POLICY TOOLS FOR URBAN GROWTH MANAGEMENT: THE CITY OF CLUJ-NAPOCA, ROMANIA

PREPARED BY: **BOGDANA NEAMTU**
GRADUATE STUDENT

SPRING 2006
PLAN B PAPER, DEPARTMENT OF URBAN AND REGIONAL PLANNING, MICHIGAN STATE UNIVERSITY

ACKNOWLEDGEMENTS

Dr. Eric J. Strauss (main adviser)

Dr. Roger R. Hamlin (2nd reader)

All the other professors in the program

Index of figures

Table of Content

Executive Summary

Graduate students in the Urban and Regional Planning Program have the option to choose between writing a Plan A (a thesis) and a Plan B in order to graduate from the Program. This policy paper represents a Plan B and it was complied to be a policy brief for the City of Cluj-Napoca, Romania.

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" or symbolic capital of Transylvania, one of the historical provinces of the country. In 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. The city is currently in the process of drafting a master plan for the city. Most of the input data have been gathered and the municipality is now exploring potential courses of action. This policy paper explores the concept of growth management and two policy tools that could be potentially used in order to address rampant urban growth and sprawl.

Growth management is a concept or ideology in planning that tries to reconcile two divergent goals municipalities face: the need to accommodate physical and economic growth while preserving the environment, the traditions, and the history of local communities. Two policy tools for growth management are reviewed in the paper: urban growth boundaries and impact fees. These policy tools have been used for the past twenty to thirty years in the U.S. and empirical evidence suggests both failures and successes. Because the Romanian planning literature is still is its infancy, this paper builds on the American experience with growth

management and urban growth boundaries and impact fees. Case studies from the U.S. are briefly presented in order to provide a better understanding of how this policy tools work in practice. While Romania is developing a suburban growth pattern somewhat similar to the U.S., this comparison will help policy makers in Cluj-Napoca to make better-informed choices regarding urban growth.

Both the literature review and empirical data suggest that urban growth boundaries and impact fees should be implemented only after a careful planning process occurs. In order for these policy tools to be efficient they need to be based on accurate information about expected growth patterns within the community. The literature also suggests that administrative capacity is key to implementing both urban growth boundaries and impact fees. An urban growth control matrix was designed in order to graphically depict the potential policy of each concept. Research indicates that impact fees are probably more likely to be implemented in a community where there is a high growth rate and an expanding real estate market. Because they are effective in one community inter-jurisdictional cooperation may not be necessary. On the other hand, urban growth boundaries are more effective on a regional basis. When land is scarce within the city limits, the boundary must encompass the adjoining communities where growth is expected to take place in the future.

The recommendations were formulated based on a three-tier structure. The initial tier comprises short-term recommendations. They include research and the strengthening of the administrative capacity of the department/agency that will further carry out the growth management process. The second tier includes the establishment and implementation of impact fees. They can be used in order to address several of the challenges the city currently faces: an insufficient road network, old water and sewer lines that need to be upgraded, lack of open space and parks in the newly built suburban neighborhoods, etc. They involve minimal inter-

jurisdictional cooperation and minimal legislative changes. Based on the local public finance law, currently in effect in Romania, municipalities are able to adopt a broad variety of taxes, fees, and charges. An analysis of this legislation leads to the conclusion that impact fees could fall under this category. The third tier is long-term in nature and refers to the creation of an urban growth boundary. It can be designed as to include the impact fee system already created. This policy paper shows that boundaries can control growth while regulating density increase, downtown historic preservation, and urban design. This document recommends them as the ultimate goal to be achieved by the City of Cluj-Napoca to guide the direction and quality of growth as well as to improve aesthetics.

Chapter 1: Introduction

1.1 Explanation of Plan B

Graduate students in the Urban and Regional Planning Program have the option to choose between writing a Plan A (a thesis) and a Plan B in order to graduate from the Program. Plan B papers can range in scope from literature review to a technical report to policy briefs. My Plan B paper was complied to be a policy brief for the City of Cluj-Napoca, Romania. The purpose is to provide guidance to the local decision-makers and to show how strengthening the administrative capacity of the city will eventually lead to two positive methods to control urban sprawl: impact fees and urban growth boundaries.

1.2. Scope of work

Because of the lack of awareness of the negative aspects of urban sprawl local decision-makers in the city of Cluj-Napoca need to know the options available to them in terms of urban growth management and control. More broadly, the goal of this research is to raise awareness among all the interested stakeholders regarding the negative impacts of uncontrolled growth.

The specific objectives of this policy brief are:

- Briefly discuss the nature of urban sprawl within the context of Romanian cities and identify several of the causes that generated this phenomenon.
- Describe the city of Cluj-Napoca from the perspective of recent growth trends. The focus is on identifying those relevant indicators/conditions that could act either as barriers for or as catalysts for growth management once specific policies are implemented.
- Review in depth two policy tools that have been used in the U.S. in order to manage growth. They are urban growth boundaries and impact fees. A discussion of specific case studies from U.S. will show interested parties successes and failures in implementing these growth management policies.

- Provide recommendations for the city of Cluj-Napoca for future action.

1.3 Methodology

The research is based on a combination of qualitative and quantitative methods. The need for both is justified by the complexity of the research topic. Empirical data available are still limited in Romania and therefore interviews with local decision-makers and direct observation were necessary for completing this analysis. They are:

1.3.1 Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis

The SWOT analysis is a process to list the community's strengths, weaknesses, opportunities, and threats. Each of these concepts can be tangible, for example land and property or an intangible, such as community organization and cohesion. Strengths are positive attributes that already exist in the community and can serve as a foundation for improvement. Examples of strengths are infrastructure or an active community organization. Weaknesses are the opposite that are problems or negative attributes that exist in the community. An example could be a blighted or problem area. Opportunities are aspects of the community that could be transformed into area-wide assets if they were converted to better use. An example of an opportunity might be vacant land because it is available for development. Threats are aspects of the community that could be deficits if they are not addressed. High levels of crime or lack of funding for implementation of plans are examples of threats. The SWOT analysis was based on direct observation, selected secondary data analysis of draft master plan provided by the city of Cluj-Napoca, and discussions with city representatives during two short informal discussion sessions in the summer of 2005.

1.3.2 Case studies selection criteria

Case studies were identified and discussed for both proposed policies. Local officials in Cluj-Napoca, unaware of such concepts, were provided with empirical evidence of how these tools work in practice. It is clear that the context of urban growth in Romania and the U.S. are different both physically and administratively. Nonetheless, there is value in providing these cross-cultural comparisons. When selected the case studies the main rationales were: (1) located in highly urban areas, growing either in terms of population or economically; (2) have a regional importance as tourist destinations, culture and arts centers, county seats, etc; (3) medium to large size; and (4) have been implemented several years or even decades ago thus some of the outcomes, both intended and unintended are already visible.

1.3.3 Secondary data analysis

Secondary data analysis implies the use of raw data gathered by another person for either a similar purpose or a different one. Data gathered by the city of Cluj-Napoca were used in order to assess the current land uses, the condition of infrastructure and public utilities, transportation patterns and housing.

1.3.4 Direct observation and conversations with city officials

Planning is just emerging in Romania as both a profession and an academic discipline. Planning literature and case studies are almost non-existent. In order to gather data about the local context direct observation was used. During the summer of 2005 I visited several of the newly built neighborhoods in Cluj-Napoca to get a better sense of the type of development, quality and availability of municipal infrastructure, amount of open space available. Some of the direct observations made are included in chapter 3. The research methodology also included informal discussions with several city officials regarding how they collect and aggregate data regarding urban growth. The short-term recommendations are based on these discussions.

Chapter 2: Urban sprawl within the Romanian context[1]

2.1. Overview

A brief history of urbanization in Romania over the 19th and 20th centuries is necessary to understand the differences between these experiences and those in the U.S. In Romania, because independent units only came together in 1918 to form the nation state known today as Romania, the industrial revolution did not act as a catalyst for urbanization. Over the 19th and 20th century, Romania continued to be mostly an agrarian country. Between 1930 (the first year for which nationwide data are available) and 1985, the number of people living in rural area continued to be greater than the number of people living in cities and towns. For example, in 1930 the percentage of people living in the rural areas was 78.6, and by 1977 it declined to 56.7. It was only in 1985 that the urban to rural ratio finally became 1:1 (official census data). However, it is clear that during this time interval the communist party and its policy agenda were the main forces behind the urbanization process and not the industrial revolution. The communist leadership decided to heavily industrialize the country. During this process industrial towns have also been created. Rural migrants were needed as workers in the newly created factories. This migration significantly contributed to the increase in urban population. In the years following the collapse of the communist regime (1989) the percentage of people living in urban areas slightly increased. However, it still continued to be relatively low as compared with other European countries. By the year of 2001, 54.6% of the total population was living in urban settlements. The level of urbanization in Europe is currently 74.6% with an expected annual growth of 0.3% per year between 2000 and 2015 (United Nations Population Division 2001).

[1] Excerpts from this chapters have been published in the Transylvanian Review of Administrative Sciences, nr.15E/2005, Cluj-Napoca, Romania;

Urban sprawl is a recent phenomenon within the Romanian society. Because of increasing affluence and economic growth currently taking place cities have started to expand beyond their traditional boundaries. Leapfrog developments, big-box retailers at the fringe of the city, increased traffic congestion, and pollution are more and more often a part of the daily urban life. The orderly transition from urban to rural spaces is already blurred in most parts of the country. There is currently very little debate both within the academic community and among practitioners with regard to suburbanization, urban sprawl, and possible negative consequences.

2.2 The spatial pattern of urban sprawl in Romania

The analysis of the current urban sprawl in Romania was conducted using the criteria and definitions identified in the American planning literature. The assumption is that sprawl seems to generate a common pattern of development all over the U.S. Despite this consistency, there is still considerable debate over what sprawl really is. Most scholars agree though that sprawl is:

- Essentially a suburban phenomenon- beyond a city's limit, transitional or on the urban fringe;
- Generally characterized as low density, favoring automobiles,
- And possibly scattered, unplanned, or ad-hoc in its pattern (Gillham 200).

Other scholars point out that there are three main spatial patterns of urban sprawl: low-density continuous sprawl, ribbon sprawl, and leapfrog development sprawl (Barnes et. al. 2001).

- **Low-density sprawl** is the highly consumptive use of land for urban purposes along the margins of existing metropolitan areas. This type of sprawl is supported by piecemeal extensions of basic urban infrastructure such as water, sewer, power, and roads.
- **Ribbon sprawl** is development that follows major transportation arteries outward from the urban core. Lands adjacent to corridors are developed, but those without direct access remain in rural uses/covers. Over time, these nearby "raw" lands may be converted to

urban uses as land values increase and infrastructure is extended perpendicularly from the major roads and lines.

- **Leapfrog development sprawl** is a discontinuous pattern of urbanization, with patches of developed lands that are widely separated from each other and from the boundaries of recognized urbanized areas. This form of development requires the greatest capital expenditures to provide total urban services at the time of development.

Barnes et. al. (2001) also briefly describe the concept of **exurban development**. Though not necessarily a form of development equated as sprawl, exurban development is worth mentioning in the context of this analysis. This type of development consists of scattered non-farm residential dwellings in predominantly agricultural and forested areas located beyond the suburbs of cities. This type of growth differs dramatically from the commonly recognized urban-suburban-rural pattern of land use. Exurbanites are often former urbanites who desire the solitude and perceived amenities of "country-living" and/or purchase second homes as rural retreats and as investments.

In the absence of a solid planning literature in Romania, the jargon and the classifications developed in the U.S. have been used to assess the nature and the form of suburban development in Romania. This approach was further validated during an on-site investigation of Romanian case studies of urban sprawl that found the physical and demographic patterns of growth similar to those found in the U.S.

Sprawl in Romania is a transitional or suburban phenomenon. It commonly occurs either at the outskirts of the existing cities or within the limits of the rural villages that border the urban settlements. The transitional character of sprawl becomes even more obvious when old neighborhoods are contrasted against the newer ones. The latter are easy to spot because they promote a different type of housing - mainly detached, single-family homes- that is uncommon

in Romania. This type of suburban development clearly represents a break with the existing shape of the urban built environment.

Sprawl has an unplanned and ad-hoc character. Suburban neighborhoods have started to become a reality in Romania only recently. Most municipalities have not been prepared to properly manage suburban growth and its outcomes. 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 unplanned. A recent case study documented by a local newspaper serves as a relevant example (Monitorul de Cluj, July 9th, 2005). In a previously low-density, single-family home district, two and three floors apartment buildings were built. The current residents became angry at the small open space ratio and the very small setbacks used on the newly built parcels. Further analysis revealed an almost unbelievable fact that determined the construction of the apartment buildings was legal. The legal document that regulates the setback from the property line dates back to 1865. One can just imagine how unprepared municipalities are to manage new construction, urban growth, and sprawl.

Other characteristics that describe suburban development in Romania include:

- The Segregation of uses: While in the U.S. the segregation of uses tends to be the rule rather than the exception, this phenomenon is definitely new for Romanian cities. Within the existing, long-established neighborhoods retail uses such as grocery stores and offices have long been intermingled with residential housing.
- A lack of open, public spaces. In Romania the inner parts of urban areas usually provide a lot of plazas and other public and semi-public spaces that allow people to interact and generate a fairly continuous traffic on the sidewalks. These areas including retail uses draw people to the downtown. Most people tend to perceive them as extremely safe. The

land at the fringe of the city is privately owned. Therefore municipalities have limited opportunity to provide public spaces in these neighborhoods. It would be extremely costly for municipalities to acquire and assemble privately owned land thus making it more suitable for the construction of public uses/spaces.

All three spatial patterns of sprawl identified and described by Barnes et. al. (2001) can be currently found in Romania. The ribbon sprawl is perhaps the most common pattern. As buildable lost are scarce and adjacent villages are not connected to the municipal utilities, both residents and developers prefer to build along the major transportation corridors. The underlying reason is that the extension of the municipal utilities follows the existing major thoroughfares and transportation corridors. The phenomenon is even more visible when it comes to non-residential facilities, such as warehouses and strip commercial. Exurban development is also present in Romania. Villages with a strategic location that have the potential to draw people due to unique scenery or other amenities have been transformed into resort-type communities.

The only notable difference between sprawl in Romania and U.S. refers to the density of suburban developments. As mentioned below, land in suburban locations in Romania tends to be expensive and scarce. Therefore, densities in suburban communities are much higher than in similar type of developments in the U.S.

2.3 Causes for urban sprawl

As mentioned before, there is no well-established planning literature on urban sprawl in Romania. This makes it difficult to engage in a meaningful debate. This section builds on forces that have driven the suburbanization process in the U.S. The Romanian context is analyzed in light of these forces. Based on this analysis the conclusion is that suburbanization in Romania has occurred due to different forces than in the case of U.S.

In the U.S. the suburbanization process rapidly accelerated its pace after World War II. The forces behind this process are numerous (Levy 2003; Glaab and Brown 1973; McKelvey 1963). After World War II the economy was poised for growth. Mortgage finance was readily available on attractive terms. Employment was high, and incomes were rising rapidly. The nation thus had more wealth to spend on land development, on housing, and on the additional transportation that suburbanization required. Automobile ownership rose. At the end of World War II, there was one automobile for every five Americans; by the 19990s, there was one automobile for every two Americans. Paralleling the increase in automobile ownership was a great expansion of the nation's highway system. Shortly after the war there began a major surge of highway building by the state, powerfully encouraged by federal subsides. Decentralization has also been promoted by improvements in electronic communication. Finally, the disinvestment in central cities coupled with cheap land at the outskirts of the city further promoted this trend (Neamtu 2003). Similar forces have been driving the urbanization process in Western Europe as well (United Nations Environment Program). Suburbanization is not a natural, ecological step in the evolution of cities. Both in the U.S. and Europe sprawl is the result of policy decisions that have influenced either directly or indirectly the preference of individuals to live in the suburbs.

In Romania, sprawling neighborhoods at the city's edge developed despite the unattractiveness of the mortgage systems, poor road infrastructure and huge costs associated with suburban land and home purchases. The mortgage system for homes and commercial properties is still in its infancy in Romania despite the significant progresses that have been made during the last three years. According to a recent document, (Urban Institute 2005), available mortgage loans in Romania are "predominantly short-term, variable-rate products, and currently represent only small proportions of total bank assets. Mortgage lending, however, is increasing rapidly and

can be expected to continue to do so". This is in contrast to an earlier report (1999) from the same source (Urban Institute 1999).

It is clear that the road system is not a catalyst for the development of suburban settlements. The total length of national roads is 78,492 km (a density of 32.9 km/100 km2). The Romanian road network is inadequate even though an accelerate process of improvement has been taking place in the last few years. Modernized roads are approximately 25% of the total length of the road network – much less than in EU countries. There are only 113 km of motorways in Romania, i.e. Bucharest-Pitesti and Fetesti-Cernavoda (European Federation for Transport and Environment 2004).

Finally, land in the suburbs is not cheap. In the U.S., one of the reasons people prefer to build homes on previously undeveloped land is due to low costs. It is more expensive to engage in redevelopment projects. Downtown land or buildings may be contaminated and older homes need to be brought up to the nowadays standards. The Director of the Planning & Community Development department in East Lansing, Mi is of the opinion that the price of land drives the construction of new buildings. While the cost of land is roughly $100/square foot downtown, it costs only $5/square foot in the suburbs (Neamtu 2003). In Romania land in the suburbs is usually much more expensive than within the inner city. In Bucharest, the capital city, for example, in 2004 the average price for a square meter of land downtown was 26.1 Euros (Adevarul June 12th, 2004) as opposed to 85/100 Euros per square meter north of the city, in one of the most expensive suburban areas. Of course, in the case of Romanian cities, this situation is also determined by the fact that buildable land is a much scarcer resource than in the US and some downtown areas are already built-up.

What are the causes of urban sprawl? What are the factors that act as catalysts in the absence of the more traditional ones? In the absence of a planning literature focused exclusively

on Romanian cities, several of the reasons listed below are "educated guesses". As pointed throughout the paper, more quantitative studies, based on specific indicators, are needed to confirm these suppositions.

First, the psychological factors underlying this process in Romania have to be mentioned. During the communist regime, people were forced to live in multi-family apartment blocks. They were deprived of intimacy and had no possibility of a house built according to their own preferences. The ultimate goal of the communist party was to eradicate any differences regarding the social or economic status of individuals. Even people with prestigious professions or higher income such as doctors or lawyers have been sometimes forced to reside within these multi-family apartment blocks. Levy (2003) describes this phenomenon as a form of social control that made such developments attractive to the totalitarian state. The collapse of the communist regime allowed people who could afford to live in single-family houses to do so. Because the party overemphasized the idea of living in apartment buildings and sharing some facilities, single-family housing has become an attractive option. In Romania suburbs are currently the location of the upper, high-income class and not of the middle class as in the U.S. There are two factors that account for this situation. First, people want to translate their socio-economic status into single-family housing ownership. It is thus somehow normal that the first to fly to the suburbs were the wealthier ones. This represents a situation similar to the U.S. at the beginning of the 20th century. Second, as mentioned before, buildable land is scarce and thus implicitly expensive.

Land ownership also accounts for existing urban sprawl. Before 1989, most of the farmland and forestland located in villages was owned by the state and farmers/villagers used to work in rural cooperatives. People used to work the land but not to own it. Also the land located at the fringe of the city was nationalized during the communist regime. The state government

was the sole owner. After the revolution, the political decision-makers decided that citizens should regain control over the land they owned before 1945. As a result, the Act no.18/1991 (subsequent amendments as well) was issued and a chaotic process of reclaiming ownership started (see also Veress). A great deal of corruption has been associated with this process. In some cases it was up to the courts to determine who will get what parcel of land. Both the elite and the citizens soon realized the potential for land speculations. In many cases, people who were no longer living in the rural areas got back the lots their parents or grandparents used to own. Due to the fact that farmland for agricultural uses is not highly priced, landowners wished to sell it to those who would develop it for residential uses. In some cases these people waited for years for somebody to start building residential housing in the area and thus to have an increase in the value of all the properties located nearby.

Financial and real estate markets and their functioning within the Romanian context also account for a great deal of the existing sprawl. All the recent country reports issued by international financing institutions such as International Monetary Fund, European Commission, and World Bank emphasized the fact that Romania lacks a sound financial system. In the absence of safe investing options such as stock, people generally channel their saving into the real estate market. Since 1989 this market has been an extremely speculative one. This feature of the real estate market further generated an increase in the cost of land. Thus, it can be argued that the high cost of land within suburbs is mainly due to two factors: in the first place, buildable land is scarce; second a speculative real estate market drives it even higher.

Land use control tools, regulations and the structure of the Romanian administrative system also contributed to the occurrence of sprawl. In the first place, municipalities do not engage in the comprehensive planning process to control sprawl. Therefore municipalities have no holistic vision about when and where growth should occur in the future. Second, there is a

weak enforcement of building such as set backs, height, lot coverage, and design. Because neighborhood associations are still weak or non-existent, the local public agencies are the only actors that could possibly enforce these regulations. As mentioned before, sprawl occurs either at the fringe of the city or inside villages that border the city. From a legal point of view however, different jurisdictions may exercise control over these suburban developments. It is very hard in light of this situation to come up with a coherent development strategy for a wider suburban area. Theoretically, the way in which the administrative system is structured should help solve this issue. At the county level, development strategies are coordinated and a regional plan should be in place (Minea 2003). In reality, things do not happen exactly as described above. Very often county councils may provide technical expertise for villages, however cities are left to be independent. What usually happens is that small villages discover what a valuable resource for their budget commercial or residential developments can be. Also, the presence of new developments tends to be regarded by small jurisdiction as their ticket for a future hook-up to municipal water, sewage or gas systems.

From a regional planning perspective, a solution could be for these bordering villages to be annexed by the city. However, the procedure is extremely complicated and if the villages are resisting this endeavor will probably fail.

2.4 Preliminary assessment of the impact of sprawl

The assumption behind this document is that urban sprawl is bad. Why do we need to fight sprawl? Why is it sprawl such an unhealthy land use pattern? Should one consider all suburban developments as being sprawl? All these questions are relevant for Romanian cities. In the absence of specific data, only preliminary conclusions can be drawn.

Urban sprawl, as depicted by the American planning literature, is an unhealthy land use pattern because of its direct and indirect impacts. 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 group, etc (Gillham 2003; Duany, Plater-Zyberk and Speck 2000). There are scholars who claim that the situation is not so clear-cut and that in certain cases empirical data do not prove the existence of a causal relationship between sprawl and these aforementioned variables. Very few studies, if any, have been conducted in Romania in order to document the effects of sprawl. In this context it is hard to substantiate the claim that sprawl needs to be stopped. Several potential negative outcomes associated with urban sprawl are identified in the remaining part of this section. Chapter 3 will discuss this issue in the context of the challenges facing the city of Cluj-Napoca.

The most alarming outcome of sprawl in Romania is environmental pollution and natural resource degradation. Studies conducted in the U.S. show that suburban homes that have septic tanks instead of a hook-up to the municipal sewage system need to be located at greater distances from each other in order to prevent health hazards (Levy 2003). In Romania it is a common situation for suburban houses to have septic tanks. Nonetheless, the lot size, and implicitly the distance at which they are located from each other, is less than 1 acre (the standard within the U.S). While smaller lots may be acceptable due to the existence of less land, this continues to Represent a challenge nonetheless. There are other situations when the septic tanks are not built in accordance with the legal provisions. However, due to the weak enforcement of legal provisions most of the owners in local communities are unaware that they can harm their neighbors or the environment.

Another negative consequence of sprawl refers to the fiscal strains it imposes on local communities. The immediate reason why municipalities should care about sprawl is increased infrastructure and utility provision costs. Sprawling neighborhoods need to be serviced by sewer,

water, electricity, and most important by 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.

The aesthetic dimension of sprawl has to be discussed as well. Old, medieval towns have specific features that make them attractive to tourists. In most cases, suburban communities will develop along the transportation corridors that bisect these cities. As an extensive system of highways is not in place, these sprawled neighborhoods will be the first thing the tourists observe as they enter the city.

Another negative aspect refers to how sprawl limits the future capability of cities to plan. In the U.S., because of the vastness of land new communities can be created anytime. Even if there are constrains as well, it is usually easier to find land to place a new, planned development. As mentioned, in Romania buidable land, especially around cities, is limited. Twenty years from now planners may envision great things for a certain city and its suburbs but they would be difficult to implement. Once these suburban neighborhoods are built, the unhealthy land use pattern is very hard to alter.

As mentioned previously sprawl is not even acknowledge as a problem by most Romanian residents, public officials, and scholars. The reason for this is that sprawl is perceived as the corollary of increased affluence and economic growth. Therefore numerous people equate sprawl with positive outcomes. This "common wisdom" is a further barrier for administrative activity to solve this problem.

Sprawl has often been seen as an indicator for economic growth and a potential tool to address the current shortage of housing in Romania. At the end of 1999, the Romanian population of 22.46 million relied on a total housing stock of 7.88 million units (an average of 351 dwellings per 1,000 people). Compared with other transitional societies, the size of

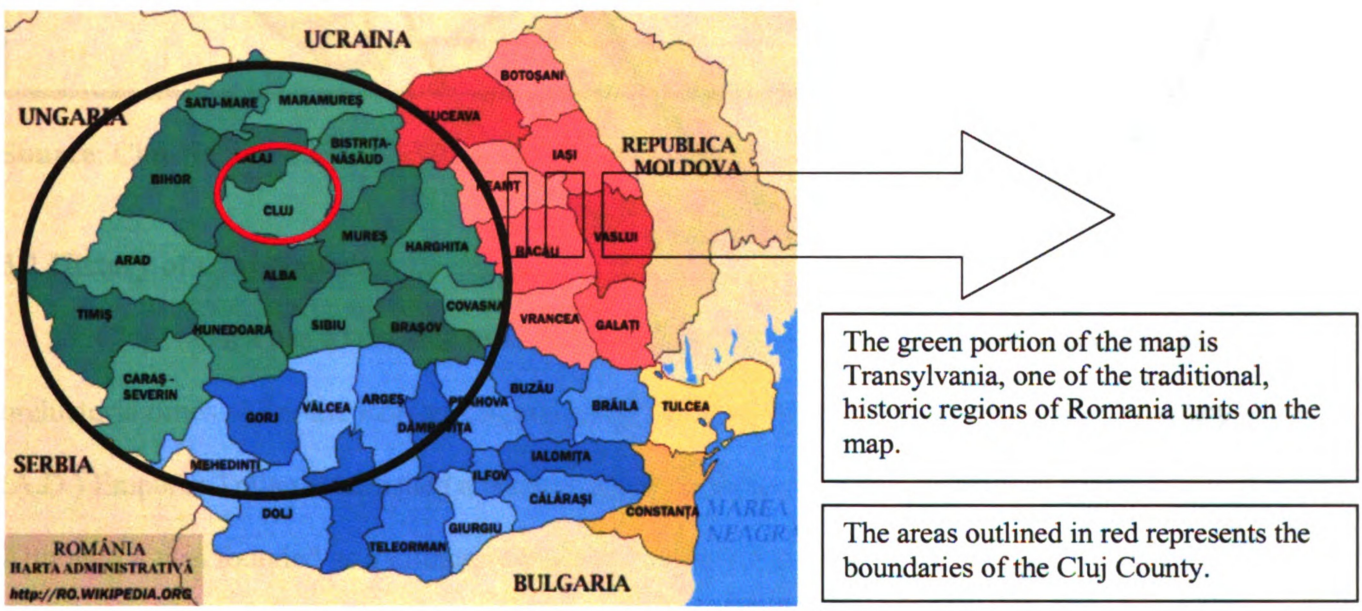
Romania's housing stock might appear adequate. Nonetheless, this apparent aggregate fit between housing supply and demand may hide a possible mismatch in terms of potential households or geographical distribution. For example, observation and reports received during the study would appear to confirm the possibility of a real housing shortage in Bucharest and some other urban areas such as Cluj-Napoca (Housing stock and construction, Romania on line at http://www.unece. org/env/hs/prgm/cph/romania/2chapter2.pdf). Sprawl occurs exactly at the fringe of these big urban centers where housing is a problem. However, suburban housing does not necessarily solve this problem. A significant percent of the housing needed is affordable housing. As suburban housing in Romania is expensive, sprawl is not going to solve the shortage of affordable housing.

Chapter 3: Profile of Cluj-Napoca, Romania

3.1 Geographical location

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" or symbolic capital of Transylvania, one of the historical provinces of the country (see Figure 3.1). Surrounded by a hilly topography that reaches the maximum height of 704 meters, the city of Cluj-Napoca covers a surface of 179.5 km² along the Somes River valley and the hydrological basins of several other small rivers (see Figure 3.2).

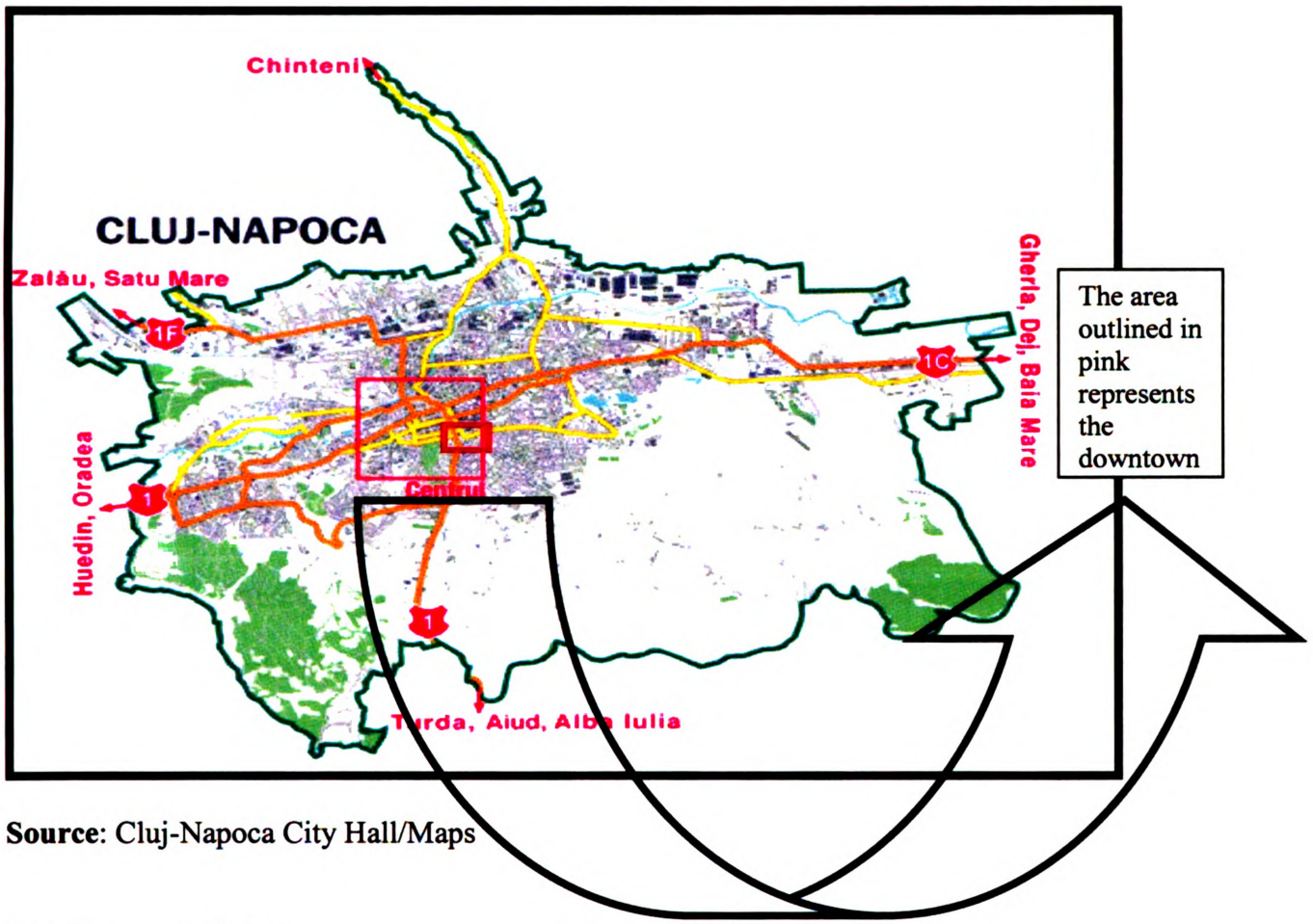
Figure 3.1: Map of existing counties for each of the historical regions of Romania[2]



Source: Wikipedia, Romania

[2] The area in green is Transylvania, the area in red is Moldavia, the area in blue is Muntenia and the area in yellow is Dobrogea. All these areas represent the historic regions that existed before the creation of the nation state in 1918.

Figure 3.2: Map of existing boundaries and neighboring cities for the city of Cluj-Napoca



Source: Cluj-Napoca City Hall/Maps

3.2 History of Cluj-Napoca

Cluj-Napoca has a very rich historical and cultural heritage that reaches as far back as prehistoric times. After the Roman Empire conquered Dacia in the beginning of the 2nd century (A.D.) Emperor Traian established a legion base at a Dacian settlement known as *Napoca*. Although it was founded as a military base, Napoca grew rapidly as civilians settled nearby. Emperor Hadrian raised Napoca to the status of a municipium, naming it *Municipium Aelium Hadrianum Napoca*. The locality was later raised to the status of a colony, probably during the reign of emperor Marcus Aurelius. Napoca became the provincial capital of Provincia

Porolissensis and the seat of a procurator. However, during the Migrations Period Napoca was overrun and destroyed (Wikepidia/ English /Cluj-Napoca/ History).

King Stephen V of Hungary encouraged the Transylvanian Saxons to settle near the Roman city of Napoca in 1272 (A.D.). Their settlement received the German name *Klausenburg*, from the old word *Klause* meaning "mountain pass." The Romanian name *Cluj* may be derived from *Klause* as well, or from the Latin name *Castrum clus*, the name by which the city first appeared in written documents, around 1170 (*clusum* means in Latin "closed", referring to the city being surrounded by hills). The Hungarians who lived there referred to the city as *Kolozsvár* (Wikepidia/ English /Cluj-Napoca/ History).

In 1270 (A.D.) Cluj was given urban privileges by Stephen V and began to grow quickly. Cluj then became a free city in 1405 (A.D.). In 1541 (A.D.) Cluj became part of the Principality of Transylvania. Although another city, Alba Iulia, was the political capital of the province, Cluj was the main cultural and religious center. Between 1545 and 1570 large numbers of Saxons left the city due to the introduction of the Unitarian doctrines. Also the war between Hungary and the Ottoman Empire further reduced the German population. They were largely replaced with Hungarians, and the city became a center for Hungarian nobility and intellectuals. In 1798 a fire heavily damaged the city (Wikepidia/ English /Cluj-Napoca/ History).

After the creation of the Austrian-Hungarian empire in 1867, Cluj and Transylvania were integrated into the Kingdom of Hungary. At this point in time Cluj became the second-largest city in the kingdom after Budapest, and was the seat of Kolozs County (Wikepidia/ English /Cluj-Napoca/ History).

After the First World War Cluj became part of the Kingdom of Romania, along with the rest of Transylvania. In 1940 Cluj was awarded to Hungary through the Second Vienna Protocol but the Romanian and Soviet armies defeated the Hungarian forces in October 1944. As a result

of the Paris Treaty in 1947 Cluj returned under Romanian sovereignty (Wikepidia/ English /Cluj-Napoca/ History).

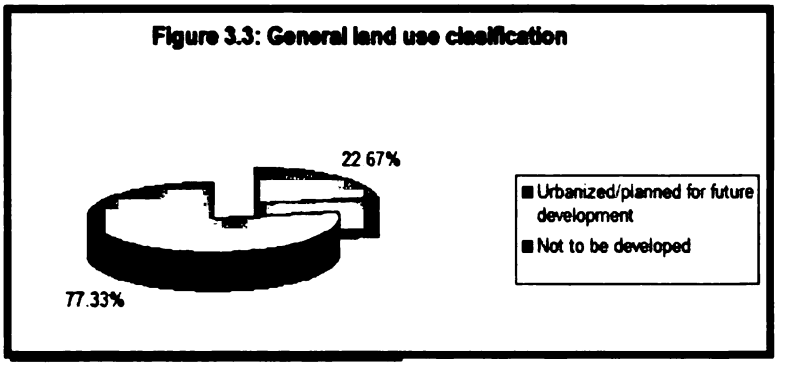
Until 1974 the official Romanian name of the city was Cluj. The city was renamed Cluj-Napoca by the Communist government in order to acknowledge it as the site of the Roman colony Napoca (Wikepidia/ English /Cluj-Napoca/ History).

On December 21, 1989 the revolution against the communist regime came to Cluj. Fifteen people were killed during this event. In the following years the democratic consolidation in the city forced many economic, political, social and cultural transformations, and physical restructuring. Currently the city remains an important cultural and economic center in the Transylvania region.

3.3 Land uses, infrastructure, and growth patterns[3]

3.3.1 Current land uses

The current comprehensive general plan for the city of Cluj-Napoca was elaborated 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 3.3).



[3] 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

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.

3.3.2 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 land that can be developed 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 delimitated the zones within the forest limits that can be developed, growth is taking place outside of this 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).

3.3.3 Vehicular traffic

City official believe that vehicular traffic has increased in the city in the last years (no 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.

3.3.4 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.

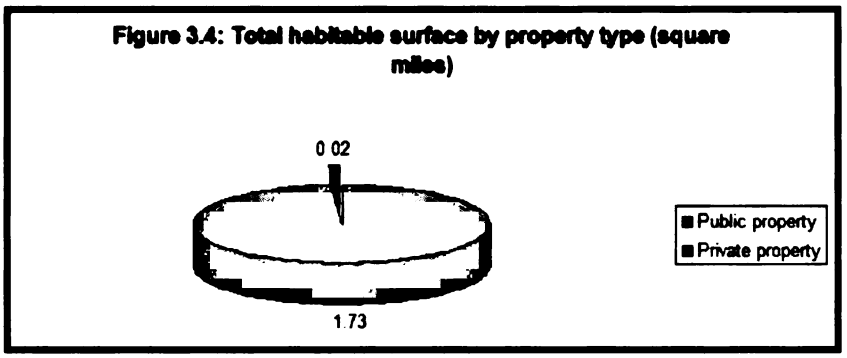
3.3.5 Public transportation

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 needs to face 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.

3.3.6 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 3.4). 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%.



The data portray one of the biggest challenges the city faces: lack of affordable and public/social 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.

3.3.7 Municipal infrastructure (water and sewer)

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 sewer developers and residents are very often willing to pay for the hook-up to the municipal system or to pay or to build the necessary onsite 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).

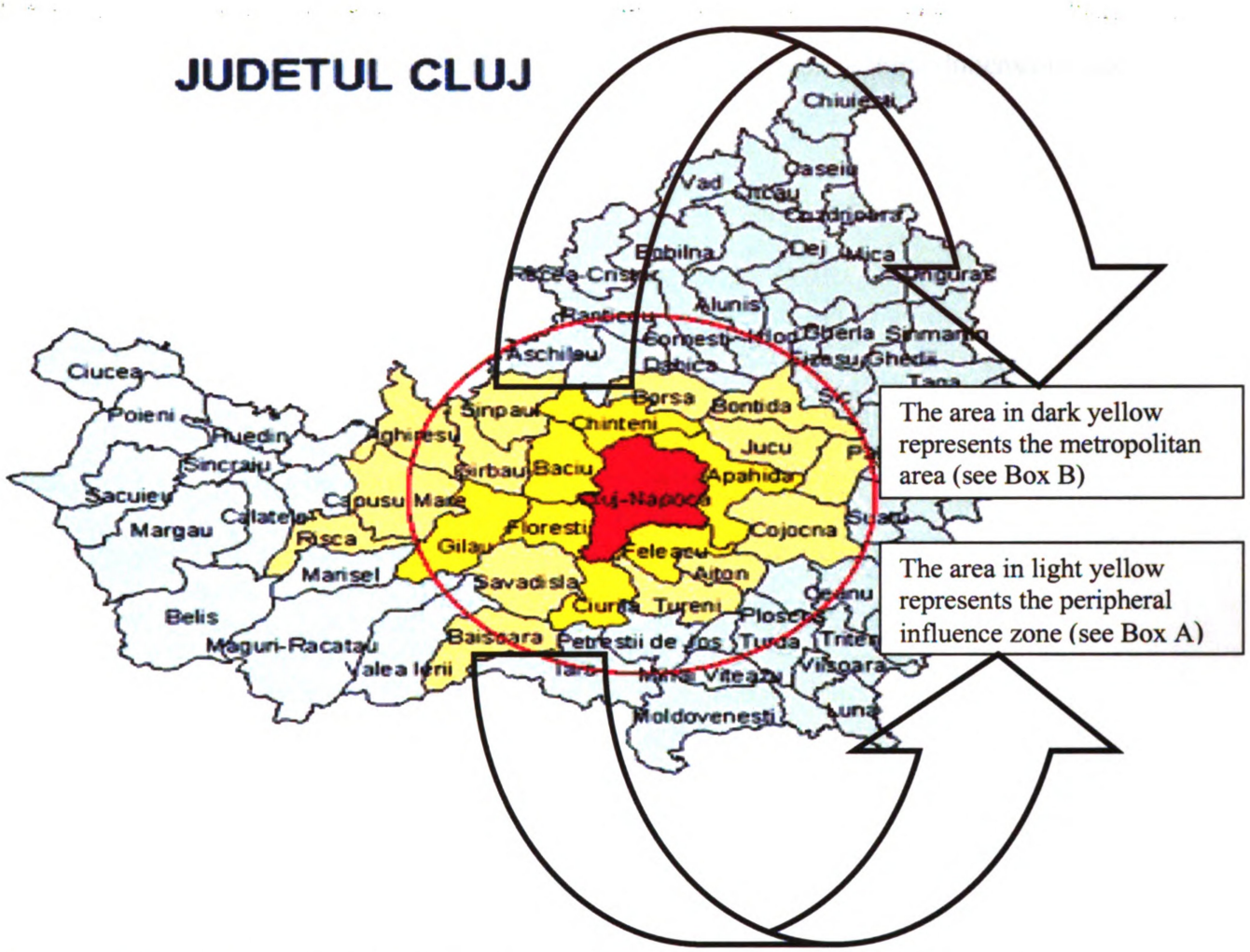
3.4 Metropolitan growth and urban sprawl

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 3.5, 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, Baciu, 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 3.5, 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 3.5: 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**

Any growth control strategy or policy tool the city decides to implement needs to be tailored as to capitalize on the assets and opportunities the city has and to minimize the weaknesses and threats it faces. The SWOT analysis helps to categorize these dimensions (see Figure 3.6).

Figure 3.6: SWOT analysis matrix

Strengths:	**Weaknesses:**
❑ A polycentric urban system: the downtown functions as the core while the neighborhoods are relatively autonomous and have a well-established identity ❑ A historic downtown ❑ A riverfront ❑ Four major universities with a student population of approximately 80,000 students ❑ The retention of most jobs within the city limits ❑ Office, banks, corporate headquarters located predominantly in the downtown area ❑ Public transit ❑ Increased density coupled with mixed uses both in the downtown and throughout the whole city ❑ The local and county government; other governmental agencies	❑ Conversion of agricultural and open land to more intensive uses ❑ The loss of parks and open spaces within the city limits ❑ No connection among the residential neighborhoods except from the downtown area ❑ Numerous buildings built in violation of local zoning and building codes regulations ❑ Weak enforcement of existing provisions; lack of administrative capacity to do so ❑ Lack of adequate public infrastructure and public utilities at the fringe of the city and within the more industrial areas ❑ Numerous old buildings that have both structural and aesthetic deficiencies ❑ Abandoned industrial buildings whose current use is uncertain ❑ One of the most expensive real estate markets in the country; lack of affordable

	housing ❑ Congested downtown during peek hours; geographical location makes the building of a ring highway too expensive ❑ Public infrastructure currently in place that needs extensive updates
Opportunities: ❑ Updating of the current general comprehensive plan; take advantage of the knowledge base that exists at the local level due to faculty/students at the four major universities ❑ Make use of the GIS and other technologies to generate some of the data that are currently missing- mapping for example the spatial distribution of sewer and water networks ❑ Creation of a metropolitan zone that would allow for a more comprehensive, region-wide approach to growth control ❑ Availability of urban renewal grants from the European Union	**Threats:** ❑ Unwilling adjacent villages that refuse to partner or to take part in the creation of a metropolitan government (tax sharing is opposed the most) ❑ Not sufficient money allocated for the areas that are at risk due to increased urban pressure ❑ A slow pace of establishing the property rights with regard to buildings that were nationalized during the communist regime; many comprehensive planning efforts are hindered because changes in ownership and use occur almost over night due to this complicated legal process

Chapter 4: Ways to cope with sprawl

4.1 Smart growth and growth management

The city of Cluj-Napoca has been facing significant growth pressures for the last decade due to 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- or anti-development. Furthermore, 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 between economic growth (more jobs, more taxes, etc) and 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 solutions to the problem of 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. Growth management and smart growth are terminology used interchangeably. 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. Throughout this paper the two concepts are used interchangeably.

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. This is illustrated by the way in which 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 the challenge of applicability. Is the whole concept of smart growth useful in practice? Even if planners, citizens, and real estate agents all agree that smart growth is an appropriate idea, what needs to be done first? What 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, and urban growth boundaries/urban service boundaries (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 caps, 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 mentioned previously, 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 international planning philosophies. In 1998 the British government established an Urban Task Force that has since advocated compact cities, the 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. The conclusion is that 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).

4.2 Policy tools advocated by growth management

4.2.1 Urban Growth Boundaries

- 4.2.1.1 What are UGBs?

As growth-management initiatives are gathering unprecedented public support both in the US and worldwide, planners are using specific policy tools in order to create "smart" communities. One of the most popular planning tools is the urban-growth boundary (UGB), 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 Figure 4.1). Eight states mandate the use of urban growth boundaries at all or selected local level. These seven states are: Washington, Tennessee, Oregon, New Jersey, Maryland, Maine, Hawaii, and Minnesota. In some states, such as Florida, urban growth boundaries are not required, but the state has recognized their importance. As a result, they have encouraged their local governments to adopt urban growth boundary programs (Kolakowski et al. 2000).

Figure 4. 1: Existing Urban Growth Boundary Programs in the US

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 that defines the limit of development, outside of this line 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). This research will focus on the broader definition of UGBs.

UGBs are used outside the U.S. 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).

- 4.2.1.2 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 questioned by smart growth opponents than others (Staley et al., 1999). While most opponents regard the first goal as benign, the second and the third aforementioned goals 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. The objectives underlying the establishment of an UGB by a municipality can change over time. Portland is perhaps the most well known city in the US to feature an UGB. In this specific case, 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 current urban development issues. 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-Napoca. 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.

- 4.2.1.3 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 adjust their boundaries in order to respond to challenges and new needs. The key word here is flexibility. A growth boundary is not meant to remained 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 determines the UBG?

Drawing an urban growth boundary is a cooperative 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, 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, both economically and in terms of population. 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 (for example 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 U.S. 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. An UGB cannot be implemented without cooperation. 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.

- 4.2.1.4 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 analysis of this city as a case study raises some important questions with regard to the benefits and costs associated with establishing an UGB. Several reasons why this case study was selected include: (1) a large size city that is growing; (2) urban (3) first implemented three decades ago, thus 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 Figure 4. 2)

Figure 4. 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
Rural	59,061,367	1,866	11,476

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 4.3 below)

Figure 4.3: % 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 19990 and 2000 US census

The City of Portland differs from most of 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.

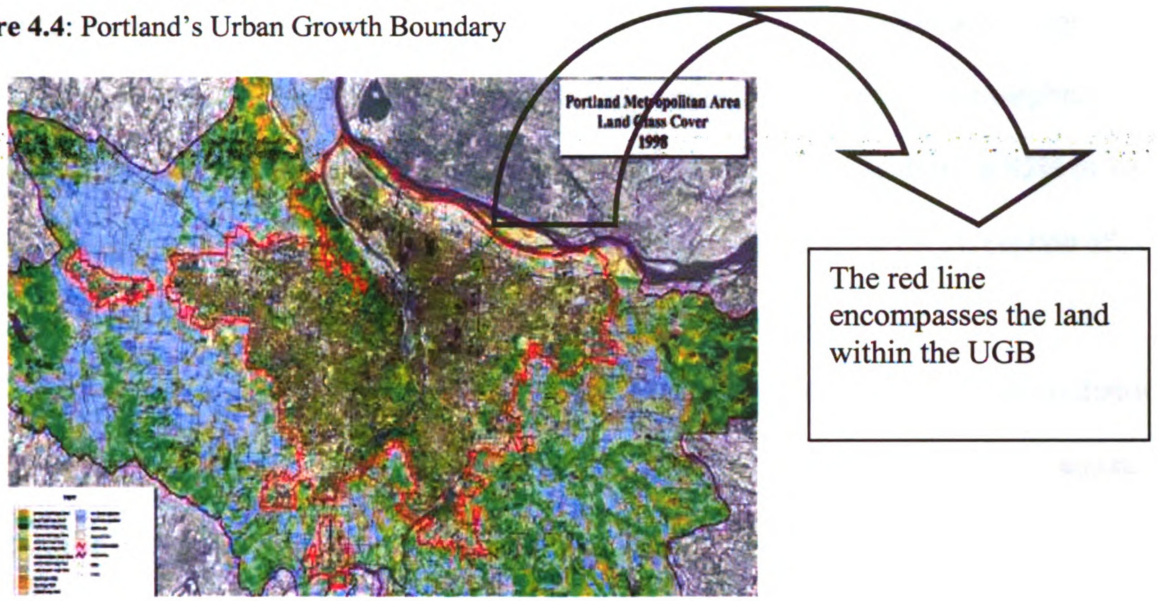
The economy of Portland has suffered a structural transformation in the last decades, moving from reliance on natural resources to knowledge-based industries and the emergence of high technology firms (Mayer and Provo (2004). The inner city has been able to retain a substantial portion of businesses 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 UBG (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 U.S. 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 UBG for the Portland region as to include 24 cities and 3 counties (see Figure 4.4). 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).

Figure 4.4: Portland's Urban Growth Boundary



Source: www.conservationeconomy.net

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 the 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 the livability of Portland. 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) suggests, 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 trigger the creation of compact, mixed-uses communities in the proximity of the transit stations-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 disturbances within the normal functioning of the real estate markets. Kolakowski et al., 2000 argue these problems 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 became 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 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 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. The authors 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. Perhaps under these 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. On February 21, 2006 the Oregon Supreme Court issued its opinion in the *MacPherson vs. DAS* case upholding Measure 37 as constitutional. 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.

4.2.2 Exactions and Impact fees

- 4.2.2.1 Overview

Over the last three decades exactions and impact fees have been popular tools for municipalities. These mechanisms have been used to the financing of public infrastructure and other needed amenities or to offset the impact new developments may impose on existing communities. Exactions have continuously evolved over time in response to the ever-changing challenges facing municipalities.

Until the 1920s, local governments generally financed the extension of water, sewer, and other utilities to new development with either general revenues, or through a centuries-old practice of levying "special assessments" on real property to pay for public improvements such as paved streets, that provide a direct and special benefit to the property. In the 1920s and 1930s, widespread bankruptcies and subsequent delinquencies on property tax or special assessment payment left many local governments unable to recoup the costs of public improvements. The Standard Zoning Enabling Act of 1926 (adopted shortly after by many states) authorized local governments to require developers to construct streets, water mains, and sewer lines (Been 2005). Thus, the first generation exactions included onsite dedications of land on which the community could construct streets, sidewalks, utilities, etc. Been (2005) points out that early dedications were linked to very basic needs, municipalities then stated to require dedications for parks, fire stations and schools. Exactions were taken a step further with municipalities requiring developers to provide offsite dedications. An additional step was for municipalities to charge fees in lieu of dedications. Developers had the option to choose between either dedicating land/building the needed facilities themselves or compensating communities with money. Been (2005) points out that while dedications and fees in lieu of dedications could be applied only to subdivisions, many local governments began to implement broader impact fees. They assess

developers for the cost that developments will impose on the government's capital budget for public services. Impact fees can be levied on apartment buildings or other residential dwellings that are not located in a subdivision as well as on office, commercial, and industrial development.

- 4.2.2.2 What are they?

There is no clear-cut definition of impact fees. In fact the planning literature uses a variety of concepts interchangeably in order to describe both fees or dedications for public infrastructure or other improvements developers need to pay. Been (2005) provides a needed distinction between exactions and impact fees. She underscores that although exactions is the umbrella term for all the various types of dedications, fees, and linkage program (see definition below), some people use the term to describe only the first generation devices: onsite and offsite dedications and fees in lieu of dedications. Impact fees, on the other hand are described as a second-generation form of exactions. Miles et al. (2000) define impact fee as " one form of a variety of exactions that requires developers to contribute to the provision of public facilities related to their developments", and underscore that similar terms are *systems development charge* or *development impact fees*. Carrrion & Libby define development impact fees as "one time charges applied to new developments. Their goal is to raise revenue for the construction or expansion of capital facilities that located outside the boundaries of the new development that benefit the contributing development. Impact fees are assessed and dedicated principally for the provision of additional water and sewer systems, roads, schools, libraries, and parks and recreation facilities made necessary by the presence of new residents in the area. The funds collected cannot be used for operation, maintenance, repair, alteration, or replacement of capital facilities." Miles et al. (2000) also point to an important distinction between impact fees and linkage fess. They are intended to assist in financing housing programs and other community

needs. The most widely know and the most stringent program, the authors claim, is San Francisco's Office Housing Production that requires developers of downtown office buildings of over 50,000 square feet of floor space to pay fees for improvements to transit, housing, public art, child care, and public open space.

Since their adoption, there has been some research on which communities are most likely to use impact fees and the type of public improvements most likely to be financed via impact fees. Been (2005) cites a survey conducted by GAO in 2000 of cities with population of 25,000 or more and underscores that 59% of the cities responding used impact fees, as did 39% of the counties responding. Other authors have pointed out that there are substantial differences among the various regions of the country with regard to the use of impact fees. Two nationwide studies conducted in mid 1980s support this argument. Bauman & Ethier (1987) found that no New England communities used impact fees in 1984 and 1985 but 45% of communities in the western states and 82% of California communities did. Purdue & Frank (1987) found that in 1985 California, Florida, Virginia, Arizona, Nevada, Washington, Maryland, and Colorado were the heaviest users of impact fees. Trying to create a more general framework of analysis, Frank and Downing (1988) found 4 community characteristics that may induce the use of impact fees: (1) a large population base; (2) a community that is experiencing moderate to rapid growth; (3) the community already faces high property taxes; and (4) there is a large capital investment to maintain.

Been (2005) underscores that communities greatly differ with regard to the type or variety of the public improvements financed via impact fees. In 1985, the author argues, fees were most commonly used for sewer and water lines, roads, and parks, with less than 5% of communities using fees for such things as solid waste facilities, police and fire stations, or low-and-moderate-income housing. By contrast, in Florida in 1991, 33% of the communities were

levying impact fees for water and sewer, 20% for parks and recreation facilities, 16% for transportation, 11% for fire and emergency medical services, and 7% for police and correctional services.

- 4.2.2.3 Which are the steps a community needs to take in order to establish exactions/impact fees?

The literature distinguishes between two main phases, namely the design of the ordinance or regulations that allow a municipality to charge impact fees (in this stage the most important dimension is the determination of the actual level of the impact fee) and the actual implementation of the system.

Designing the ordinance

Steward (1988) underscores that every development impact fee ordinance should evolve only after proper studies of growth pressures, research into the financing options for facilities, the equitable allocation of burdens among existing and future residents, and development of an efficient administrative structure. He claims that in order to draft the ordinance a committee would be appointed. Steward identifies three main stages that preclude the adoption of an ordinance that allows municipalities to charge impact fees. As a practitioner Steward provides a colorful picture of how complicated consensus building among developers, municipality, new and old residents can become. The three stages identified by Steward are:

"Hell no, we won't pay ". This phase summarizes the antagonism between municipalities and developers. On the one hand developers wish that municipalities increased general taxes so everybody contributes to the financing of new developments. Governments on the other hand are well aware that in most cases it would be impossible to raise taxes in light of the opposition of existing residents and fear of them moving to the next community.

"Let's study the problem". In this stage all interested stakeholders start gathering evidence regarding how impact fees function in other communities. Policies about what percent of the impact fees should come from development, how fees should rise over time to reflect increasing costs, what to do about fees if outside revenue sources rise or fall more than expected should be determined in this stage. Steward claims that more impact fee proposals will die here than in any other phase or at the ballot box.

"Love it to death". In this stage developers admit that the adoption of impact fee is imminent. Steward underscores that in order for the ordinance to stand any chance of being adopted compromises and concessions to the developers are the key. For example the municipality should establish a transition period under which all the previously approved but not yet built developments wouldn't be charged an impact fee. Also the amount of the impact fee can be less than the expected cost of the new facility. As a concession the municipality will have partially subsidize the cost.

As mentioned before, an important stage in the drafting of the ordinance is the **determination of the impact fee rate/level**. The most important decision a municipality faces refers to whether to price the public infrastructure and utilities at a marginal cost as opposed to an average cost. The average-cost pricing method usually sets a flat connection fee which functions as a subsidy to outlying development because the areas less costly to serve subsidize development in areas that are more expensive to serve (Recht 1988). Been (2005) argues that where public services are subject to congestion- that is, where the last units of service are more expensive to provide than the first, the cost of providing services to new residents may be higher than the cost of providing such services to existing residents. Unless new residents are asked to pay the higher marginal cost of the services they require, rather than the average cost of

providing services to the entire community, they will not bear the full cost of their decision to move to the community.

Auerham (1988) contends that regardless of whether the impact fee system provides for a flat rate or a rate that varies with type and location of land uses, it needs to include policies on how much to charge in unconventional cases. Among the most common of the unconventional situations, Auerham claims, are demolishing a structure and constructing a building on the same site; adding on to an existing structure; adding buildings adjacent to an existing, related use; and constructing facilities whose cost rates are hard to determine (such as an adult congregate living facility or a combination retail outlet and warehouse).

Although the impact fee level greatly varies from one community to the other, various scholars document average state and national levels. For example Miles et al. (2000) cites a national survey done by James Nicholas from University of Florida in 1997. Figure 4.5 summarizes its key findings.

Figure 4.5: National average impact fees by type: 1997

	Single family house (unit)	Multifamily housing (unit)	General industry (1,000 sq f.)	General office (1,000 sq f.)	General retail (1,000 sq f.)
Roads	$1,288	$825	$727	$1,594	$2,423
Parks	966	797	209	209	209
Utilities	829	849	200	306	391
Water and sewer	5,063	4,113	Varies	Varies	Varies
Schools	2,179	1,078	270	270	280
Public facility	251	151	48	118	158
Solid waste	781	923	256	192	385
Public safety	259	235	58	81	200

Libraries	240	147	115	268	161
Total	$11,856	$9118	$1,883+	$3,038+	$4,027+

Implementing the impact fee scheme

Auerhahn (1988) identifies several aspects that are important during the implementation phase of an impact fee scheme. They include:

Collaboration with budget and accounting staff: As a development manager for Broward County, Florida (one of the first counties to adopt impact fees back in the 1970s), Auerhahn remembers that the first mistake made was to establish numerous, development specific, separate accounts for the collected impact fees. As a result the county ended up having to many small accounts that were insufficient to properly finance a large infrastructure project. While legal restrictions apply with regard to how money collected from a development can be used toward the financing of unrelated infrastructure improvements, the city must make sure that other restrictions are not added just because of the way the accounting system or the budget are set up.

Waivers: While flexibility is important, waivers should not be granted except for the circumstances that are clearly specified and defined in the ordinance. Auerhahn underscores that waivers can easily become a major distraction for the staff and the governing body. In addition if the political and administrative environment is corrupt or even perceived as corrupt waivers may be the result of political deals or bribes. The end result could very easily be distrust on the behalf of both residents and developers with regard to the development practices of the local governing body. For example Broward County had at the time Auerhahn wrote the article three categories of development for which impact fees could be waved: public facilities, low- and moderate-income housing, and facilities for higher education.

Enforcement: Auerhahn underscores that enforcement mechanisms are probably the least considered aspect of impact fee administration. He underscores that there are two major factors that need strong enforcement, namely payment on time and appropriate land use. Timely collection of impact fees is guaranteed for example if the payment of the fee is a prerequisite for issuing of the building permit. The second factor occurs if impact fees are assessed against the type of use. Municipalities need to make sure that the developer implements the type of use specified in the building permit.

Data maintenance: A review and update process needs to be conducted at regular intervals. The local governments need to check the data on which it bases the impact fee calculations. It is hard to determine the best interval at which a review has to occur. Auerhahn underscores that certain data may need to be reviewed more frequent than other. The former could include population forecasts and in this case annual updates are recommended; the latter usually includes changes with more drastic effect such as the opening of new major public facilities and in this case more frequent updates may be needed.

All the aforementioned factors can be included under the generic category of administrative factors. Kaiser, Burby, and Moreau (1988) identify 3 groups of administrative factors that determine the overall success in the adoption of an impact fee scheme. First, there must be a need for innovation resulted from a rapid population growth and employment growth and an increasing demand for public facilities. Second, there must be administrative capacity to innovate, meaning that the government structure is able to review, deliberate, and implement an impact fee scheme. Finally, there must be land use and facility planning and coordination capacity because impact fees depend on a comprehensive land use and capital improvement program.

In addition to these administrative concerns, numerous authors also talk about **legal constrains** and **equity concerns** (Miles et al. 2000, Carrion & Libby).

Carrion & Libby point out that an impact fee must meet three constitutional tests. First, the fees must meet a substantive due process test, where the local government has the authority to assess, collect and spend impact fees for a determined public facility. Second, the fee must pass the equal protection test, which means that the fee has to be applied to all parties on the same basis. All new development that imposes an impact must be assessed the same kind of fee, although fees may vary by the magnitude of impacts and the fees must be rationally related to the public purpose. Finally, the "takings" test must assure that the local authority's objective is sufficiently close to the method chosen to accomplish the stated objective and that property is not "taken" without just compensation.

Equity considerations are extremely important as they raise the question of who should pay for infrastructure improvements. From the standpoint of intergenerational equity developers point out that past generations of residents benefited from wide public sharing of infrastructure costs and that many citizens besides those in their projects, including future generations of users, benefit from the improvements (Miles et al. 2000). Another equity concern is raised in relationship to government services traditionally financed on the basis of ability to pay: that is, people who earn more should pay more. Miles et al. (2000) contend for example that elementary and secondary education is normally considered important enough to society as a whole that is finance largely by property tax revenues that reflect levels of personal income. As the authors argue, which capital facilities should be financed in this way and which should be targeted for payment by specific fee represents a continuing issue.

Been (2005) features a very interesting discussion with regard to the fairness of impact fee schemes. This article discusses whether communities use impact fees in order to exclude

poor/low income people or other individuals that are deemed not fit into that community. She claims that evidence regarding whether impact fees in particular are used for exclusionary purposes is conflicting and thin. Been states that a 1989 survey found that jurisdictions did not consider impact fees to be the most effective devices to control growth, and anecdotal evidence suggests that jurisdictions that exclude growth choose instead other techniques such as growth caps or large lot zoning that they believe will be more effective.

- 4.2.2.4 How do they help municipalities control growth?

Impact fees are primarily used in order to shift the costs of paying for public infrastructure and other needed amenities from the public sector to private developers and eventually down to consumers. However by using impact fees current land use and growth patterns can be altered as to achieve a more sustainable, less sprawling development pattern. The planning literature identifies three main aspects of the impact fees that deem them suitable for controlling urban growth (Been 2005, Carrion & Libby).

In the first place the use of impact fees encourages greater efficiency. By forcing the developer and its customers to assume or share in the costs of infrastructure, impact fees may induce more efficient use of the existing infrastructure (Been 2005). Carrion & Libby point out that impact fees might offset many of the subsides of new development that produce a "leapfrog" urban sprawl pattern that allows development to skip over land closer to the urban area. Second, impact fees require the developer and consumers to pay to mitigate the negative effects a development may have on a neighborhood, such as increased traffic congestion, noise, and environmental degradation, impact fees may encourage efficiency by making the developer and its customers internalize the full costs of the harms that the development causes (Been 2005). Carrion & Libby underscore however that impact fees can be used as an instrument to guide development efficiently when they are accompanied by a comprehensive plan and the provision

of infrastructure is phased and budgeted as to respond to needs. If these requirements are met, an impact fee is an effective tool in guaranteeing adequate infrastructure to accommodate and facilitate growth in areas where there is a lack of public facilities, also eliminating substantial infrastructure costs in areas where there is little current development by avoiding a leapfrog urban sprawl pattern. Third, impact fees make possible growth in areas where growth moratoriums would be otherwise imposed. In areas that are growing so rapidly that the government cannot provide public facilities fast enough, exactions enable growth that might otherwise be stalled by growth control measures. Moreover, impact fees may serve to reduce uncertainty about the risks of future growth, thereby enabling more growth by decreasing existing residents' incentives to use growth control or management devices to avoid those risks (Been 2005).

- 4.2.2.5 Are there any unintended effects?

The literature identifies three main type of unintended or additional costs associated with the implementation of an impact fee scheme: (1) additional costs for the city; (2) limited role for planners; and (3) increase in housing prices (perhaps the most well documented impact).

Additional costs for the city

Been (2005) states that in the presence of an impact fee charge, all other conditions being equal, businesses may choose to locate in a community without impact fees thus retarding urban growth. From a regional perspective impact fees are in this context inefficient with regard to growth control because growth is merely exported to the next community that welcomes it. Also, impact fees require local governments to engage in more professional and sophisticated capital facilities planning and that requires additional administrative staff with the necessary skills. Thus, a disadvantage of the impact fee scheme is that it is more complicated and expensive to implement.

Limited role of planners

Connerly (1998) brings up an interesting discussion with regard to the way in which impact fees limit the role planners play in reference to the communities they serve. He states: "On one hand, impact fees permit planners to play an important role in establishing a substantial fiscal base for communities without overburdening current taxpayers. But in fulfilling their roles as important fiscal agents, 'impact fee planners' essentially define the public interest to include only the needs of the community for which they currently work. Such planners therefore eschew a role that seeks to address broader social issues, such as housing inequities, and they thereby reduce planning to a narrow, technical role". His arguments may no longer be true given the recent trend to use policies such as linkage programs to address equity concerns.

Increase in housing prices

The assumption underlying the implementation of an impact fee scheme is that the burden of infrastructure provision is transferred from the municipality to the developer. However, empirical evidence seems to suggest that under certain conditions the cost of infrastructure gets shifted to new residents of the community and that new homebuyers ultimately absorb the cost (Evans-Cowley & Lawhon 2003).

Huffman et al. (1988) conducted a very detailed analysis of housing markets impacts. Their findings suggest that the costs of an impact fees are distributed based on the characteristics of the local/regional real estate markets (supply and demand) (see Figure 4.6).

Figure 4.6: Payment of residential development impact fees

Supply and demand conditions	Result
Buyers are insensitive to price changes and there are no barriers to entry by developers (e.g., smaller, isolated, desirable urban areas like Colorado Springs)	Developers can mark up housing costs by nearly the full cost of the fee plus a factor equivalent to the cost of administering the fee. Buyers pay the largest share of the fee.
Buyers are insensitive to price changes and	Developers will change their market

there are barriers to developer entry (e.g., highly desirable places within larger metropolitan areas like San Jose, California.	orientation to higher income households. Lower- and middle-income households will be squeezed out of the community and into nearby communities that are close substitutes. Buyers pay the largest share of the fee.
Buyers are sensitive to price changes and there are no barriers to entry by developers (the most common situation)	In the short term both buyers and developers share the burden. Unless developers offset their share of the fee by reducing lot or dwelling unit size, quality, and amenities, and by reducing the cost of land purchase, their share of the fee burden will come out of profit. Assuming capital is relatively mobile, developers will exit the market after they have sold their pre-fee inventory. They will reenter the market when demand raises prices to a level that restores profit to its pre-fee level. Thus, in the long term, buyers will pay the largest share of the fee, unless landowners reduce their price.

Source: Huffman et al. (1988)

The authors also underscore that impact fees may affect differently non-residential development. As the authors point out where development and housing linkage impact fees are assessed on non-residential development, especially offices, the fees will push tenants who are sensitive to rising rent levels out of the community and will dissuade prospective tenants from choosing that jurisdiction. The jurisdiction is then denied a certain amount of future economic development.

Nelson (1994) on the other hand cautions us about the dangers of a "one size fits all" approach to the consequences impact fees have on the housing prices. He argues that impact fees are not necessarily bad for low- and moderate-income housing efforts. Impact fees, according to Nelson, work to increase the supply of land by providing the funds needed to expend infrastructure and increase developable land, and therefore if supply meets demand, prices will not rise.

Each community should first conduct a clear assessment of its real estate market before implementing an impact fee scheme, especially if housing affordability is an issue within the community.

4.2.2. 6 Case studies: Impact fees at work

Because of a broad variety of impact fees and calculation formula, this section provides several short case studies that illustrate nonetheless the ways in which impact fees can be used and combined with other growth management policy tools.

An example of a very simple impact fee scheme is the connection fee charged against all new developments, regardless of their location or use. The City of Albuquerque, New Mexico operates a regional water and sewer agency that serves the areas within the city limits as well as areas outside the incorporated limits. A one-time connection fee of $919 is charged for a single-family home. This fee is the same regardless whether the property is inside or outside the city limits. Connection fee revenues are placed in a separate account and used to finance the expansion of the sewer system. Albuquerque can waive connection fees for residents whose income is less than 80 percent of the median income for their family size. This policy is in place to encourage low-income homeowners to connect to the sewer system thereby protecting groundwater. Waivers are limited to the first 100 residents in each year and the applicant must qualify for the program. Similarly, the City of Little Rock, Arkansas, operates a regional water and wastewater agency that serves the city as well as two surrounding suburbs. A sewer connection fee of $100 is charged for new sewer connections from residential dwelling units. This fee is the same in the city limits as well as outside of the city limits. The connection fee revenue is combined with other sewer revenue and used for expenses including new development (Report to Pima County Board of Supervisors on Urban Growth and Development in Eastern Pima County).

Transportation impact fees are another important category of impact fees used by municipalities to address road related issues in the face of ever-decreasing local budgets and state/federal subsidies for roads. Pima County, Arizona has a transportation impact fee in place. The city has struggled for the last 10 years to implement such a policy tool. In 1996 County Board of Supervisors narrowly passed a $1,550-per-house impact fee. This was the culmination of a protracted struggle between developers, county staff and politicians facing re-election. Pima County Administrator Chuck Huckelberry stated at that time: "It's been very slow because the issue is divisive", he said. "We've had a lot of discussion with the industry--more than we would normally have with the industry--and so that process...has kind of been drawn out." The $1,550 figure, significantly lower than the various amounts county staff recommended for different areas of town, has drawn mixed reviews: Some say it represents a start, some say it is a joke, and some say it is s a disaster. The impact fee scheme developed over time includes charges against commercial properties as well. The level of the transportation impact fee is also regularly updated. In November 2005 the Pima County Board of Supervisors voted an increase of $708 in the level of transportation impact fee per home from 3,692 to 4,400. They also intend to bring on the agenda the issue of whether the transportation impact fee level should be the same throughout the whole region (Pima County News November 2005).

San Diego, California features a very interesting example of how a community can integrate impact fees with other more comprehensive growth management efforts. It shows that impact fees can be adopted as a short-term or medium-term policy tool and then integrated into a more comprehensive approach. In the 1970s, San Diego unveiled a growth management strategy to slow growth in the far fringes of the city and to accommodate new development within the urbanized area. An ordinance was adopted in 1970 requiring adequate public facilities concurrent with proposed development; and in 1979 the city adopted a three-tiered planning area: urban,

planned urban, and future urban development. To encourage development in the urban tier, capital improvements are targeted in this area, and development incentives are provided. A very important incentive refers to totally waiving development impact fees. In the planned urban area, impact fees and public facility improvements are required for new development (a "pay as you go" policy). The future urban area is considered a holding zone and is off limits for urban development for a 20year period (the area originally allowed one home per 10 acres). Initially the use of impact fees and waivers in the first tier represented a major success. Two-thirds of the population growth in a five-year period occurred here, and the population growth in the outer area was only one-third of what was originally projected. However in the following years a major limitation with regard to the waiving of impact fees in the most urbanized tier became apparent. As a result of consecutive years of rapid growth, it became clear there was a shortfall of over $1 billion in infrastructure costs within the urban tier. Capital improvements in this area funded from city revenues as opposed to impact fees charged against developers were not able to keep with rapid growth (Report to Pima County Board of Supervisors on Urban Growth and Development in Eastern Pima County).

The City of San Antonio also implements a very interesting impact fee system. It is in fact a combination of onsite and offsite water impact fees and linkage fees. The city has a water and wastewater agency that provides service inside the city limits and outside, up to the Bexar County boundary. A connection fee of $427 is paid within an extraterritorial jurisdiction area (ETJ) and $804 outside the ETJ. The ETJ is an area about five miles beyond the city limit and is about 360 square miles. Developers are required to build on-site sewage improvements as well as off-site sewer improvements. Within the ETJ, the city gives connection fee credits for off-site improvements. Also San Antonio's affordable housing policy is to rebate the water and sewer connection fees for developments where the home sells for $75,000 or less. The homebuilder

must apply for the waiver and must demonstrate that the selling price is within the target. The connection fees can be waived for non-profit organizations and public housing providers. This program applies only within the city's target area. The objective of this program is to increase the number of affordable houses available in the city limits (Report to Pima County Board of Supervisors on Urban Growth and Development in Eastern Pima County).

4.3 Urban growth control matrix

Both urban growth boundaries and impact fees are policy tools that can be used in order to achieve a variety of goals. For example an urban growth boundary can help a municipality to prevent the loss of farmland, protect the orderly transition from urban to rural, encourage infill projects and brownfield redevelopment, or encourage more compact, denser developments. A city must clearly understand which objectives a policy tool can accomplish in reference to fighting urban sprawl and growth control management. Figure 4.7 summarizes growth management objectives that can be achieved by each policy tool.

Figure 4.7: Urban growth control matrix

Policy tool / **Objective**	**Urban Growth Boundaries**			**Impact Fees**		
	YES	NO	Indirectly	YES	NO	Indirectly
Preserve open space and farmland	√					√
Minimize the use of land generally by reducing lot sizes and increasing residential densities	√				√	
Reduce infrastructure costs			√	√		
Clearly separate urban and rural uses	√				√	

Ensure the orderly transition of land from rural to urban uses	√				√	
Promote a sense of unified community			√		√	
Control the quality of development			√		√	
Enforce better design guidelines/aesthetics		√			√	
Integrate equity concerns (affordable housing)			√			√

The matrix shows that urban growth boundaries are more inclusive policy tools than impact fees. UGBs can be tailored as to meet a variety of goals.

Certain prerequisites need to be in place in order for the implementation of UGBs and impact fees to be successful and efficient. Figure 4.8 summarizes these conditions.

Figure 4.8: Prerequisites for the implementation of UGBs and impact fees

Policy tool / **Prerequisite**	**Urban Growth Boundaries**			**Impact Fees**		
	YES	NO	In subsidiary	YES	NO	In subsidiary
Recent land use data and population/growth forecasts	√			√		
Administrative capacity	√			√		
Inter-jurisdictional cooperation	√				√	
Local support (residents, developers, interest groups)	√					√

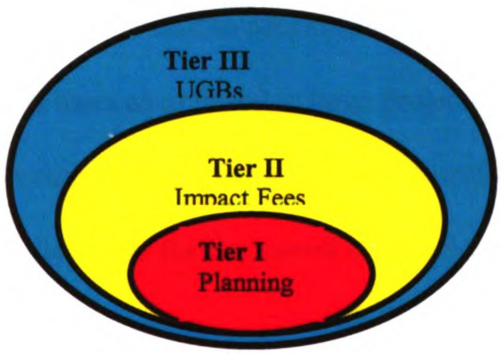
The most notable difference between UGBs and impact fees in terms of necessary prerequisites for implementation refers to inter-jurisdictional cooperation. An UGB is established based on the assumption that in the future the city will grow into the adjacent jurisdictions. If the boundary does not include at least a broader metropolitan region, the whole concept is compromised. Impact fees can benefit from a regional approach. If adjacent jurisdictions all implement impact fees than development will not just simply migrate to the next community that welcomes it. However, as the main goal of impact fee is to shift the share of infrastructure provision from the public sector to developers, unlike UGBs, they can be successfully implemented at the local level as well.

Chapter 5: Policy recommendations

5.1. A three-tier recommendation matrix

There are three tiers of recommendations. Each tier refers to a different timeframe and implies a different level of consensus during the adoption and implementation stage. **Tier I** is short-term, low consensus, **tier II** is medium-term, medium consensus, and **tier III** is long-term, high consensus. The three recommendations can be graphically represented as nested levels, each level building on the successes and progress made during the previous stage (see Figure 5.1).

Figure 5.1: A three-tier recommendation structure



- **Tier I: Planning: Short-term (up to 1 year) and low consensus**

Both the literature review and empirical evidence from the selected case studies suggest that before a community implements any growth management policy a thorough planning process is essential. Planning is defined here as to include two main components: (1) research, and (2) administrative capacity building. The former is important because both UGBs and impact fees are established based on several assumptions about future growth. Unless accurate information is available these policy tools will be ineffective. As mentioned previously the city of Cluj-Napoca has a general plan dating from 1999. As city officials and planners themselves

acknowledge, the data are already out of date mainly because several area plans were adopted in the meanwhile without any amendments being made to the general plan. In terms of research population and growth forecasts for the city and the entire region are needed. Expertise may be a problem in this stage since local administration and planners have not traditionally engaged in the collection and analysis of such data. This report recommends that until research skills are acquired by city staff, major research projects are contracted out.

Capacity building is also an important consideration under tier I recommendations. It is suggested by the literature and practice that the implementation of both UGBs and impact fees requires significant effort on the behalf of local staff. Impact fees especially require a quite complicated collection, accounting, and spending system to be in place. This may prove to be a challenge for the city of Cluj-Napoca. Numerous existing legal provisions are not currently enforced because the city lacks the staff to administer these regulations. In addition, development takes place on a piece meal basis as opposed to large projects under the supervision of one developer or construction company. It is recommended therefore that before the implementation of growth management policy tools the city spend at least 6 to 12 months building administrative capacity.

Tier I is low consensus because the implementing authority (the city itself) carries out most of the process. While input may be sought in the research phase, this effort does not involve building consensus or obtaining support.

- **Tier II: Impact fees: Medium-term (1 to 3 years), medium consensus**

After the planning phase is completed, this documents recommends that an impact fee scheme is designed and implemented. Though not acknowledged by existing legislation, exactions are in place in the form of infrastructure improvements onsite and connection fees for the hookup to the sewer and water networks. This represents an informal practice accepted by

developers because very often this is the only way for the development to be built and be marketable. However, these exactions do not capture the costs that new developments impose on the community as a whole, especially in terms of transportation, open space/parks, and schools. Impact fees are appropriate because they best fit the type of development currently taking place in Romania. While exactions usually apply to subdivisions impact fees are more of a fit for apartment buildings and houses that are built by individual property owners. These are the two most popular form of residential construction currently taking place within the city limits. Impact fees also have the merit that they do not put a cap on growth provided developers are willing to pay them. One of the biggest concerns both developers and city officials have is that the city will be perceived as anti-development. This is a label everybody fears especially in the context in which Cluj-Napoca is faced with fierce competition from other cities in the Transylvania region that seem to threaten its supremacy as the most important economic and cultural center of the region.

Tier II is medium consensus because the establishment of an impact fee scheme is negotiated between the city and the developers. The literature recommends that developers are involved in the design of the scheme from early stages in order to minimize their resistance and to be able to respond to the concerns they might have. It is medium consensus however because it does not involve negotiations among several jurisdictions.

- **Tier III: Urban Growth Boundary: Long-term (3 to 10 years), high consensus**

Once the impact fee scheme is in place and functioning, the next step is the creation of an urban growth boundary. The boundary is justified because most of the suburban development currently taking place is outside the city limits. As the land within the city limits is rapidly vanishing, future growth will migrate further towards the villages in the close proximity of Cluj-Napoca. Therefore a broader policy tool in scope is needed. The boundary should integrate the

impact fee scheme. The literature (see Been 2005) shows that most communities in the U.S. use a combination of tools meant to manage growth.

Tier III is high consensus because it involves a complicated negotiation process among numerous stakeholders. First, the cities and villages that will be encompassed by the boundary need to work together and agree on how the line will be drawn. This is not an easy process as it involves winners and losers. As mentioned before the villages adjoining Cluj-Napoca that have experienced the most significant growth already voted against the creation of a metropolitan area. More negotiation is needed in order to re-launch the creation of the metropolitan area project that is a necessary precondition for the creation of an urban growth boundary. Inside each jurisdiction negotiations with developers and other interest groups are also important. The central government may be an important part of this negotiation process. It could use either the carrot (incentives) or the stick (penalties) in order to get all the relevant stakeholders to at least consider the possibility of creating the UGB.

5.2 General recommendations

Growth management tools are sometimes believed to generate unintended, negative effects. Before they are implemented the city of Cluj-Napoca should closely assess the local context to determine whether such effects might occur. The most well documented negative consequence of both urban growth boundaries and impact fees refers to a shortage of affordable housing. More broadly increases in the median price of both housing and land may result. In desirable markets, builders tend to respond to high impact fees or other costs associated with regulations by ignoring lower-income households and focusing on more expensive housing. In these cases the costs can be more easily passed on to homebuyers and/or landlords (Evans-Cowley & Lawhon 2003). Cluj-Napoca currently features one of the most expensive (if not the most expensive) real estate markets in the country. Both affordability and availability of housing

are major issues. Attention should be paid to this specific context so that growth management policies do not exacerbate these existing problems.

Cluj-Napoca is also already faced with overcrowding and high traffic volumes, both pedestrian and vehicular in the downtown section. By overemphasizing growth in these areas existing conditions may worsen.

Finally, city officials should keep in mind that the discussed policy tools have the power to mainly control the quantity and location of growth. They do not address any concerns the city may have with regard to the quality of the new development. By quality it is meant a certain design or architectural style that is compatible with the already existing neighborhoods or, in the case of downtown projects, with the historical features the downtown has. If such concerns are to be addressed a completely different set of tools should be used. It may include: design guidelines, historic preservation, building codes and zoning ordinances, planned unit developments, etc.

5.3 Specific recommendations for the implementation of each policy tool discussed

5.3.1 Urban Growth Boundaries

- The creation of an urban growth boundary would help the city of Cluj-Napoca accomplish the following goals: (1) channel growth into areas that have already started to develop and that are serviced by public utilities; (2) create a more orderly transition from urban to rural land uses/spaces; (3) set aside land for future development; and (4) implement a cohesive planning vision for the whole metropolitan area.
- Establish the metropolitan area. The UGB implies inter-jurisdictional cooperation and governance. Unless the Cluj metropolitan region/area is created, establishing an UGB will not be effective. An UGB constitutes an urban growth control policy tool that affects more than just one community. The authority 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.

- Create a metropolitan government or agency that is responsible for all the land use planning at the metropolitan level and that coordinates the planning process at the level of the communities that form the metropolitan government.
- Create a mechanism that will allow for the boundary to be reviewed on a regularly basis. This is important in the Romanian context that is characterized by rapid, significant changes that affect urban growth patterns.
- Do not create waivers, or specify clear, objective conditions that would justify the granting of a waiver. The logic behind this recommendation is to create a stable environment for real estate investors and to discourage land speculations. This is extremely important in the context of the local public administration that is already confronted with weak enforcement of legal provisions and is plagued by corruption.
- 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 boundary limits.

5.3.2 Impact fees

- The establishment of an impact fee scheme would help the city of Cluj-Napoca accomplish the following goals: (1) reduce fiscal stringencies; (2) make developers pay for the costs the new development imposes on the community; (3) make sure that growth is not hindered by the inability of the city to finance the needed infrastructure.

- Based on the challenges the city is confronted with, the impact fees, at least in the first stages, should target: (1) roads, (2) water and sewage, (3) open space/parks, and (4) schools. Impact fees that try to mitigate the effects new development has on the school system would be perhaps the most difficult to implement. There is almost no link between the place of residence and the location of schools. In other words the students living in a new development may be enrolled in schools scattered throughout the city. Though in the US most impact fees cannot be used to finance projects that are located further than a certain mile radius (1 to 4 miles generally), in the case of school impact fees the city of Cluj-Napoca may establish a different system for the spending of revenues generated by impact fees.
- The level of impact fees to be charged should be clearly specified in local ordinances. In the U.S., the literature emphasizes that in numerous cases impact fees are determined as the result of a negotiation process between the municipality and the developers. Though such a process may feature important merits, Cluj-Napoca should avoid such a system. Local public administration has a high level of corruptions and local officials have their political clienteles, many of whom are developers. Citizens do not trust their local public administration. Therefore a negotiation between the municipality and the local developers would be perceived as bargaining or not in the public interest.
- Make sure that the city is able to build in a timely manner the infrastructure that has been paid for by developers with the impact fee. The City of Cluj-Napoca has a bad reputation with regard to overly prolonging the building or the updating of infrastructure projects for long periods of time. In many cases the city has contracted out the construction services, however the contractors did not comply with all the requirements and deadlines specified in the contract. The city needs to make sure that an expedited procedure for contracting

out of the infrastructure projects paid for with impact fee revenues is in place. Higher sanctions for the contractors need to be built into the contracts and enforcement of sanctions for lack of compliance and unjustified delays should be strong.

References

- **Books and journal articles**

Auerhahn, E. (1988), "Implementing an Impact Fee System: Ten Years of Experience", *Journal of the American Planning Association*, 54/1;

Barnes, K. M., Morgan, J.M, Roberge, M.C., and Lowe, S. (2001) *Sprawl development: Its patterns, consequences, and measurement*, Center for Geographic Information Sciences, Towson University;

Bauman, G., and Ethier, W. H. (1987), "Development exactions and impact fees: A survey of American practice", *Law & Contemporary problems*, 91;

Been, V. (2005), "Impact fees and housing affordability", *Cityscape: A Journal of Policy Development and Research*, US Department of Housing and Urban Development, Office of Policy Development and Research;

Bothwell, J. and Merrill, S. (*2005*), *Regulation and Supervision of Mortgage Lending in Emerging Markets: An Assessment in Bulgaria and Romania,* The Urban Institute, Washington DC;

Carrion, C., and Libby, L. W., *Development impact fees: A primer*, Ohio State University, Working Papers, available on line at http://www-agecon.ag.ohio-state.edu/resources/docs/pdf/910676B4-2A3C-408B-B6CB09223CBC2EA7.pdf;

Chapman, N. and Lund, H. (2004), *Housing density and livability in Portland.* In Ozava, C.P. (editor), "The Portland Edge: Challenges and successes in growing communities", Island Press;

Connerly, Ch. E. (1988), "The social implications of impact fees", *Journal of the American Planning Association*, 54/1;

Duaney A., Plater-Zyberk, E., and Speck, J. (2000) *Suburban nation: the rise of sprawl and the decline of the American Dream*, New York: North Point Press;

Evans-Cowley, J. S., and Lawhon, L. L. (2003), "The effects of impact fees on the price of housing and land: A literature review", *Journal of Planning Literature*, vol. 17. No. 3;

Frank, J. E., and Downing, P. B. (1988), "Patterns of Impact Fee Use", in Development Impact Fees: Policy Rationale, Practice, Theory, and Issues, edited by Arthur C. Nelson. Chicago: Planners Press, American planning Association, 3-21

Gillham, O. (2002), *The limitless city: a primer on the urban sprawl debate*; aerial photographs by Alex S. MacLean, Washington, DC: Island Press;

Glaab, C. N., and Brown, T. A. (1973), *A history of urban America,* The Macmillan Company, New York;

Hamlin, R.E., (2002), *Public-private partnership for inner-city redevelopment*, IPPSR, Michigan State University;

Howe, D. (2004), *The reality of Portland's housing market,* In Ozava, C.P. (editor), "The Portland Edge: Challenges and successes in growing communities", Island Press;

Huffman, F. E. (1988), "Who bears the burden of development impact fees?" *Journal of the American Planning Association*, 54/1;

Kaiser, E. J., Burby, R. J., and Moreau, D. H. (1988), "Local governments' use of water and sewar impact fees and related policies: Current practice in the Southeast", in *Development impact fees: Rationale, practice, theory, and issues*, edited by A. C. Nelson, Chicago: Planners Press, American Planning Association;

Kolakowski, K., Machemer, P.L., Thomas, J.M., Hamlin, R.E. (2000), *Urban Growth Boundaries: A policy brief for Michigan Legislature*, IPPSR, Michigan State University;

Levy, J. M. (2003), *Contemporary urban planning,* 6th edition, Prentice Hall: New Jersey;

Mayer, H. and Provo, J. (2004), *The Portland Edge in Context.* In Ozava, C.P. (editor), "The Portland Edge: Challenges and successes in growing communities", Island Press;

Merrill, S., Katsura, H., and Rabenhorst, C. (1999), *The prospects for housing finance in Romania,* The Urban Institute, Washington DC;

Miles, M. E., Berens, G., and Weiss, M. A. (2000), Real estate development: Principles and process, 3rd edition, Washington DC, Urban Land Institute;

McKelvey, B. (1963), *The urbanization of America*, Rutgers University Press, New Brunswick, NJ;

Minea, E. M. (2003) *Amenajarea teritoriului: Urbanism,* Editura Accent, Cluj Napoca;

Neamtu, B. (2003) "A case study: A policy perspective on East Lansing's redevelopment agenda" *Revista Transilvana de Stiinte Administrative*, Cluj Napoca, nr.2 (10);

O'Toole, R. (2004), "A Portlander's view of smart growth", *The Review of Austrian Economics*, 17:2/3;

Seltzer, E. (2004), *It's not an experiment: Regional planning at Metro, 1990 to the present.* In Ozava, C.P. (editor), "The Portland Edge: Challenges and successes in growing communities", Island Press;

Staley, S. R., Edgens, J. G., and Mildner, G. C. S. (1999), *A Line in the Land: Urban-growth Boundaries, Smart Growth, and Housing Affordability*, Policy Study No. 263, Los Angeles: Reason Public Policy Institute;

Stewart, H. A. (1988), "So you want to Adopt Development Impact Fee Ordinance", *Journal of the American Planning Association*, 54/1;
Veress, E. (1999), "De/Re-Taranizare in Romania dupa 1989", *Sociologie Romaneasca*, nr. 3;

*** United Nations Population Division (2001), data base available online at http://www.un.org/esa/population/unpop.htm;

*** United Nations Environment Program, GEO: Global Environment Outlook 3, Urban Areas: Europe, available online at http://www.grida.no/geo/geo3/english/420.htm;

*** European Federation For Transport and Environment, Country Fact Sheet, March 2004;

*** Housing stock and construction, Romania, available on line at http://www.unece.org/env/hs/prgm/cph/romania/2chapter2.pdf

*** Greenbelt Alliance, *Urban Growth Boundaries: A new planning solution in California to stop urban sprawl, protect open space and strengthen our neighborhoods and cities*, available on line at http://www.greenbelt.org/downloads/about/ugb.pdf, accessed March 15th, 2006;

*** Proiect planificare strategica Municipiul Cluj Napoca (Analiza preliminara), available on line at http://www.primariaclujnapoca.ro/proiect_planificare.aspx, accessed March 15th, 2006;

*** Mediu: Cluj-Napoca, 2005, available on line at http://www.primariaclujnapoca.ro/proiecte-dezbateri/Politici_comunitare_de_mediu.pdf, accessed March 15th, 2006.

- **On line resources**

Wikipedia/ Romanian, available on line at http://ro.wikipedia.org/wiki/Jude%C5%A3ele_Rom%C3%A2niei, accessed March 15th, 2006;

Wikepidia/ English /Cluj-Napoca/ History available online at http://en.wikipedia.org/wiki/Cluj_Napoca#History, accessed March 15th, 2006;

Cluj-Napoca City Hall, Maps, available on line at http://www.map2web.cc/map4/index.php?fdimx=6&fdimy=4&fpnr=230&PHPSESSID=d6ac5c4715e43a90b821a0af61ee928e, accessed March 15th, 2006;

Official census data available on line at www.recensamant.ro, accessed March 15th, 2006;

Monitorul de Cluj, July 9th 2005, *Haos urbanistic in cartierele Clujului (C.S.).*

Adevarul, June 12th 2004, available online at http://www.adevarulonline.ro;

http://www.uoregon.edu/~pppm/landuse/UGB.html, accessed March 15th, 2006;

http://smartgrowth.org/about/default.asp, accessed March 15th, 2006;

www.conservationeconomy.net, accessed March 15th, 2006;

Oregon Department of Land Conservation and Development 2006, Measure 37, available on line at http://www.lcd.state.or.us/LCD/measure37.shtml#Supreme_Court_Reinstates_Measure_37__Decision_Effective_March_13, accessed March 15th, 2006