a collective team from Cluj-Napoca. Some of its objectives are the following:

- Cluj-Napoca must develop as a modern European city;
- creating rich and pleasant public spaces;
- developing "urban territories", areas with urban characteristics within the city;
- protecting the city from urbanistic abuse;
- protecting the neighbour's right;
- returning the city towards Someșul Mic River, seen as an important energy passageway within the city, with real development potential;
- the plan must have urban development strategies that will primarily target the relation with the territory;
- ensuring urban quality and starting the process of urban regeneration, based on stopping the urbanistic

disaster;

- demarcating areas for "urbanisation" and other areas for restructuring within the city.

The aim of this paper is the critical analysis of the "urbanisation" and restructuring procedures proposed by the new General Urban Plan of Cluj-Napoca. Based on a case study, we established the necessity for the "urbanisation" procedure of a particular area.

As the topic at hand is extremely important for the city of Cluj-Napoca, the article is structured as follows:

- the theoretical explanation of the concepts of "urbanisation" and "restructuring", the effort to establish whether these two notions were properly used within the GUP, further details on these concepts, and discussion about their actual implementation;

- the case study of a certain area proposed for urbanisation: Câmpului Street – the Popii Valley, through a comparative analysis 2005-2013.

By definition, urbanisation refers to the process by which rural areas become urbanised as a result of economic development and industrialization. Demographically, the term urbanisation denotes the redistribution of populations from rural to urban settlements over time [9].

Urbanisation, a process of population concentration, is caused by all those factors which change the distribution of population by size of locality. Thus, all those factors which make people move from places of lower population concentration to places of higher concentration lead to urbanisation.

In the case at hand, we are dealing with places already included in the urban area, where restricting and controlling, through different means and practices, the expansion of the city's built-up area at the expense of the surrounding natural areas is highly desired. The urbanisation procedures are the main tools for attaining an adequate degree of medium and long term city sustainability. The lands dedicated to "urbanisation" currently have an agricultural function within the city's built-up area.

J. Koutský, O. Slach and T. Boruta (2011), when debating on the city's old industrial areas, concluded that they could not be thought of as lacking economic structures like, for instance, peripheral regions, rather, they actually had very extensive structures, but these structures had become obsolete and incompatible with the requirements of the present world. Their general characteristics were complexity and underdevelopment [3].

Urban restructuring is a method of fighting the effects of a deficient planning policy that took place within urban territories. It leads to functional modifications which will respond to urban development

needs. The main types of urban planning operations are regulated territorially, by demarcating the areas where operations are possible, as well as procedurally, by establishing the phases and general conditions in which they can take place.

2. THEORY AND METHODOLOGY

The research methodology is focused on the critical and analytical investigation of the General Urban Plan (both the project currently in effect and approved in 1999 and the project due to be approved, initiated in 2011), on investigating the available cartographic database, the legislation and, last but not least, on actual field studies: direct observation.

The case study contains our calculation of the binary change index, as a key for deciphering land use changes, in a global quantitative perspective [2], [7], [8]. For a better understanding of landscape dynamics, one can use several global indicators of change, which reflect the changes that took place within the established time frame. The method of binary change index uses types of land usage (as variables) between adjacent moments in time (t_1 and t_2). The method was employed for the analysis of change trajectory by van Eetvelde and Käyhkö (2009), and by Ileana Pătru-Stupariu *et al.* (2011). The formula for the above mentioned index is the following:

$$BCI = \frac{NCH(\%) - CH(\%)}{NCH(\%) + CH(\%)}$$

where $NCH\%$ represents the percentage which remained unchanged within the study area, while $CH\%$ is the surface percentage that changed its destination, between t_1 and t_2 [7].

BCI values are classified by Ileana Pătru-Stupariu [8] into five groups:

- values between -1 and -0.6 indicate radical changes;
- values between - 0.6 and - 0.2 indicate very significant changes;
- values between - 0.2 and 0.2 indicate substantial changes;
- values between 0.2 and 0.6 indicate moderate changes;
- values between 0.6 and 1 indicate limited changes.

The index reveals, in a quantitative and global perspective, the changes and their distribution, but fails to provide qualitative information about these changes (which landscape elements changed or the change’s trajectory). For our study, however, it does not have such a disadvantage, because we are dealing with a homogenous landscape of a residential area. The relevance of such an index for our study rests in the establishment of the change’s extension for the territory

at hand, change which requires the implementation of territorial planning and organisation in the area.

3. RESEARCH RESULTS

The urbanistic practices of the last years led to urban dispersion in Cluj-Napoca, as well as to real estate speculation, becoming genuine antisocial practices. The aberrant extension of the built-up area, whose surface area doubled from 1999, reaching roughly 10,000 ha, basically put the city in a hypothetical situation in which the population from the inner city could migrate in these new residential areas [4], [5]. These policies neglected supporting the Someşul Mic River, the Nadăș and the main municipal thoroughfares. These are the reasons why the new Plan intends to remediate these situations and prevent their resurgence in the future. Thus, the restructuring and the “urbanisation” procedures were established, in some areas of the city, set by the General Urban Plan.

3.1. Restructuring areas

The General Urban Plan established two types of areas set for restructuring: areas along traffic routes and those industrial areas that have restructuring potential.

The restructuring process, according to the Plan, will lead to the creation of mixed areas that will include collective housing alongside public interest areas: administration, finances and banking, commercial, cultural, education, healthcare, sports, and tourism. Housing will take from 30% to 70% of the total built area [10].

3.1.1. Areas to be restructured, adjacent to traffic routes

These are spaces with residential status situated along those streets that became, once the city developed and urban traffic intensified, important interest and circulation thoroughfares. These areas are plagued by urban decline, and also by many dysfunctions and incompatibilities.

The following traffic routes running west to east were included in this category: Mănăștur Route (partially), Moșilor Route, 21 Decembrie 1989 Boulevard, Clinicilor and Napoca streets, Eroilor Boulevard, Dorobanților Route, Avram Iancu Street. The list also includes Horea, Republicii, Pasteur, partially Brâncuși and București streets.

From a functional point of view, currently, these areas have diverse functions, from housing and complementary destinations, to mixed areas with public endowments and services, areas of industrial

production (to a lesser extent), all being intended by the new Plan as mixed areas.

Within these zones, the Plan identified several dysfunctions and incompatibilities, such as:

- traffic taking place in inadequate and undersized areas;
- incoherent functional mix because of the fact that the buildings initially planned for housing now host tertiary activities, often incompatible with housing areas by creating pollution and excessive traffic for the provision of goods;
- the qualitative degradation of residential buildings' courtyards because of the emergence or creation of parking spaces for the new functions;
- the general qualitative degradation of housing and the drastic reduction of its presence;
- the housing of the areas went through a series of extension, subdivision/re-division, and transformation works that were totally unnatural as they were structurally inadequate for other functions;
- the construction of new buildings, dissonant with the characteristics of the area, producing a negative diversity also because of a lack of clear regulations.

The figure below presents these dysfunctions in detail.






-  the construction of new buildings, dissonant with the characteristics of the area, producing a negative diversity also because of a lack of clear regulations
-  the qualitative degradation of residential buildings' courtyards because of the emergence or creation of parking spaces for the new functions
-  incoherent functional mix because of the fact that the buildings initially planned for housing now host tertiary activities, often incompatible with housing areas by creating pollution and excessive traffic for the provision of goods

Fig. 1. 25-29 Dorobanților Street, 16 - examples of restructurable areas adjacent to traffic routes (source: maps.google.ro).

3.1.2. Areas to be restructured, with industrial character

They are represented by large tracts of land, currently being intended for industrial production and services, generally privately owned, situated in areas with high potential for urban development.

We are referring to a relatively compact industrial area, mainly situated north of the railway, along the Nadăș and continuing along the Someșul Mic, limited to the west by Baciului Route, north by Corneliu Coposu, and by Maramureșului Streets, and by Muncii Boulevard, and spreading south of the Someșul Mic towards Beiușului Street. It encompasses the former factories of the communist era: Armătura, Carbochim, 16 Februarie, etc. Outside this area, there are several other similar zones, “islands” within the city, such as the blocks east of Horea Street and west of the Someșul Mic River, of Orăștie and Vlad Tepeș Streets in Someșeni.

In these areas, the initial industrial activity stopped or decreased considerably. Currently, these spaces are re-divided, transformed and rented for production activities, industrial and semi-industrial services, storage, etc. Activities take place in inadequate and improvised spaces, while some locations are completely unused.

The internal organization of precincts is basically nonexistent because of non-systematic developments during different periods. The constructions and industrial halls were mostly built in the second half of the 20th century and are now in different stages of conservation, having various usage values. Some can be classified as buildings belonging to the industrial patrimony.

The infrastructure and the building interiors have decayed. Moreover, there are issues with terrain contamination because of the industrial activities that took place there.

3.1.3. Contract-based restructuring procedure

This type of procedure is intended to be established between “the Local Council of Cluj-Napoca and the owners of industrial units” [10]. In order to restructure a series of areas, the Plan involves a step by step procedure, comprising:

- the negotiation stage. Here, the investor “negotiates with local authorities in order to establish the conditions and the restructuring framework” [11]. The negotiations will follow the rules set by the Local Urbanism Rulebook and by the legislation in effect:
 - preparing the preliminary urbanistic studies and a feasibility study;
 - finalizing the negotiations, based on the conclusions of the prior studies;

- finalizing the restructuring contract, “signed by Cluj-Napoca’s City Council and by the owner of the industrial unit” [10];
- preparing a zonal urban plan and its local urbanistic rulebook.

3.2. “Urbanisation” areas

The General Urban Plan contains a practical manner of urbanistic limitation and control, which is the urbanisation procedure. The lands intended for “urbanisation” currently have different urbanistic functions, free of construction or with several dispersed constructions, being classified as agricultural land within the built-up area. The proposed functions vary considerably: housing, institutions and services, green spaces, industrial production, mixed areas. There are vast tracts of land within the city, which have been occupied chaotically by buildings. These areas are primarily situated in the median sector of the northern slope of the Feleacu Hill, victim of the urbanistic chaos of the last decade: the upper sector of the Popii Valley – Câmpului Street, Eugen Ionesco, Turzii, Bună Ziua, Borhanci, and South Someșeni. In the northern part of the city, such areas can be found at the extension of Muncii Boulevard – Apahida, parts of Lomb Hill – Steluța. Considering the theoretical exposition regarding the notion of urbanisation from the beginning of our paper, we consider the term used in the general urban plan as incompatible with the term’s scientific definition. The areas subjected to the “urbanisation” procedure are currently part of the urban territory, being lands with built-up area. These are not lands from outside the city limits, from the neighbouring rural areas. By using such a notion, the GUP’s developer intended to emphasize the fact that these areas presently do not possess urban characteristics (infrastructure, characteristic street grid, rigorous plot design, and so on), but will acquire such characteristics through the proposed procedure. The proposed “urbanisation” procedure will be gradually established for each case, in the following manner:

- obtaining the approval of the Technical Municipal Commission for Territorial Planning and Urbanism “regarding the expedience of the urbanisation procedure” [11];
- obtaining the expedience notice for the preparation of a Zonal Urban Plan, based on a written petition submitted “by the owners association, previously established” [11];
- preparing the Zonal Urban Plan by private owners, finding solutions for endowments and terrain redistribution;
- issuing permits and the terrain’s complete provision of endowments;

- issuing the construction permit.

4. DISCUSSIONS

Restructuring and “urbanisation” procedures have the following targets, according to the GUP’s [12]:

- the reconstruction of those city areas that are currently degraded because of urbanistic chaos and real estate speculation;
- assigning a new use in several areas in order to attain an optimal and sound capitalization of land and buildings;
- the city’s sustainable development/evolution [4], [5] through a better usage of lands that are free of constructions, and through the provision of necessary resources for a long term development;
- establishing a rational public investment policy in infrastructure;
- protecting the natural environment;
- ensuring a coherent form of the urban body.

These goals emerged from the current reality, a product of the urbanistic practices of the last 20 years in which real estate speculation and urban sprawl/dispersion led to a series of urban dysfunctions.

In terms of *contract based restructuring procedures*, we have the following remarks:

- the role of local authorities is not clear in this procedure, and we ask ourselves why someone would have to make a contract with the City Council in order to restructure an area;
- the difference between the above-mentioned procedure and the legal procedure, currently still in effect, that enables the change of land functions through Zonal Urban Plans is also unclear [14].

If the reason behind this contract is ensuring an area for public interest functions within the plot to be restructured, this condition can be clearly specified in the Local Urban Rulebook for that very Territorial Unit of Reference. Thus, one can enforce categories of public constructions, the minimum percentage allocated to that function, and other mandatory urbanistic provisions for the functional usage of the respective lot.

We do hope that this procedure will not lead to confusion and further complications, and to excessive red tape for building in these areas.

Regarding the “urbanisation” procedure, we consider that some remarks are appropriate for a complete understanding of its actual application:

- the re-allotment procedure is included in the current body of laws [15], but there are very few cases in which this complicated and costly cadastral operation is put into effect. In most cases that required re-allotment, out of urbanistic considerations, other solutions were found that enabled the construction of a

certain building (for example, the construction was scaled down, individual lots were used or there were owner associations, keeping however the current allotment). Despite all these inconveniencies, during the July 2013 meeting of the Local Planning Commission, a 14 ha re-allotment project, situated on Mihai Românul Street, was debated. Even though it failed to be approved, this project represents a first step for a coherent urban planning in Cluj-Napoca.

- Cluj-Napoca still does not have a “land feasibility process”, meaning introducing utility networks before constructing any kind of building. We consider the introduction of such a step to be auspicious. Moreover, we urge for this aspect to be supported by a legally binding stipulation in order for it to receive extra authority and to have better chances of being implemented.

The essential problem regarding this procedure is its legal aspect. A court action against the local authority, due to the latter’s refusal to issue a building permit without this procedure, can have surprising decisions. From our experience, the

courthouses can force the local authority to issue the permit directly, without following the procedure. This can lead to lengthy and costly trials, and the decision might be detrimental for the local authority. This situation is because of the lack of binding legal provisions which prevents courts from issuing an optimal solution for the many urbanistic problems.

5. CASE STUDY

5.1. An area proposed for urbanisation: Câmpului Street – the Popii Valley. Comparative analysis 1999 – 2005 – 2012

One of the urban areas that require an extensive urbanisation procedure is the residential zone that emerged along Câmpului Street, situated in Mănăştur neighbourhood (fig. 1). It is situated in the south-western part of the city of Cluj-Napoca, mostly on the left bank of the Popii Valley, a right side tributary of the Someşul Mic River.

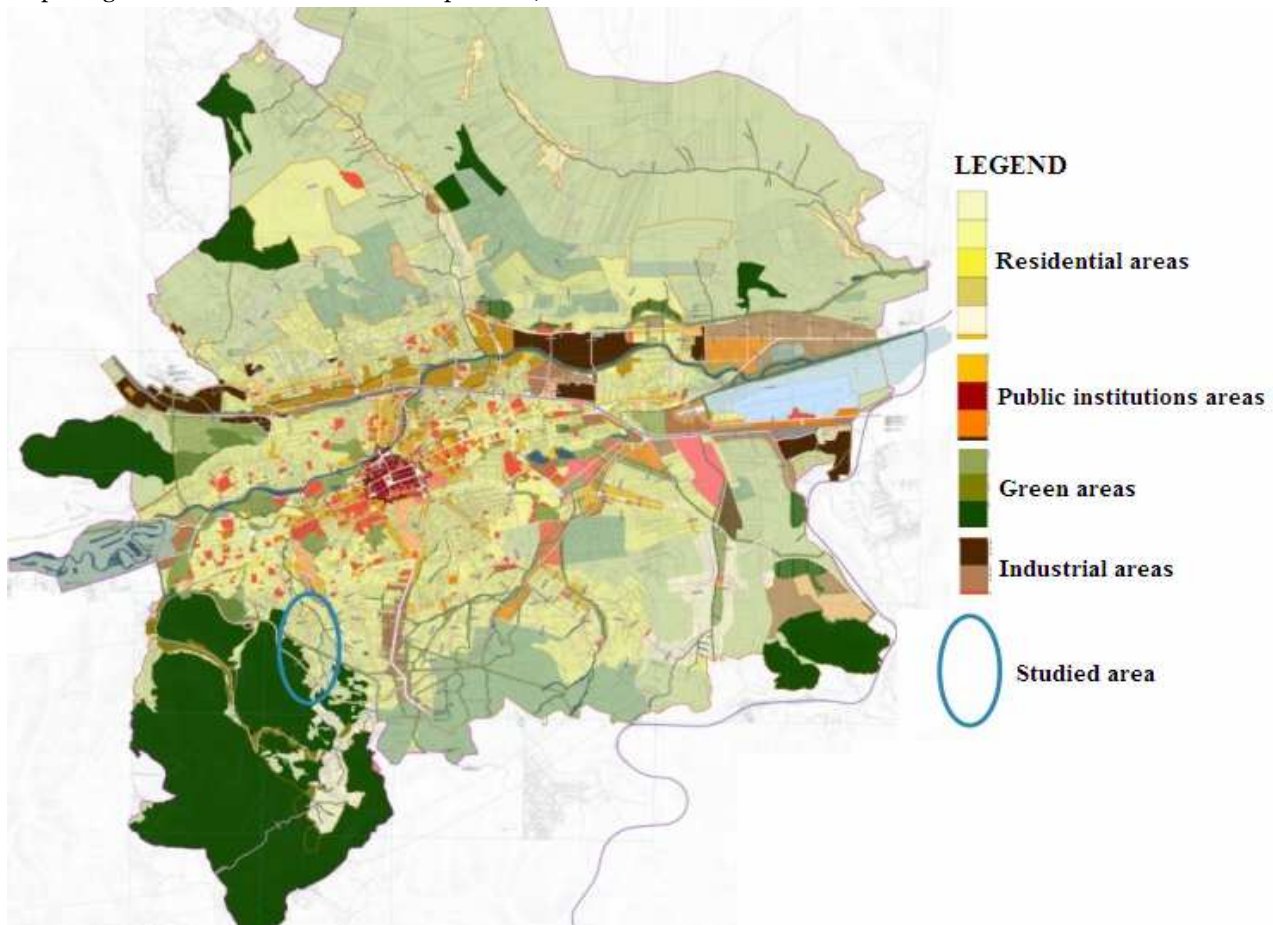


Fig. 2. Location of Câmpului Street area within the City of Cluj-Napoca.

The purpose of this case study is to present the evolution of the area and the conditions that enabled

the current situation and led to the stringent necessity to apply such a procedure. To achieve this objective, we

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conducted an analytical research of the cartographic material that would capture the evolution of the area in terms of building expansion. We calculated the binary index of change, as a global quantitative indicator of land use change [2], [7], [8]. The area in question belongs, from a zoning perspective, according to Cluj-Napoca’s current GUP and Regulations (approved in 1999), to the following functional areas:

- residential area (L), individual housing and small collective housing sub-area, with maximum ground floor + one story, or ground floor + two stories (L3);
- productive activities area (A), agricultural-industrial activities sub-area (A1);

- planted spaces area (V), forests and forest plantations for slope protection (V7).

The functional zoning of the area reflects the 1998-1999 situation, when the current GUP was created, when the construction boom of 2007-2008 was still far, and Câmpului Street stretched south, with a continuous built front, for only one kilometer from the Mănăştur Street intersection.

At that time, the street network of Victor Felea, Carol Davila, Dinicu Golescu, Ştefan Cicio Pop Streets, currently in full swing, was not developed. Even so, the complete lack of planning foresight and perspective is unacceptable.

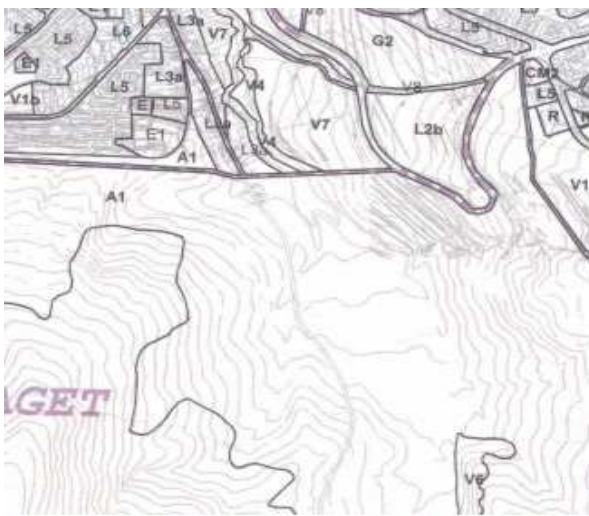


Fig. 3. The evolution of Câmpului Street area between 1999 and 2012.

Moreover, the inclusion, in the 1999 GUP, of the entire Câmpului residential area, south of the

intersection with Eugen Lovinescu Street, into the “Productive activities zone” (A), more exactly,

“Agricultural and industrial activities zone” (A1) further supports the previous statement.

According to this zoning provision, south of the above mentioned intersection, functions such as “non-polluting agricultural-industrial activities, within or without large agricultural and industrial constructions, the distribution and storage goods, agricultural-industrial research requiring large tracts of land” were permitted.

Subsequently, taking advantage of the lenient legislation of the time, the entire area changed its function based on Zonal Urban Plans, made by private investors who saw the area’s potential for real estate development. Currently, the entire area, formerly intended for agricultural and industrial functions,

changed its destination, and became “a residential area”, due to a long series of Zonal Urban Plans, thus creating the premises for residential development.

When analysing the area’s evolution, from 1999 onwards, we identified several interesting situations (fig. 2). The method of the binary change index uses, as variables, the types of land occupation between two points in time (t_1 și t_2), with an average temporal resolution, four years in the case of Cluj-Napoca: 2005, 2009 and 2012.

This method was used in tracking change by Van Eetvelde and Käyhkö (2009), and by Pătru-Stupariu *et al.* (2011) in Romania.

The results of our calculations are in the tables below.

Table 1. The binary change index of Câmpului Street area between 2005 and 2009.

Total surface area (ha)	Surface area occupied by courtyards and constructions in t1 – 2005 (ha)	Surface area occupied by courtyards and constructions in t2- 2009 (ha)	NCH (%)	CH (%)	BCI
6,462	2,019	3,893	31.2	30.4	0.01

Table 2. The binary change index of Câmpului Street area between 2009 and 2012.

Total surface area (ha)	Surface area occupied by courtyards and constructions in t1 – 2009 (ha)	Surface area occupied by courtyards and constructions in t2- 2012 (ha)	NCH (%)	CH (%)	BCI
6,462	3,893	4,929	61.6	14.6	0.61

One might see, based on the comparative analysis of these situations (tables 1 and 2), the magnitude of the construction phenomenon in the area, as well as the current planning chaos, a strong reason for an immediate implementation of the “urbanisation” or restructuring procedure.

5. CONCLUSIONS

The case study shows that, between 2005 and 2009, there have been substantial changes in the Câmpului Street area, part of the Municipality of Cluj-Napoca, followed by constrained changes. These changes require the enforcement of an “urbanisation” procedure, with the intent of regenerating this highly populated area. For example, within the area situated between Tamasi Aron, Câmpului, and Ștefan Ciceo Pop Streets, such a procedure can be implemented. Properties can be fused together, the entire area can be plotted and organised, functionally and spatially, according to an adequate rulebook. The procedure must set aside land for public amenities and green areas.

With all the issues and uncertainties regarding these procedures, presented so far, they are part of the new General Urban Plan. Once this project is approved by the City Council, based on the approvals required by law, these procedures become mandatory.

Based on the urbanistic experiences so far, the procedures will be adapted, supplemented and corrected to be fully put into practice. These future modifications and additions should take into account the original purpose for which the procedures were established in the first place, which is stopping the urbanistic chaos and creating a healthy urban planning in Cluj-Napoca. Furthermore, in our opinion, a legislative initiative from the central authorities is necessary to maintain the compulsory nature of following these procedures for all the buildings, not only for those in Cluj-Napoca.

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