

POLICY TOOLS FOR ADDRESSING URBAN SPRAWL: URBAN GROWTH BOUNDARIES

(II¹)

Eric J. STRAUSS

Professor, Director Urban and Regional Planning Program, Michigan State University, U.S

Bogdana NEAMȚU

Assistant Professor, Department of Public Administration, Faculty of Political, Administrative and Communication Sciences, Babeș-Bolyai University, Cluj-Napoca

The analysis herein explores the topic of urban growth boundaries and how local governments in Romania could use this growth management tool in order to address unplanned, haphazard growth that is taking place at the fringe of cities and in the villages/farming communities that surround them. The structure of the paper is threefold. The first section focuses on a brief socio-economic profile of Cluj-Napoca, Romania. The aim is to provide a better context and facilitate the reader's understanding of the nature of urban growth and suburbanization in Romania. Cluj-Napoca is currently in the process of adopting a master plan for the city and specific policy recommendations on how to address urban sprawl may prove useful. The authors hope to stir a debate among scholars, practitioners, and residents with regard to how the city of Cluj will further develop and whether future development should occur in the same manner it occurred during the last 10 years. The second section of the paper is meant to introduce the concepts of growth management and urban growth boundaries. The former is described in terms of a planning philosophy while the latter is portrayed as a specific policy tool that growth management advocates suggest it could be used in order to fight sprawl. A case study on urban growth boundaries is presented in order to underscore specific advantages and disadvantages associated with establishing a growth boundary. The last section comprises several preliminary policy recommendations for the city of Cluj-Napoca. Because of the incomplete data the authors currently have on critical issues some of the recommendations are general in scope and need to be further detailed.

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¹ This article should be read as part two to the article by Bogdana Neamțu, Urban sprawl from a comparative perspective: The case of Romanian cities versus their American counterparts. Is there any reason why we should worry? Published in *Revista Tranilvana de Stiinte Administrative*, no 14/200, reprinted in *Revista Tranilvana de Stiinte Administrative* no15 E/2005

Introduction

Urban sprawl is a recent phenomenon within the Romanian cities. However, it is progressing at an alarming pace. In the American planning literature sprawl is defined as (1) essentially a suburban phenomenon – beyond a city’s limit, transitional or on the urban fringe, (2) generally characterized as low density, favoring automobiles, and (3) possibly scattered, unplanned, or ad-hoc in its pattern (Gillham 2002). The somewhat increased economic growth currently taking place in Romania is accompanied by uncontrolled and chaotic real estate developments. Leapfrog developments, big-box retailers at the fringe of the city, increased traffic congestion, and pollution, are nowadays an intrinsic part of the daily urban life of many Romanians. Most of the municipalities have not been prepared to properly manage suburban growth and the outcomes associated with it. Many cities and rural communities lack an updated comprehensive plan. Because of a permissible legal framework, weak enforcement of existing regulations, and lack of expertise on the behalf of planners, urban growth is ad-hock, unplanned, and haphazard.

The assumption underlying this analysis is that urban sprawl is bad and it negatively impacts the cities. Why should municipalities be worried about sprawl? Should the residents even care? The answer to both questions is “yes”. The immediate reason why municipalities should care about sprawl is increased infrastructure and utility provision costs. Sprawling neighborhoods need to be serviced by sewage, water, electricity, and roads. However, they will eventually need parks, schools, and other amenities that are specific to urban areas. This means increased costs in the context of already under-funded local budgets. Other reasons that should make both municipalities and residents worry are non-monetary. In the American planning literature sprawl is described as an unhealthy land use pattern because of the outcomes, both direct and indirect, associated with it. These outcomes include air pollution and traffic congestion, lack of physical activity, degradation of prime farmland, weak social ties and lack of community spirit, disinvestments in central cities and further segregation of minority and low-income groups etc. (Gillham 2002; Duany, Plater-Zyberk and Speck 2000). While not all these outcomes can be found within the Romanian context, the loss of farmland, soil pollution, and blurred boundaries between urban and rural spaces are reasons of concern.

I. Land use patterns and the built environment in Cluj-Napoca²

Located in the northwestern part of Romania, approximately 320 km northwest of Bucharest (the capital city) the city of Cluj-Napoca is the seat for Cluj County and one of the most important academic, cultural and industrial centers in Romania. It is also known as the “heart” of Transylvania, one of the historical provinces of the country. In the recent years, the city has experienced tremendous growth that manifests itself in the occurrence of suburban residential neighborhoods at the fringe of the city and within the adjoining villages and strip commercial along the major transportation corridors.

□ Current land uses

The current comprehensive general plan for the city of Cluj-Napoca was drafted and adopted in 1999. However, the plan no longer reflects the current land uses within the city limits as several area and detail plans have been subsequently adopted. Based on 2004 city data the total land surface was 69.31 square miles. Out of the total surface 22.67% (15.71 square miles) represents urbanized or planned to be urbanized land while the rest of 77.33% (53.59 square miles) is not to be developed (see Figure I.1).

² All data in this section, unless otherwise specified, are compiled from Proiect planificare strategica Municipiul Cluj Napoca (Analiza preliminara), available on line at http://www.primariaclujnapoca.ro/proiect_planificare.aspx, accessed March 15th, 2006

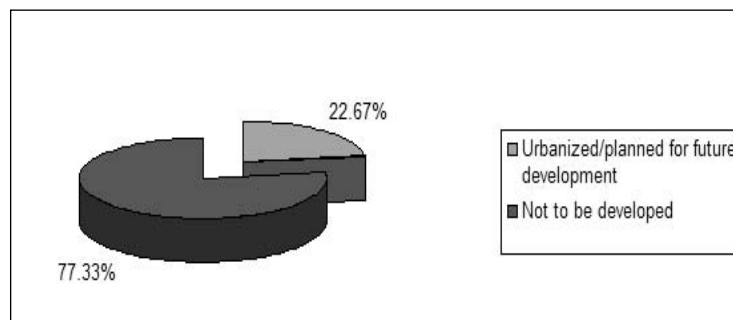


Figure I.1. General land use classification

The city can change the classification of land in order to meet its growth needs. Recently the city has changed the designation of a large tract of land in the southern area of the city. The land was previously classified as non-buildable. As the city did not adopt more detailed zoning and design guidelines for development in this area, most construction occurred in a haphazard manner, jeopardizing the city's goal to prevent leapfrogging growth that is not currently serviced by public infrastructure.

The agricultural land (farmland, grazing land, orchards) accounts for 38.34 square miles while the non-agricultural land (including forests, wetlands, transportation corridors, brownfields, and residential/commercial/industrial buildings) accounts for 30.97 square miles.

- Conversion of forests and open space to more intensive uses

As the available urbanized or planned to be urbanized land within the city limits is vanishing, more pressure is put on the forests at the fringe of the city. These forests serve as an amenity for the city residents and are mostly used for weekend trips on foot or bike and outdoor cooking/picnics. The Faget forest was until very recently classified as non-buildable, open space land. Confronted with numerous requests and complaints about the lack of available land for future developments, the city decided to expand the buildable land as to include areas located within the Faget forest. As a result of this decision the total surface that is urbanized or can be developed in the future increased by more than 53.2% (4.38 square miles were added). Though the area plan clearly delimited the zones within the forest limits that can be developed, growth is taking place outside of these areas as well. There are ways in which legal requirements can be avoided. One way is for landowners to apply for a temporary building permit with the county and then to build a permanent residence instead. Many of the problems the city faces with regard to sprawl are exacerbated by a weak enforcement of the land use regulations that are already in place. Another negative impact refers to an increased use by the city residents of the nearby forests that are more pristine in character than Faget forest. Another forest within the city limits – Manastur forest – is currently in danger of being eradicated by residential development. Because of a very complicated situation regarding ownership of land within the limits of Manastur forest the city is not undertaking any action to enforce the existing regulations.

Growth has taken its toll on the amount of open space and public parks as well. Even before suburbanization started, Cluj-Napoca did not have enough public parks. Furthermore they are unevenly distributed throughout the city's neighborhoods. Currently there are 75.35 square feet of open space per resident available, a measure inferior to what's considered healthy and acceptable – 182.99 to 279.86 square feet/capita, within cities bigger than 100,000 inhabitants (Mediu: Cluj-Napoca 2005).

- Vehicular traffic

City officials believe that vehicular traffic has increased in the city in the last years (no official traffic data currently available). During the 2000-2004 the number of city roads increased by only

1.46%. Negative impacts of previous planning and construction are apparent. They include: (1) no functional connections between entrance and exist to the city. Thus all the transit traffic (both West-East and South-North) goes on the main thoroughfare that bisects the downtown; (2) no connections between the downtown and the largest residential neighborhoods; (3) most streets are not wide enough. The intersections no longer support current levels of traffic; and (4) huge volumes of traffic on foot sometimes intertwine with vehicular traffic, as there are no car-free or pedestrian area or bike lanes within the downtown.

□ Parking

Some of the limitations of the road network are amplified by a chronic lack of parking throughout the city. The total parking surface covers 0.14 square miles. In 2005 the city hall had a waiting list for parking spaces totaling a number of 1,485 applications. In the downtown area there are no parking structures. Most people park on the street or on the sidewalks. This interferes with both vehicular and pedestrian traffic. Numerous feasibility studies are currently under way to determine the best location for future parking garages.

□ Public transportation

An extensive transit system (including 229 buses operating on 29 routes, 110 trolleys on 6 routes, 49 trams on 3 routes, and 12 minivans) has been in place for more than three decades. This mass transit system is the result of experimenting and adjusting to the residents' needs. However, there are challenges that the city faces as well. They include: (1) an aging stock of busses – some of them are 15 years old; (2) maintenance of routes that serves remote locations and are not economically efficient; (3) the impossibility to supplement the number of busses during peek hours because of an overcrowded road network. There is not room on city streets for exclusive bus lanes.

□ Housing

There are currently 13 residential neighborhoods within the city boundaries and all of them comprise residential. In most cases residential uses are intermingled with neighborhood commercial, office space, and even light industrial. In 2004 the built surface within the 13 neighborhoods was 1.75 square miles. Of the 1.75 square miles 1.73 square miles represent private property and 0.02 square miles account for public property (see Figure I.2). The total built surface has increased as compared to 2000 by 11%. Public built surface has decreased during the same time interval by 20.4% while the privately built surface has increased by 12.7%.

In 2004 there were 116,931 housing units (all types included) within the city. Compared to the year 2000 the total number of housing units has increased by 2.4%. However, during the same time interval the number of public housing units decreased by 9.5%. The number of private housing units increased from 2000to 2004 by 2.78%.

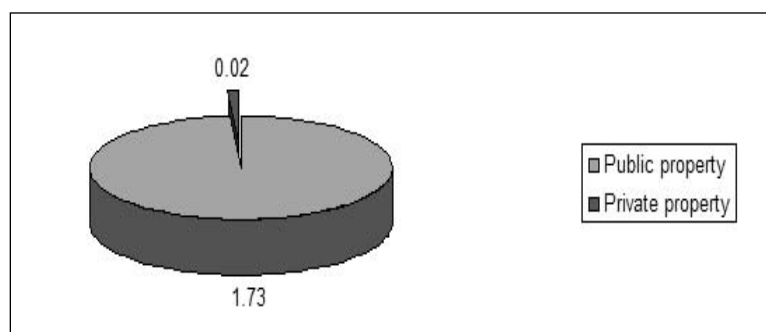


Figure I.2. Residential built out area by property type (square miles)

The data portray one of the biggest challenges the city faces: lack of affordable and public housing. While private housing units are increasing the number of public housing units is decreasing at an alarming pace. Housing availability is another important problem the city has to tackle. There is currently no recent study to document the condition of housing markets in Cluj-Napoca. In 2006 the most prestigious financial journal in Romania called "Capital" labeled Cluj as the most expensive city in the country. The ranking system was based on an aggregated measure that looked at a variety of factors, including housing. This study, though not an academic research, seems to at least confirm some of the anecdotal information about the lack of both housing affordability and availability.

□ Municipal infrastructure (water and sewage)

In the recent years the city has received extensive funding from the European Union through several projects meant to help the city update the water/sewer system. At the end of 2006 approximately 124 miles of collector pipes will have been either created or retrofitted. This represents a major step toward upgrading the public utilities. More needs to be done in the future, as most of the water and sewer pipes are old and outdated.

The length of the water distribution network remained the same in 2004 as compared to 2000. The length of the sewage increased by 2.46% from 2000 to 2004. During the same time frame the length of the natural gas distribution network increased by 2.47% as well.

In the newly built developments that are not serviced by municipal water and sewage, developers and residents are very often willing to pay for the hook-up to the municipal system or to pay/build the necessary on-site improvements. In many cases the hook-up to the water/sewer system may not be legal. A common observed practice is for one house to pay for the hook-up and then for several other houses to branch off from the main hook-up without paying any fee (discussions with city officials 2005).

□ Metropolitan growth and urban sprawl

The city exercises a considerable influence on the whole metropolitan area. It is estimated that the influence zone encompasses half of the total surface of the Cluj County. There are approximately 14 to 18 villages contained within the peripheral influence zone (see Figure I.3, Box A). Most of these villages have experienced significant population losses due to migration to the city and a decrease of the birth rate. While this situation holds true for most of these villages, there are several others that have experienced growth in the last years. These villages that managed both to retain their population and to grow economically are the ones in the very close proximity of Cluj-Napoca: Apahida, Baci, Floresti, Gilau, Luna de Sus, Sanicoara. They have grown precisely because of urban sprawl. They were able to attract big box retailers or industrial storage facilities that need large lots of land serviced by municipal infrastructure that were either not available or more costly to purchase within the city limits. Residential sprawl is significant as well though no data are currently available to estimate its magnitude. However more and more people are residing in those villages in close proximity of Cluj-Napoca and commute to the city to work. This is a somewhat reverse pattern of sprawl compared with the US where most of the jobs have followed the residential base to the suburbs.

The city is considering the creation of a metropolitan area and government in order to be able to design a more coherent strategy for this area so heavily impacted by growth. Eight villages are expected to form the metropolitan area (see Figure I.3, Box B). The creation of the metropolitan area does not represent however an immediate priority for the city and it is not part of the development strategy for 2007. It will be nonetheless included in the 2007-2013 strategy. Some of the villages that are supposed to take part in the creation of the metropolitan area clearly oppose this project. Not surprisingly the villages that have already rejected the project for the creation of the metropolitan area are those who benefit the most from the economic growth associated with suburban development, both commercial

and residential (Baciu and Floresti). It is unclear at this point in time whether these villages will be forced to join or the metropolitan area will be created without their participation.

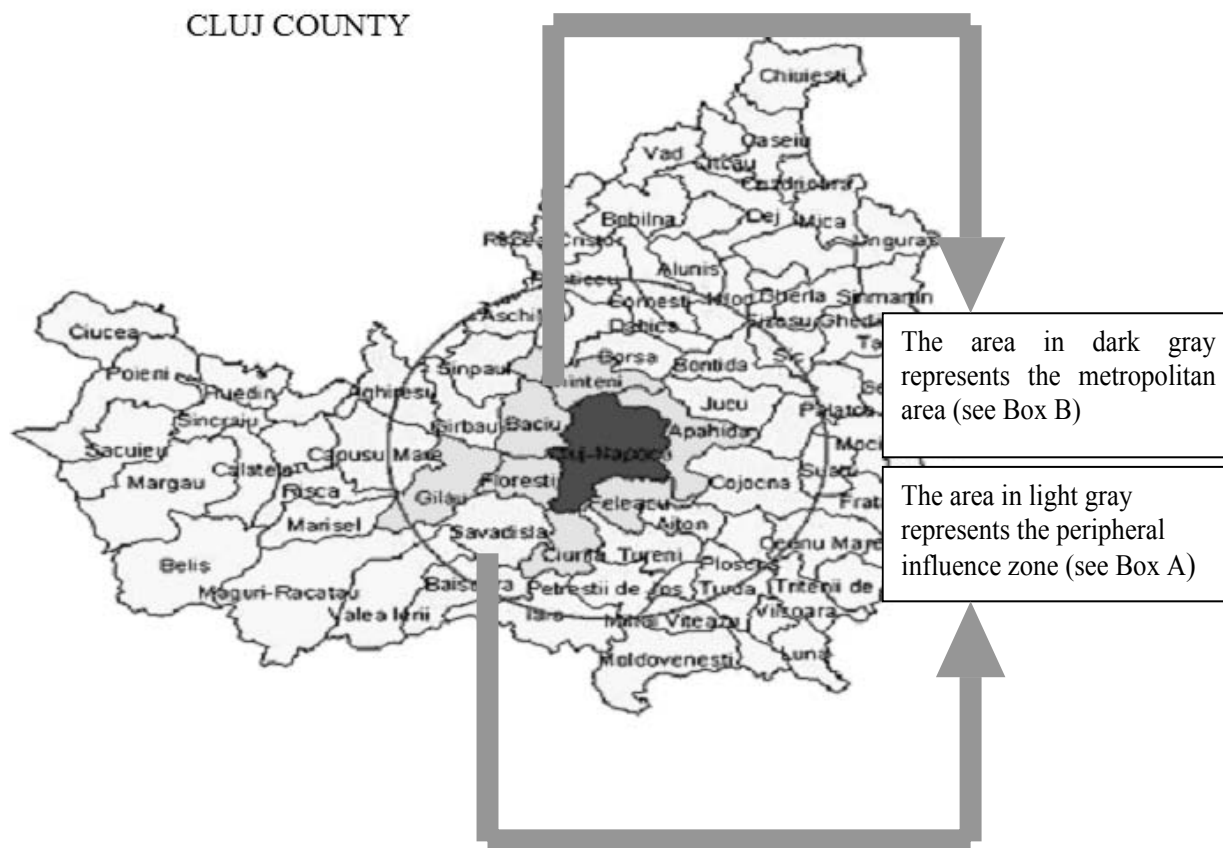


Figure I.3. The peripheral influence zone and the metropolitan area

Source: Cluj County available on line at <http://www.cjcluj.ro/zona-metropolitana-urbana/>

Box A: Peripheral influence zone

Village	Population	Surface/sq miles
Aghiresu	7173	40.92
Garbau	2647	27.86
Sanpaul	2560	35.99
Borsa	1868	31.03
Bontida	4734	23.79
Jucu	4120	32.87
Caianu	2573	21.28
Cojocna	4399	53.53
Aiton	1350	17.48
Tureni	2582	28.59
Baisoara	2353	42.87
Savadisla	4497	20.12
Rasca	1767	25.35
Capusu Mare	3698	2241
Total	46,321	424.01

Box B: Metropolitan area

Village	Population	Surface/sq miles
Apahida	8783	40.93
Feleacu	3818	23.82
Ciurila	1528	27.88
Floresti	7504	23.52
Gilau	7857	45.10
Baciu	8162	33.65
Chinteni	2786	37.84
Cluj-Napoca	318027	69.31
Total	358465	302.20

II. Fighting sprawl: Smart growth and Urban Growth Boundaries

a) Growth management and smart growth

Cluj-Napoca, as many other communities both in the US and worldwide, has been facing for the last decade significant growth pressures and the occurrence of suburbanization at the fringe of the city or within the limits of the adjoining villages. One of the reasons why local politicians are afraid of tackling the issue of uncontrolled growth is because there is an underlying assumption that a city is either pro-development or against it and that environmental concerns, even if reasonable ones cannot be addressed without jeopardizing economic growth. Romanian cities are by no means the only ones that worry about the dichotomy economic growth (more jobs, more taxes etc)/environmental protection. Their American counterparts have had the same concerns for several decades now.

Growth management and smart growth are two concepts that are considered as potential antidotes for urban sprawl. They also hold the promise of reconciling the need for economic growth with the need to preserve the environment, the already existing communities, and the historic legacy of many of the Romanian cities. Though many times growth management and smart growth are used interchangeably, there are scholars who point out differences. Gillham (2002) states that growth management (a concept that originated back in the 1960s and then continued to develop over the next two decades) places the emphasis on preserving environmental resources by setting limits on new development and thus restricting future growth. Smart growth on the other hand is managed growth that attempts to fulfill the need to provide for growth (both economic and in population) while at the same time limiting the undesirable effects of growth. Based on these two definitions it could be argued that the philosophy behind growth management is no growth at all while smart growth promotes the concept of orderly, planned growth.

Growth management and smart growth are used and misused by a variety of stakeholders in an attempt to either defend the status quo or to fundamentally alter the current pattern of land use development. Let's take a brief look at how two different organizations whose agendas are completely different define smart growth:

- ❑ **Sprawl Watch Clearinghouse** (Gillham 2002): "Smart growth is calling for an end to sprawl and a new vision of urban/suburban collaboration and regional growth management". This definition emphasizes the traditional antagonism that exists between suburbs and inner cores with regard to land uses and stresses the importance of regional governance.
- ❑ **National Association of Home Builders** (Gillham 2002): "Smart growth is understanding that suburban job growth and the strong desire to live in single-family homes will continue to encourage growth in suburbia". This definition uses smart growth in order to reaffirm or even to legitimize the status quo.

The difficulty of having a commonly agreed-upon definition for smart growth is closely related to another challenge this planning movement faces, namely its applicability. Is the whole concept of smart growth of any use in the real world? Even if planners and citizens, and real estate agent all agree that smart growth is the way to go, what needs to be done first? Which are the concrete techniques and policy tools that have the potential to make the communities "smarter"? Some of the principles and techniques associated with smart growth include: open space preservation, mixed-use developments, variety of transportation choices, regional planning/governance, downtown revitalization, urban growth boundaries/urban service boundaries etc (<http://smartgrowth.org/about/default.asp>). As Gillham (2002) argues, most of the aforementioned measures involve some degree of regional cooperation. In most cases an efficient transit system needs to be provided at a regional level as more and more people work and live in separate places. The same goes for different types of mechanisms that either limit or channel urban growth (growth capes, urban growth boundaries,

urban service lines etc). If the municipalities do not cooperate the residents and the businesses will always migrate toward the next community that has more permissive regulations.

As discussed in the introductory section, communities worldwide are facing the challenges of unplanned, haphazard urban growth. More and more often NGOs and local governments outside the U.S. are concerned with developing a more healthy approach to growth. Though they may carry different names, smart growth and growth management are currently philosophies/planning movements that are international in scope. In 1998 the British government established an Urban Task Force that has since advocated compact cities, reuse of abandoned brownfields, and the creation of mixed-use neighborhoods. The Task Force also stresses the status quo – building on greenfields is no longer sustainable. Current growth patterns undermine urban economies and exacerbate racial, class, and ethnic divisions (<http://www.publications.parliament.uk/pa/cm199798/cmselect/cmenvtra/495-ix/8051318.htm>). As it can be very easily noticed, both problems and solutions are becoming international in scope though the local context can add either additional challenges or incentives.

b) Urban Growth Boundaries

□ What are they?

As growth-management initiatives are gathering unprecedented public support nationwide and internationally, more and more attention is paid to specific policy tools that could be used in order to create “smart” communities. One of the hottest planning tools is the urban-growth boundary, or urban-limit line. Packaged as part of a menu of growth-management policies, UGBs have become particularly popular as potential ways to preserve farmland and open space; their advocates claim, that if land development is not permitted beyond a certain point, open space and farmland will be preserved, while existing urbanized areas will experience higher levels of investment and development. Numerous communities across the United States have adopted urban growth boundary programs or variations of urban growth boundary programs (See Table II. 1). Seven states mandate the use of urban growth boundaries at the local level. These seven states are: Washington, Tennessee, Oregon, New Jersey, Maryland, Maine, and Hawaii. In some states, such as Florida, urban growth boundaries are not required, but the state has recognized their importance, and as a result they have encouraged their local governments to adopt urban growth boundary programs (Kolakowski et al. 2000).

Table II.1. Existing U.S. Urban Growth Boundary Programs

Location	Level	Concept	Examples
Florida	State	Strongly encourages	Metro Dade, Sarasota, Polk, Orange Counties
Hawaii	State	Requires designation	
Maine	State	Requires designation	
Maryland	State	Requires designation	Baltimore and Ann Arundel Counties
Minnesota	State	Required for the 5 county region	Minneapolis-St. Paul
New Jersey	State	Requires designation	Cap May Counties
Oregon	State	Requires designation	Portland region, Clackamas County
Tennessee	State	Requires designation	
Washington	State	Requires designation	King County
Arizona	Local	Left to localities	Tempe
California	Local	Left to localities	Approximately 22 programs established
Colorado	Local	Left to localities	Cities of Boulder, Fort Collins, and Westminster
Illinois	Local	Left to localities	Kane County

Kentucky	Local	Left to localities	Lexington/Fayette County Metro Area
Massachusetts	Local	Left to localities	Plymouth
Nebraska	Local	Left to localities	City of Lincoln and Lancaster County
Pennsylvania	Local	Left to localities	Buckingham Township Lancaster County
South Dakota	Local	Left to localities	Sioux Falls
Vermont	Local	Left to localities	Manchester
Virginia	Local	Left to localities	Virginia City

Source: Kolakowski et al., 2000

There is no clear-cut definition of what an UGB is. Possible definitions include:

- ❑ A “line in the land” drawn around an urban area outside of which development is prevented or highly discouraged. Urban-growth boundaries are usually considered long-term growth management tools, often established for 15 or 20 years periods (Staley et al., 1999).
- ❑ A pro-active growth management tool that seeks to contain, control, direct or phase growth in order to promote more compact, contiguous urban development (Greenbelt Alliance).
- ❑ Urban growth boundaries restrict urban growth to a specific area around a community and prevent the spread of development into the surrounding countryside (Porter, 1997, cited in Kolakowski et al., 2000).
- ❑ A perimeter around each urban area to contain urban growth. Land outside of this boundary is maintained at much lower densities and receives no sewer or water services. This approach aims at establishing cities with edges, where the boundary between urban and rural is clear (Williams, 1991, cited in Kolakowski et al., 2000).
- ❑ The designation of urban growth areas identifies where growth should occur, and with a cordon of boundary line, establishes the geographical extent to which development is permissible. It is an indirect means of controlling growth in that it channels development rather than limit it (Burrows 1978, cited in Kolakowski et al., 2000).

There are other concepts that are used interchangeably with UGBs. Some other terms used to describe similar institutional arrangements include: designated growth areas, urban service districts or areas, urban service boundaries or districts, general service districts, and public utilities (Kolakowski et al., 2000). While most authors consider that these concepts describe the same thing, a distinction is sometimes made between UGBs and urban service boundaries. Staley et al. (1999) describe an urban service area as “determined by objective information about a local government’s costs to extend roads, water and sewer lines, or other publicly provided services. Beyond some point, the county or local government determines that the extension of those services is not cost effective. Urban-service areas apply to public infrastructure and utilities and reflect decisions about the cost-effectiveness of extending these services into new areas. On the other hand, UGBs are explicit attempts to channel growth for broader political purposes and goals. Another main difference between UGB and service boundaries is flexibility. The urban service areas are “more flexible in expansion because they are drawn mostly consistent with the economics of planned public facilities ... whereas, urban growth boundaries have many more policy objectives in addition to providing efficient services” (Nelson et al. 1995, cited in Kolakowski et al., 2000).

UGBs are used outside the US as well. Internationally, many people look to England as the home of “Green Belts” and urban growth boundaries. A boundary and a 900 square mile Green Belt surround London. Copenhagen is surrounded by a boundary and “green wedges” of open space. Vancouver, British Columbia, has drawn long-term boundaries, encouraged infill development and protected a “green zone” of farmlands and other open space (Greenbelt Alliance).

□ **How do they help communities fight sprawl?**

There are a variety of objectives that a municipality can achieve by using an UGB. Staley et al. (1999) identify six objectives. They are:

- Preserve open space and farmland
- Minimize the use of land generally by reducing lot sizes and increasing residential densities;
- Reduce infrastructure costs by encouraging urban revitalization, infill, and compact development;
- Clearly separate urban and rural uses;
- Ensure the orderly transition of land from rural to urban uses; and
- Promote a sense of unified community.

Some goals associated with UGBs are more contested by smart growth opponents than others (Staley et al., 1999). While most opponents regard the first goal as benign, goals number 2 and 3 respectively seem to be at the center of disagreement. Most pro-development groups argue that people should be able to determine the type of housing they want to live in – infill developments and multifamily complexes are not appealing to everybody. Most opponents also claim that by using a UGB local governments are reducing the livability of a place. The objectives underlying the establishment of an UGB by a municipality can change over time. In the US, Portland's UGB has been initially created in order to protect the fertile farmland in the Willamette Valley; however, as urbanization increased, attention has shifted toward managing the forms growth takes within the established urban growth boundaries, especially in the Portland metropolitan area (Mayer and Provo 2004) This only proves that the UGB is a flexible policy tool that can be used in order to address a large array of issues urban areas are currently confronted with. In the case of Romanian cities an UGB would be most likely used in order to reduce infrastructure costs and to prevent the loss of farmland in the villages surrounding the urban areas. Increased urban density and infill redevelopments are not a major concern for many Romanian cities, including Cluj. The city has a very vibrant, densely built downtown. Even in the residential neighborhoods as well as the newly built subdivisions densities are still high.

□ **Which are the steps a community needs to take in order to establish a growth boundary?**

UGBs can be a powerful planning tool; however, they need to be set up in such a way to allow the communities involved to easily respond to the challenges they are confronted with. The key word here is flexibility. A growth boundary is not meant to remain unchanged over time; rather it will be expanded based on the master plan as to accommodate and channel future growth towards those areas that have been identified by the community as desirable for development/new construction. There are several questions to be considered when establishing an UGB (<http://www.uoregon.edu/~pppm/landuse/UGB.html>):

Who draws the UGB?

Drawing an urban growth boundary is a joint effort. The city that wants to establish a growth boundary needs to closely cooperate with the adjoining communities. The assumption underlying the creation of an UGB is that in the future the city will annex the adjoining communities and that the boundary will be expanded in order to accommodate further growth. In order for this assumption to hold true various municipalities need to agree on how to “synchronize” their land-use regulations and how to actively participate in the process of drawing the boundary. In the U.S. this proves to be extremely difficult in home rule states where the excessive fragmentation of local governments may hinder cooperation in land use and planning matters. Besides various local and county governments, the citizens are also an important actor in the process of drawing the UGB. The community needs to be actively involved starting with the early stages of the planning process. This may prove to be crucial for the success of the UGB especially when residents need to approve it by vote.

How much land is needed?

The process of deciding how much land is needed inside the boundary implies a complicated research and forecasting effort on the behalf of all the municipalities involved. The amount of land to be included in the UGB depends on how much the city is expected to grow. City officials estimate growth by making population projections or by using projections already done by some state or regional agency. Based on these projections, the city decides how much vacant land is likely to be needed to accommodate the expected growth. Community leaders, planners, and citizens estimate how many acres will be needed for the new houses, offices, stores, factories, and parks that will serve the future population. The amount of vacant land within the city limits and the projected growth rates are thus the key elements in drawing the UGB. Communities with large areas of vacant land already inside their city limits or that do not expect much growth establish their UGBs close to the current city limits. In fact, some cities have made their UGBs congruent with their city limits. Cities with little vacant land and high growth rates draw their UGBs farther from the city limits, thus creating large areas of urbanizable land.

Can the boundary be later expanded?

UGBs are meant to be a very flexible planning tool. As with other long-term, comprehensive planning efforts (such as a master plan for example) the community should be able to revise and amend the UGB every 5 years. The aim is to make sure that growth that was not anticipated can be accommodated. A flexible amending mechanism is required especially when it is hard to get reliable long-term demographic and growth forecasts. However, too much flexibility can also hurt the boundary. A balance has to be achieved between the need to keep it flexible enough so that the community does not miss important development opportunities (let's say the attraction of a huge business incubator that needs a large lot of land outside the limits of the UGB) and the need to contain new development within the UGB limits.

How is the location of the UGB decided?

The municipalities involved in the creation of the UGB must decide which are the most important goals to be achieved. Such goals, based on the experience of several US cities with UGBs include: efficient use of land, protection of agricultural land at the city's edge, and cost-effective public services. The latter criterion suggests that a hilly, wooded area for example would be costly to serve with sewers, water, and therefore it should not be included in the UGB.

How much inter-jurisdictional cooperation is needed?

Cooperation among all the jurisdictions involved is critical. In the US an UGB can be mandated statewide (as in the case of Oregon) or adjoining municipalities can come together and decide they need to create an UGB in order to protect farmland and to prevent future development from spreading out. As with other growth control mechanisms, cooperation is important because otherwise new growth is simply exported to the next community that welcomes it. In the case of Romanian cities inter-jurisdictional agreements are going to be very important. Because undeveloped land is scarce within the city limits, an UGB will most likely encompass land located in the adjoining villages. If cooperation lacks the whole UGB becomes questionable. This is going to represent a huge challenge for Romanian municipalities that have not traditionally cooperated in matters of land use planning. Theoretically, a three tier planning system is already in place: national, county, and local. Ideally the plans formulated at one level should coincide with the plans formulated at the superior level. However, this does not always happen in practice.

c) Case study on urban growth boundaries in the U.S: Portland, Oregon

Portland, Oregon is not a direct comparable case study to the city of Cluj-Napoca. However the authors strongly believe that this case study could be informative and raise some important questions

with regard to the benefits and costs associated with establishing an UGB. Several of the reasons why this case study was selected include: (1) a large size city that is growing; (2) urban (3) first implemented three decades ago, the impacts of the boundary are presumably already in place and more easily observable; and (4) there is a growing body of literature on Portland’s UGB therefore the availability of data is not an issue.

□ **Overview**

Portland is known as the “Capital of Good Planning”. For many urban planners the region has been the poster child for regional planning, growth management, and other innovative urban planning policies (Mayer and Provo 2004). The city of Portland has continuously evolved during the last three decades, transforming itself from a relatively small community into one of the biggest and finest cities in the US. Located on the Pacific Rim and bridging the states of Oregon and Washington, the Portland metropolitan area is uniquely positioned as the strategic center of trade and commerce on the U.S. West Coast. At the center of the region is Multnomah County, home to the City of Portland and accounting for 660,486 residents in the 2000 census. The entire region is highly urbanized, having the city of Portland and the Multnomah County as urban growth nuclei of the region (see Table II.2 below)

Table II.2. Urban-rural population, City of Portland and Multnomah County, Oregon

	United States	Portland, Oregon	Multnomah county, Oregon
Total	281,421,906	529,121	660,486
Urban	222,360,539	527,255	649,010
Inside urbanized areas	192,323,824	527,255	648,935
Inside urban clusters	30,036,715	0	75
Rural	59,061,367	1,866	11,476
Filler	0	0	0

Source: adapted from the 2000 US Census

The population has grown rapidly during the last three decades both within the city of Portland and the metropolitan area (see Table II.3 below)

Table II.3. % population change from 1990-2000

Unit of government	Population in 2000	% Change 1990-2000
City of Portland	660,486	13.1
Multnomah county	529,121	20.0
Portland-Vancouver metropolitan area	1,918,009	26.5

Source: adapted from 1990 and 2000US census

The City of Portland is somehow unique among its American counterparts with regard to population growth. The common trend in the US for the last five decades has been an increase in population at the metropolitan level accompanied by a drastic decrease within the city limits and especially in the downtown area. Mayer and Provo (2004) argue that Portland population growth has been primarily attributed to the region’s economic success especially in the 1990s.

The economy of Portland has suffered a structural transformation in the last decades, transformation that implied a shift from reliance on natural resources to knowledge-based industries and the

emergence of high technology firms (Mayer and Provo (2004). The inner city has been able to retain a substantial portion of businesses within its limits. Certain jobs have migrated to the suburbs, however employment in the central city is still fairly large (44%) compared with other American cities (Mayer and Provo, 2004). Most of the service-oriented firms, such as public relations companies, multi-media firms, insurance brokers, and banks have their offices in the central city. High technology industry, in contrast, is concentrated in suburban Washington County. The nursery industry takes advantage of the availability of agricultural lands protected from development and locates at the edge of the urbanized regions just outside of the UGB (Mayer and Provo 2004). The Portland region has not just been able to retain but also to increase its manufacturing base during the last two decades. Between 1990 and 2000, the metropolitan area added 22,871 manufacturing jobs. During the same time frame most regions in the US posted a loss in manufacturing employment due to the migration of these jobs overseas (Mayer and Provo, 2004)

The data presented in this section portray the city of Portland and the whole metropolitan region as an example of successful and balanced growth. Data seem to lend support to an argument made by Hamlin (2002) that in order for a region to be healthy and to develop it needs both the suburbs and the inner city.

□ **Land use planning in Portland**

Urban planning has played a key role in shaping the current profile of Portland for more than 3 decades. In the early 1970s Senate Bill 100 created the Land Conservation and Development Commission to monitor local comprehensive planning and compliance with a set of statewide planning goals. These goals are still in effect and focus comprehensively on the preservation of farmland, open space, housing, public facilities and services, urban growth boundaries, and economic development. By establishing a statewide land use planning framework Portland was at the forefront of what is referred today as the smart growth movement (Mayer and Provo 2004). The 1973 legislation also mandated the creation of urban growth boundaries in all municipalities and required negotiations between the cities and counties so that they would agree on the boundary lines. Several years later, in 1979 Metro was created; it is the only regionally elected land use and transportation planning agency in the US. Metro drew the UGB for the Portland region as to include 24 cities and 3 counties. In the 1990s Metro developed a comprehensive plan for the region called Region 2040 that outlines specific goals for the next decades and clearly spells out that higher density, mixed uses developments is going to be preferred and encouraged over less intensive land uses. The plan calls for mass transit and cluster developments and emphasizes the importance of public input and stakeholders' support toward the implementation of this regional vision (Seltzer 2004).

□ **Successes**

Portland's UGB can be considered a success in reference to the goals established by the state legislature. The boundary prevented the spreading out of new development into the surrounding farmland. By most measures Portland has a limited amount of urban sprawl. Chapman and Lund (2004) cite a study done by Ewing et al. (2002) and state that Portland ranked as the 8th least sprawling of the 83 regions surveyed. In a study by Mayer and Provo (2004) a sprawl score of 126.12 is attributed to Portland (by the same measure San Francisco has a sprawl score of 146.83). There are numerous subsidies put in place by the regional government to encourage denser development within the UGB: 10 years of property tax waivers for all high-density developments along an existed or planned light rail corridor, waivers for impact fees that are normally charged to builders of low-density developments, and below market-values land for developers that agree to built more denser (Staley et al. 1999). The advocates of UGBs and other smart growth policy tools contend that less urban sprawl and a denser building environment would increase the livability of a city. For most part Portlanders agree that livability has increased. Chapman and Lund (2004) cite the results of a survey carried out by the

city of Portland and Multnomah since 1993 that tries to measure the residents' perception on how livable Portland truly is. The number of city residents who rate the livability of their neighborhood as "good" or "very good" has increased over the past decade, from 77% in 1993 to 82% in 2002. The only drawback is the fact that as Chapman and Lund (2004) point out the perception of livability has not been consistent across time or throughout the city or region.

The UGB also positively impacted Portland's downtown and its central business district that are currently considered important assets not merely for the city but for the whole region. Abbott (2004) describes downtown Portland and adjacent districts as "everybody's neighborhood", a space that is shared and used by people throughout the whole metropolitan area. The city's core claims nearly all the cultural institutions, civic facilities, and gathering places that serve the region as a whole.

There are several aspects that distinguish downtown Portland from other inner cores. In the first place, the downtown not only flourished during the last decades but it also expanded via the redevelopment of some of the adjacent neighborhoods. Perhaps the most illuminating example is the case of the Pearl District. A former warehouse area located on the north edge of the downtown, it was transformed into the theater/arts district with art galleries, lofts, antique stores etc. Second, as mentioned previously, the downtown was able to retain and maintain its employment base. Third, downtown design is an important component of Portland's success. Design led to the conservation of a sense of place, friendliness to pedestrians, and the enhancement of downtown with public art.

As Abbott (2004) argues even successful downtowns may represent a potential problem for future development and planning. In the case of Portland, the downtown is encroached by viable residential neighborhoods and industrial districts. These areas in close proximity to downtown are not in need for redevelopment and want to maintain their current use. However, this impinges upon the expansion of the downtown. The challenge for planners is to find a way to allow denser development to expand beyond the long-established boundaries of the downtown while in the same time preserving the neighborhoods adjacent to the downtown. Even more challenging is to find a way to market the expanded downtown as a whole to both Portlanders and visitors.

Portland is also unique due to its mass transit network that allows residents and visitors to use a combination of public transit modes instead of driving. While most American cities are struggling to build and subsidize public transportation, Portland seems to be "blessed" with a variety of transit modes (light rail is the most important ones). There is also regional leadership that supports the aim of reducing overdependence on the automobile. Metro's 1999 regional transportation plan calls for: building 95 miles of new light rail and commuter-rail to add to the 17 miles that already existed and the 13 miles then under construction; building almost no new highways; reducing parking in existing shopping centers and office parks by 10% (O'Toole 2004). Tri-Met, the region's transit authority, assesses that light rail is a success in Portland. In the first place, ridership has continuously increased since the first light rail line was opened back in the 1980s. Second, the transit system has triggered the creation of compact, mixed-uses communities in the proximity of the transit stations – in the planning literature they are referred to as transit oriented developments or TODs (Mayer and Provo 2004).

❑ **Negative, unintended effects**

An UGB can generate unintended effects despite its overall success. Most scholars agree that the disadvantages associated with the implementation of an UGB refer to perturbations within the normal functioning of the real estate markets. Kolakowski et al., 2000 argue these perturbations include: (1) segmented real estate markets; (2) increased land prices inside of boundaries and reduced prices outside; and (3) increased overall housing costs.

As Portland develops into one of the most attractive places to live in the US, maintaining housing affordability is a daunting task for local and regional decision-makers. Smart growth advocates and opponents alike agree that housing is becoming more and more expensive in Portland. Howe (2004)

states that median sale price for existing, single-family homes in the Portland metropolitan region rose over 50% from \$104,743 in 1990 (in 2000 dollars) to \$160,217 in 2000. In the first quarter of 2000, the National Association of homebuilders ranked the Portland region as having the 165th least affordable housing markets in the nation, a sharp contrast to the first quarter of 1991 when the rank was 55th. A lot of disagreement exists however with regard to the causes that generate this increase in home prices and the policy tools to be used in order to cope with this challenge. Opponents of smart growth (see for example Staley et al. 1999) claim that house prices are a direct function of how much available land exists within a city. Therefore, they blame the UGB for the lack of affordable housing. Smart growth advocates claim that Portland has become less affordable because of the redevelopment that occurred in the city. As Howe (2004) states Portland used to be affordable because nobody wanted to live in the city. Some of the sharp increases in the prices of homes, Howe warns us, need to be understood within the broader context of what happened in Portland at that time. For example in 2000 home prices skyrocketed in contrast to the previous decade. However, this increase everybody witnessed was not necessarily the result of less available land but rather of a booming local economy after the recession period in the 1990s. Population growth also accounts for an increase in home prices and therefore a lack of affordability. The counterargument used by smart growth opponents is that Washington county (part of the same PSMA as Portland) also experienced population growth; nonetheless single-family homes have remained more affordable than in Portland (Howe 2004).

A solution to address the increase in housing prices is for local and state governments to provide affordable or subsidized housing. The city of Portland has proactively sought to capture a significant portion of the region's housing growth through support of downtown housing development and zoning regulations that favor higher densities, such as accessory dwellings and row houses. In the five-year period ending in June 2000 the city captured over 30% of the housing units built within the region's UGB. It has to be said that the city leadership is committed to improving the amount of affordable housing. Thus Portland complies with the region's voluntary five-year affordable housing production goal and predicts that 1,791 units will be built for households that make less than 30% of the median income.

Another negative impact associated with the Portland's UGB is traffic congestion. The construction of new highways has been limited in the Portland region for the last several years while numerous public funds have been channeled towards the construction of new rail lines. Those who oppose smart growth question however the appropriateness of this decision. Though absolute mass transit ridership has increased, Portlanders continue to remain highly dependent on automobile for most of their daily trips. Staley et al. (1999) argue that from 1990 to 2000 per capita driving in the Portland area increased by 35%, from 17.4 miles to 23.6 miles per day. Also by 2020 the amount of time Portlanders waste sitting in congestion will have more than quadrupled. Metro predicts that once the density of the population further increases and the construction of the new rail miles is completed, the share of transit as well as of walking/cycling will increase to 12% (combined). However, this leaves autos with 88% of all travel. Staley et al. (1999) conclude that even if Metro's predictions are going to materialize, mass transit is still the exception rather than the rule in Portland.

Finally, many pro-development groups argue that the market via supply and demand should determine where new developments take place and how they look like (single family homes, condos, infill projects). Staley et al. (1999) state that Portlanders are more and more often rejecting the increase of density within residential neighborhoods. They also claim that the market for multi-family and apartment buildings is oversaturated. Chapman and Lund (2004) however argue that the problem is more complex than Staley et al. (1999) suggest. A distinction needs to be made between density and infill (brownfield redevelopment). The authors claim that most Portlanders oppose infill rather than denser neighborhoods.

□ **Future challenges**

As a result of Oregon's state mandate and Metro's strong regional implementation powers the Portland region serves as an excellent example of an urban growth boundary's ability to encourage and create inter-jurisdictional cooperation. This program's success can be attributed to: the local government's cooperation, the regional government's power and influence, and the state legislation requiring and building the capacity of regional and local governments to cooperate (Kolakowski et al. 2000). Despite its obvious success however, Portland and its UGB face problems as well. There is a growing debate on whether Portland truly is the "ideal" city portrayed by planners and urban scholars or whether under impressive statistics lies an ugly truth, a city that is becoming less and less affordable for a variety of people, more and more congested, and bears no resemblance to what Portlanders may want to see happening in their community. As R. Yaro, an urban planning professor from the University of Pennsylvania argues, the reality is probably somewhere in between. Portland is currently facing the need to reevaluate its planning goals, both short-term and long term. An important task for regional decision-makers will be to regain the trust and the enthusiasm of Portlanders with regard to growth management. The rejection of several smart growth policy initiatives may represent the sign that something needs to be changed.

On Nov. 2, 2004, Oregon voters passed Ballot Measure 37. The measure provides that the owner of private real property is entitled to receive just compensation when a land use regulation is enacted after the owner or a family member became the owner of the property if the regulation restricts the use of the property and reduces its fair market value. In lieu of compensation, the measure also provides that the government responsible for the regulation may choose to "remove, modify or not apply" the regulation. The measure became effective on Dec. 2. It has since been ruled unconstitutional. The State of Oregon appealed the circuit court's judgment. On February 21, 2006 the Oregon Supreme Court issued its opinion in the *MacPherson vs. DAS* case reversing the trial court decision and upholding Measure 37 as constitutional. Measure 37 claims against the state have been on hold since the trial court ruled last October that the measure was unconstitutional (Oregon Department of Land Conservation and Development, 2006). This complicated legal situation proves that the authority of a municipality or a regional planning body to establish a UGB can be challenged in court. As with other planning decisions municipalities are carefully weighing the odds of having a planning decision challenged in court.

III. Preliminary policy recommendations for Cluj-Napoca

Based on the literature review, case studies from the U.S., and the authors' understanding of the local context, several preliminary policy recommendations are reviewed. We caution the reader however that some of the data on land use patterns for the city of Cluj are limited at best, fact that hinders the accuracy of this analysis and its subsequent recommendations.

- An urban growth boundary should only be contemplated if a regional (metropolitan) population forecast is undertaken by an objective organization. Such an organization would do a standard population forecast by appropriate age cohort. At that point a prediction for land demand would be based on population growth. Such an estimate for demand on land would be based on: (1) historic residential patterns; (2) urban growth activity in similar Romanian contexts; and (3) opinion surveys or other devices reflecting the preference of current residents. The conclusion of such an exercise should be a short-term (five years) and a long-term (twenty years) forecast for the demand for additional land that would be changed from agricultural/open space to a more intensive use. Such an exercise should be repeated every five years with totals for required new urban land updated at that time.
- The boundary would be drawn to accommodate a twenty-year growth demand as previously indicated. Such a boundary would be drawn large enough to provide some choice to landowners

who wish to convert their land to more intensive uses as well as to provide adequate alternatives to urban dwellers to choose among housing options. Once established the boundary should remain the same for at least 5 years to provide stable environment for real estate investors and to discourage land speculations.

- ❑ The boundary area should be drawn in conformity with existing planning criteria. It is important to draw the line in conformity with natural barriers and existing road networks. Individuals should be able to easily comprehend where the urban growth boundary line lies.
- ❑ The document creating such an UGB line should refer to the adopted master plan for the city of Cluj. It is important to promote growth in a fiscally and environmentally sound manner. Such a UGB would be contained in an addendum adopted as part of the plan. This addendum would contain sets of maps showing where the boundary will be in five, ten, and twenty years.
- ❑ The city might consider adopting the UGB as their urban service boundary. All physical infrastructure expansion would be contained within the boundary. No services would be extended outside the area.
- ❑ The UGB implies inter-jurisdictional cooperation and governance. Unless the Cluj metropolitan region/area is created, establishing an UGB doesn't make any sense. An UGB constitutes an urban growth control policy tool that affects more than just one community. The legitimacy for such an effort should come from a higher level of government than merely a single city. Local governments that are roughly equals in powers will not willingly cooperate on development issues unless there are incentives or mandatory requirements to do so. A city such as Cluj should not adopt such a policy without assurances that it would be legally effective to promote planning objectives that have been determined in advance.
- ❑ The city should pay special attention to identifying and assessing the likelihood of unintended impacts. As the American experience shows housing affordability may become an issue within the boundary. In the case of Cluj this will only add to an existing problem. If policy makers consider that such effects are likely to occur than policies that counteract them should be initiated.

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