# IUP concept applied to Avoid Urban Chaos in Prishtina

**Written by: M Sc Ferhat H. Bejtullahu – Architect**

**Construction Company "T R E G T I A"** http://www.tregtia.net/

**University for Business and Technology** http://www.ubt-uni.net/old/?lang=en

**June 2011**

**M. Sc. Ferhat Bejtullahu Architect** http://artarch.50megs.com

**Education:**

| | |
|---|---|
| *Institution* | Faculty for Architecture, **University of Prishtina**, Kosovo |
| *Date from - date to* | September 1979 – 25 June 1986 |
| *Degree obtained:* | **Dipl. Ing. Arch**.<br>GRADUATED ENGINEER OF ARCHITECTURE |

| | |
|---|---|
| *Institution:* | **University for Business and Technology, UBT Kosovo** |
| *Date from - date to* | December 2007 – 01 July 2011 |
| *Degree obtained:* | **MASTER OF SCIENCE** (MSc) IN<br>ARCHITECTURE AND SPATIAL PLANNING |

Thesis topic: Avoiding Urban Chaos in Prishtina – presentation

**Trainings:**

| | |
|---|---|
| *Type of Training:* | **Integrated Urban Planning**<br>Advanced International Training Programme (ITP) |
| *Date and Place* | September 2009, SWEDEN and February 2010 KENYA |
| *Type of Training:* | **"Opportunities and Challenges for the Kosovo Construction Industry"** organized by USAID |
| *Date and Place* | May, 2010, Prishtina, Republic of Kosovo |
| *Type of Training:* | **Local Environmental Management in Urban Areas**<br>Advanced International Training Programme |
| *Date and Place* | September 2010, SWEDEN and - March 2011 in Macedonia |

**List of publications:**

1. "Application of Design and Construction Standards – Chaos Prevention,"

Ferhat Bejtullahu & Besa Jagxhiu (Presented at International Scientific Conference in Architecture and Spatial Planning:"International Experiences and Challenges in Kosova", University of Business and Technology, Prishtina, Kosovo, 26 June 2008)

2. "Role of Codes for Sustainable Assessment of Constructions"

Violeta Nushi & Ferhat Bejtullahu (Presented at the International Conference "Sustainability of Constructions - Towards a better built Environment", University of Innsbruck – Austria 03rd – 05th February 2011).

3. "Sustainable construction - ecological efficiency of contemporary multi-storey concrete buildings v. s. timber buildings"

Nushi Violeta | Jakupi Enis, Bejtullahu Ferhat (Presented at 14th International Symposium of MASE-Struga, Macedonia 28.9-1.10.2011)

Working: Design Office Manager (10 engineers) at Construction Company "TREGTIA" http://www.tregtia.net/

## Introduction

**Overall aim of the report** is to give wider access to the experiences gained through implementation of the lessons learned during the international training programmes and in particular the application of the IUP concept during daily work and implementations on policy and institutional development in Prishtina-Kosovo.

To describe application of the IUP concept and the implementation the report is organized in following main features:

1. **Background**
2. **Objectives**
3. **Process**
4. **Results**
5. **Conclusions**

## 1. Background

As an architect and urban planner with excellent qualifications, trainings and a strong desire to excel in this profession I have participated in international trainings organized by Swedish Government (SIDA) with innovative inclusive planning approaches and modern planning techniques (community visioning) during:

- SIDA's International Training Programme on **Integrated Urban Planning**.

Prishtina, the capital city of the newly independent state of Kosovo[1] is Kosovo's wealthiest municipality, has grown from a small trading town. This growth and the preceding two decades of economic and political change and conflict have impacted upon the achievement of the city's Strategic Plans. Moreover, there is a lack of capacity in terms of qualified and experienced Kosovar Urban Planners.

It was noted in a recent ESI report[2] that illegal construction is rampant. Buildings are constructed without regard to safety standards, and unplanned housing settlements and commercial developments place major strain on infrastructure.

The city's historical centre has been filled with new, high-rise construction. Infrastructure is deteriorating: water cuts are frequent, the road network is barely maintained, and the sewage system is deteriorating. Public spaces, parks and markets are falling into disrepair. Municipal services are unreliable. In winter, ice accumulates in the streets, posing a threat to public safety, while in summer garbage builds up in public spaces.

There is a need to reduce Urban Chaos as result of fast and incompetent urbanization process also reduce urban sprawl – as unstructured and uncontrolled expansion of urban areas; caused by little planning and market forces.

[1] Kosovo unilaterally declared independence on 17th February 2008
[2] "Utopian Visions - Governance failures in Kosovo's capital" European Stability Initiative Discussion paper, Prishtina, 8 June 2006

Analyses of planning and real situation in Prishtina are analysed in two periods:
-Planning and structural relationship before war in year 1999
-Planning and structural relationship after war in year 1999

Cities are now recognized as being one of the major challenges in the transition towards a sustainable world. The structural development of Prishtina happened as an evolution of anonymous urban fabric, created by the often uncelebrated architect or builder. For the period of the past few years, Prishtina once again has entered a new phase of drastic change. The city has been growing and expanding at an unprecedented rate. Monitoring this new wave of growth is probably beyond the capacity of any single individual, and while drawing a mental map of Prishtina became a very difficult exercise

### 1.1 Urban planning

A starting point of urban chaos would be the inherited urban planning problems from the previous un-democratic systems. The today's spatial planning process in Kosova contains the following problems:

There is also lack of following and implementing legal acts and administrative guidelines. The procedures for approving plans and construction permits are uncertain and generally not followed. Implementation of the urban plan is done without previously planning or considering the appropriate infrastructure i.e. road infrastructure, water-supply, sewerage, electric power, etc.

The community is often not incorporated on time, and the inadequate work done in informing stakeholders about urban planning has led to constructing various regulation plans that are not in harmony with citizens' needs. An example would be the regulatory plans for parts of Prishtina which were expected to contain 30 % - 70 % business buildings, when the needs are obviously less.

The lack of clear national standards for public services which should be achieved by local governments, raise the need for the community along with the local governments (Prishtina Municipality Council) to create a system of urban maintenance which would have the adequate resources, organization structures and offer valuable services to the citizens.

### 1.2 Capacity Building

The ability of communities to recover from disasters is determined by a whole range of factors. However, central to the success of any disaster response is a community's management capacity, based on its available resource capital, and its ability to effectively mobilize such capital to maximum effect (Bryson and Crosby, 1992).

### 1.3 Collective Residential Buildings with Commercial floor

There is too little attention given to the application of design codes and construction standards for "low-energy buildings" here in Kosova, especially to the standards of "passive objects" which are present in Europe. This way, too little is done about energy efficiency and application of isolating materials and ventilating facades. Not enough emphasis is put on using renewable energy. In addition, very little attention is given to the orientation of the buildings.

No optimal, eco-friendly and recyclable materials are used. Furthermore, locally produced materials are not used, and are substituted with imported uncontrolled materials from other countries with dubious origin.

## 2. Objectives

The objectives of this report are

- to provide documentation of the results of the Integrated Urban Planning training programme;
- to promote the development of the IUP concept in Prishtina - Kosovo;
- to promote the application of the IUP concept in a wider field;
- to share knowledge and experiences about integrated urban planning;

My intention is to include reports regarding the implementation of the project works initiated by me, experiences during the process and recommendations regarding the continuation.

## 3. Process

To apply IUP concept and make my contribution in reducing urban more effective it was necessary to identify urbanizing processes and planning models generated during urban growth of Prishtina. Identification of models and suggested solutions (strategy) is performed based on the processes, all processes ranged as: strategic, main – key processes and support processes.

Before and after the war (1999 year) process of planning, projecting and constructing the buildings is done without incorporating them in the existent area. In addition, this is done without the appropriate support of infrastructure and with tendency to destroy old structures.

Emergent trends cannot be isolated from the historical perspective, and most new trends originate from past practices and models. It is necessary to define the periods in the history of Kosovo that were of significance to the development of urban planning, and also defining the models and practices of urban planning related to them. From this research three categories originating models of planning can be identified as "colonial planning, modern planning, and post-modern planning."

### 3.1 The first planning model

The first is period of late-Ottoman rule in Kosovo. The second is the period of the Serb rules in Kosovo. The Ottomans were responsible for much of the early modernization in Prishtina, which can be describe as an effort of "used modernization." In that period of Ottoman control over the Balkan, planning models were mostly Western ones that were first applied to Istanbul, and then to the different provincial capitals of the Ottoman state. Prishtina had acquired the status of a provincial Ottoman city during the second half of the nineteenth century. In this context, Ottoman reform program known as the "Tanzeemat" was applied to Prishtina partly through modernizing the city's building regulations and upgrading its infrastructure. From a city planning perspective, the town was organized around the old bazaar's nucleus, created in the last century of Ottoman rule, with the residential area principally expanding along the north and the east.

### 3.2 Second planning model during the Serb Mandate

The Serb superimposed a model consisting of wide boulevards intersecting at monumental squares over the city's medieval fabric, which already had been partially razed during the late-Ottoman period. Unlike other examples of colonial planning in the region, where a dual city model was used and the old city was left intact and the new sections were constructed adjacent to the old ones, in the case of Prishtina, colonial planning proceeded by superimposition instead of juxtaposition.

A remarkable impact on the transformation of the urban and architecture of Prishtina had the Yugoslav architects. In the following period, before and during the Italian occupation, some of the most remarkable buildings in Prishtina landscape were constructed, such as the wide boulevard in the direction north-south, the square at the city centre accompanied by the group of buildings for the ministries. This was achieved through three consecutive regulatory plans and a master plan. While the foundations of urban planning in Prishtina start consolidated, it became an attractive place for the Yugoslav architects to experiment their ideas about the future landscape of the city. At the end of the perpetual process of substantial urban transformations Prishtina appeared dressed in a new image with refreshed historical figures and heroes, a promoted glorious history and re-shaped past. The regime reconstructed its own city centre as to announce the subordination of citizens to the imminent glorification of culture and art in the poor capital city. By re-writing the national history and repositioning the national leaders, communist policies had a direct impact on legitimizing Prishtina from an artificially created capital city as one may call, to a historic city. This was specially designed for the purpose of historic continuity with the imaginative past. The socialist ideology emphasized the political and cultural role of the capital city and city centres at the expense of commerce, regulation of city size, prominence of urban historic heritage, and else (Fisher, 1962: 5)

Analysis of the connections between urban design and historical social development of Prishtina can outline new planning tendencies: a city of the future – but more specifically, a city of the communist future. Consequently the medieval fabric found in Prishtina had disappeared to be replaced with the colonial early modern Prishtina.

### 3.3 Colonial planning and contemporary trends

Since the 1974s, a new group of planners has emerged in Kosovo, and these planners have begun to seriously investigate the issue of colonial planning. They are studying developments that took place in the early twentieth century in order to understand the evolution of the city of Prishtina today. Planners have adopted what can be referred to as a "new historical consciousness," which departs from old methodologies that were limited to studying the effects of the physical aspects of colonial planning on the city's contemporary planning. Consequently, they concentrate on examining the ideologies underlying colonial planning as well as the processes that define it. Such a change in the perspective of planning is due to the fact that the modernist approach to planning, which revolved around the actions of the public sector, began to be questioned, and even disqualified.

A high migration rate from the rural areas to the city took place with a significant concentration in Prishtina and its suburbs. Those developments during the last decade of 20 –the century contribute to urban sprawl growing every day.

"…market, policy and personal choices support conventional development or sprawl because resources are relatively plentiful and no one is advocating for society's needs.
Individual maximization is not societal maximization, and in the short run individual Maximization involves bearable negative social costs." Burchell and Mukherji (2003: 1535)

Furthermore, sprawl development is now perceived as contributing to significant fiscal costs for infrastructure providers such as local government (Burchell and Mukherji, 2003),

The sporadic development of houses in considered nominal was rapidly transformed into massive illegal settlements asserting the failure of state institutions to control the urban planning, to precede the urbanization process and to formulate clear housing development policies. There was a general perception that the only way of building a house was to do it illegally.
Burchell and Mukherji (2003) explain that urban sprawl has allowed people to gain access to less expensive, single family homes on large lots situated away from urban centres rife with crime and poverty, while still allowing residents great freedom of movement, as the vast highway systems have been built to accommodate their automobiles.

However, the failure of the state institutions to take their responsibilities resulted in a very problematic environment created by illegal constructions.

### 3.4 Post-war period

New planning trends evolved in Prishtina during this period. "Corporate planning," in which one real estate company is fully responsible for rehabilitation and redevelopment works, was carried out for the first time in Prishtina in the reconstruction of the city's Suburban neighbourhood centres are slowly vanishing, due to the development of large shopping malls at the expressway junctions. With less trust in urban planning, the most influential public land use intervention today is the investment in new roads. These roads are typically built as by-passes, but once in place they attract industrial developments and big box retailers, thus draining existing urban areas of services and capital and contributing to a never-ceasing urban dispersal (Nyström 1997:28).

Generally it has been very difficult to successfully implement planning models in Prishtina. There has been a profound reluctance among the inhabitants of Prishtina to accept planning models in the different periods of the city's modern history, a phenomenon that mainly can be attributed to the city's mercantile-sectarian underlying order. This has resulted in a situation of "planning chaos" in Prishtina and also in Kosovo, and this difficulty in the implementation of planning rules and regulations in the specific socioeconomic context of Prishtina is one of the main issues that are explored in this research.

## 4. Results

To illustrate my role and the role of my organisation and the planning system in urbanizing process it is necessary to present results of IUP concept applied in some cases and first effects arising from applied concepts. This will help to predict future results of developments based on suggested strategies. I will compare conditions in the urban planning during project development time with effects on today developments. Comparison is done in same aspects as it was proposed as solutions.

### 4.1 Social - Integrated strategies to build competent institutions

The role of politics, economics and social change upon Urban Planning is essential and must be integrated into any sustainable approach to a solution. Examining issues such as increased public participation in urban planning and development and improved environmental, economic, social and cultural sustainability and strengthening of the institutional infrastructure. Institutionalizing the new approach involves consolidation of the procedures and practices over the long term (Ludeking, 2004).

Too many of its residents engage in various sorts of negative behavioural patterns, whether carelessly putting their household garbage along the street, littering their surroundings, listening to music at blaring volumes, or driving recklessly through the city's streets.

To a certain level, these problems may be addressed through higher levels of diligence in implementing and enforcing existing regulations. However, while the relevant authorities need to carry out their duties as efficiently and effectively as possible, residents also need to assume their share of responsibility. Community-based neighbourhood associations can function as an important vehicle that allows this to happen. They can address all sorts of issues including public cleanliness, traffic, urban beautification, as well as opening communication links and establishing dialogue with municipal authorities. In other words, the top–down and bottom–up approaches both need to come together. One hand cannot clap.

The urban situation in Prishtina features a highly bureaucratic municipal structure that the average resident too often perceives as forbidding and unreachable, except possibly through that infamous system of familial and social contacts as well as socio-economic greasing agent. At the same time, that average resident often treats the city, including the immediate neighbourhood in which he or she lives, with indifference, detachment, and neglect.

Another issue is the role that international and national non-governmental organizations (NGOs) can play in developing participatory planning approaches within a context such as that of Prishtina. Some international NGOs are training civil agencies in Kosovo in participatory rapid appraisal approaches that aim at effectively involving local communities in the developmental process. A number of those NGOs also have ties with the main public sector organization involved in housing issues, and have trained employees of the public sector in participatory approaches. Another level of participatory planning that is being applied in Kosovo is the community consultation process, which is being investigated by the United Nations Development Program (UNDP). Prishtina therefore seems to be at a very appropriate juncture for initiating serious efforts through which the municipal leadership and various community development organizations join forces and go on board upon putting in place mechanisms of integrated planning, that enable the formation of neighbourhood-based community organizations devoted to improving the quality of the city's urban life. With this, a much-needed bottom–up approach to urban development can come into being, linking up with, complementing, and engaging the already-existing top–down urban management structures.

Tolerance is a mark of civilized society. At the same time, a civilized society needs to adopt a clear policy of zero tolerance regarding the actions that threaten it and its values. It is time that the concept of zero tolerance towards violations of civilized daily behaviour in the city is put into effect. This may be easier said than done, but if Prishtina is to be an agreeable and liveable city, and not degenerate into a polluted, congested, dirty, and noisy metropolis where aggressive and rude behaviour prevail; there really isn't much of a choice.

Today developing connecting-transit zones enabled creating both open and controlled cities, thus avoiding the pressure of the urban chaos. New centres will no longer be considered as

peripheral satellites of a greater core, but as urban centres that play the well-defined role of a coordinator (Lipjan – airport city).

### 4.2 Spatial - Transit Town

Prishtina is a growing city that can avoid urban chaos and reduce urban sprawl with strategies that focus on the transit towns with greatest potential such as Fushe Kosova and Lipjan. These satellite towns can be used to release the energy of development. (Spatial aspect)

The success or failure of managing change affecting a city greatly depends on the reactions of its residents to change. Change often is imposed by external factors, and not usually initiated by those it affects, let alone embraced by them. This applies to all societies, but more so to those for which change has not been institutionalized and built into their political and cultural systems.

Another example is that of traffic. If a new traffic artery is built that provides an easier and more direct link between a central and suburban part of the city, most residents will welcome it as this is an "easy" type of change. To take this a step further, if there is increased diligence in enforcing parking and traffic violations in a systematic, across-the-board manner, residents also will grudgingly accept it, even though this will require changes in driving behaviours. As with the implementation of anti-littering regulations above, such change already has been mentally internalized as these driving regulations have existed for some time, and are intended to promote public safety.

There also are unique conditions when people readily and fully accept change. This is when a "tipping point" is reached. One scenario for reaching it is when the status quo becomes so intolerable that an overwhelming consensus, if not demand, emerges for change.

Change continuously affects cities whether we want it or not. The residents and authorities of a city will have to deal with it, but ideally should do so proactively rather than reactively. As city authorities manage change, the reaction for many residents is to resist any changes that affect their daily routines or require additional effort even though the changes very well may positively impact their daily lives. The authorities are not in an enviable position here Prishtina has an abundance of empty plots. As a result of the current building boom, we have reduced number of empty plots but still not enough.

Main characteristic of the cities in Kosova is their growth. The growth of Prishtina is great. What used to be a small town of about 2000 people in the early 1920s, today is a metropolis of 0.5 million inhabitants. The continuous expansion of the area of Prishtina and the population growth has been highlighted by drastic growth spurts that have transformed the look and feel of the city, how people interact with it, and its connections with the outside world, both regionally and internationally.

The transformations that affected the city as a result of this development were extensive. Prishtina consequently came to provide its residents with a diversity of products and services not available before.

On the physical level, one of the most striking changes that took place in Prishtina then was the increase of apartment buildings. Such buildings of four stories usually house a minimum of 12 living units, in contrast to the previously predominant housing type, which consisted of a single-family house that often would be expanded with time through the addition of one or two housing units on top of it. Considering the rising demand for housing and the increase in land prices, the higher density apartment building, which zoning regulations allow in most parts of the city, made more economic sense for developers and investors than the single-family expandable house.

New construction in many residential areas of the city consequently consisted almost exclusively of apartment buildings rather than single-family houses. In Melbourne, 'high-density residential housing has become a legitimized response to concerns about increasing urban sprawl. As such, high-rise housing fits neatly into urban consolidation models and is now considered to be integral to the production of economically sustainable cities' (Costello, 2005: 50).

Ideally, the subdividing of new plots in an urban centre should take place in a gradual manner. As the population of the city grows and a need arises for more buildings, new areas would be subdivided to accommodate that need. Planning authorities also would put in place long-term strategies that define the directions of physical growth for the city, and identify areas to be subdivided in the future for residential, commercial, cultural, recreational, office, or industrial purposes. Accordingly, the physical expansion of a given urban centre would be brought under control and kept in tune with the growth of its population and economic activities.

In Prishtina, the subdivision of plots has followed a different path. Although Prishtina is a city that has experienced tremendous growth, the subdividing of land in the city, especially since the 1970s, has taken place at a highly rapid rate that has surpassed its rate of growth. As a result, most of the areas of Prishtina located outside its boundaries from the 1960s have an abundance of empty plots.

Such a ubiquity of empty plots is not healthy. Infrastructure services need to be provided for underutilized areas. Moreover, these empty plots often end up as dumping grounds for the neighbours, who use them to get rid of garbage and even construction debris. In short, these empty urban plots provide for an inefficient use of land, and are eye soars in the city.

How did such a situation come into being? It is partly a result of accumulative inefficient planning decisions. Another reason is related to the fact that a number of the plots have multiple owners who inherited them from what originally was a single owner. When the inheritors are unable to agree on what to do with these plots, they are left as is, neither built upon nor sold to someone who would build on them.

The advantages of this concept are:

- It is more sustainable, creates a balance with the tradition leading to a sustainable community
- Makes the usage of surfaces, resources and energy more efficient
- Helps in protecting the open spaces and residences, which leads to maintaining a balance with nature; creating a sustainable environment
- Results in a lower consumption of energy (fuel, oil and gas), as a result of reduction in dependence from foreign energy
- Reduces the usage of automobiles/vehicles; less driving means less pollution
- Encourages walking on foot, which in turn will increase frequentation of local businesses; also less time spent driving means more time to spend with family and friends
- Future increase in revenue will enable the community to decrease tariffs and taxes
- Increases the value of land and rent, which leads to increasing amounts of rent revenue
- Height and density would bring profits to communities
- Promotes a healthier lifestyle
- Neighbourhoods will be safer because there are more people on the street which decreases the level of crime

**Case of IUP concepts applied in urban development in city scale**

***Satellite town1- Fushë Kosovë.***

Example of applied IUP concept is planed of residential high density urban blocks in this transit town near to Prishtina. Important objective of this solution is to maintain and increase the environmental values that are currently available in Fushë Kosovë (Picture1) by creating sustainable balance between built and green areas. Construction of these blocks will achieve a high rate of population density per hectare and have seen as necessary infrastructure (water, sewer, electric heating, etc.) with optimal capacities. At the same time provided high green standard (which is absent in the location in question) which in addition to positive impacts on air will also be used as a decorative element creating are:

-Establishment of environmental values that are currently available in Kosovo Polje be provided by these properties (assets)

• Furnishings (mobile) for squares
• trails, paths and access supplier • Furnishings (mobile) site toy for children
• Furnishings (mobile) lighting for parks and sports grounds
• Fontana, springs and other equipment for enrichment facilities open water
• Monuments
• Inscriptions


*Picture 1 Satellite town1- Fushë Kosovë.*

An effective public transportation system provides the inhabitants of the city with access to its various areas. It allows access for people who cannot drive those known as the "transportation disadvantaged": the under-aged, the elderly, those who cannot afford a car or taxi, those with physical impairments. There also are people who simply prefer not to drive. Public

transportation provides all of them with mobility, which they otherwise would not have; mobility to reach places of employment, education, culture, and recreation.
Today's developments have proved that advantages of a city where the transits have the greatest potential to emit development energies are:

- Developing infrastructure and services is much easier than in the areas where regulatory plans are composed without any specific criterion
- Controlling the territory outside of existing urban areas as well as in the newly planned ones becomes easier. Meanwhile, the existing centres undergo a renovating process and the needs for construction space are addressed by the new plan
- Environmental and ecological advantages of this intervention are indisputable. Similar to the existing urban centres, they would be relieved of the pressure of being urbanized
- As a result of being placed between existing centres with a strong urban potential, new centres will no longer be considered peripheral satellites of a greater core, but as urban centres that play the well-defined role of a coordinator (Lipjan – airport city)
- Great potential of a zone to present a public space stimulates public transport and investment, while the individuals' and businesses' relationship are regulated through the planning laws and urban codes that distribute their responsibilities vertically. Being delegated the responsibilities from the local and central government is crucial to the success of this establishment.
- What we must avoid is separating the functions and creating new centres for shopping, recreation, etc. Dillinger: "Rethinking can only take place gradually"

### 4.3 Environmental -The need for Energy, Codes and Sustainable Urban Development

There is a need to achieve low energy construction in Prishtina and the Code for Sustainable Buildings will play a key role in enabling Prishtina municipality to seize this opportunity, and to build a future housing stock which both meets needs and does not harm the environment.

Solutions for challenges that will be assessed include urban change, emerging social problems, migration, traffic, informal residences being built near the road in the suburbs, lack of infrastructure, lack of strategic urban development, technological demands, city soul, city size and growth, the airport road, parking and public transportation.

The currently available experience indicates that a local approach to planning for change in Prishtina is likely to be ineffective. Urban authorities are not engaging with issues of sustainable development and attempting to translate global policies into local practice through urban development planning. Locally produced construction material should be used. The transportation of other materials incurs high costs, including energy spending and pollutants emission. Locally provided materials such as rocks, should be considered.

In this aspect authorities have increased activities. My professional contribution is continual and after participation in ITP on Local Environmental Management in Urban Areas is paper **"Role of Codes for Sustainability Assessment of constructions"** Ferhat Bejtullahu & Violeta Nushi (Paper has been accepted to be published at the *International Conference "Sustainability of Constructions - Towards a better built environment"*, University of Innsbruck – Austria 03rd – 05th FEBRUARY 2011). In this paper the applied measures and suggested strategy for sustainable constructions are illustrated.

### 4.4 Location of Structures in Appropriate Areas

Developing the areas in which the infrastructure is already installed, is a solution which leads away from urban chaos. Development in these areas protects agriculture and greenery, as well as it increases the density, enabling this way the usage of neighbour services and shops and alternative transportation.

Planning/projecting objects with mixed usage, where the residence and commercial utilization is combined, enables creating vivid communities and reduction of one of the greatest pollutants, cars. The quality of the planning system and its operation constitute an important dimension in institutional vulnerability (CAMPBELL 2006).

Planning of public transport, pedestrian areas, and special areas for the handicapped, bicycle paths is also necessary. The buildings should be placed in the way which would ensure access in the public transport and pedestrian access to the basic services. This minimizes the use of vehicles. The use of vehicles can also be reduced by working at home, so there should be special attention given to the possibilities of home-offices when planning/projecting and installing electricity. The planned buildings should be supported by a well-developed project of road infrastructure, water supply and sewerage system, and electric and mechanical installations.

The buildings should be placed in the way which will minimize their negative impact in the environment. Clustered residences or connected building units enable shorter roads and lines of services. The pristine spaces should remain intact; this way while planning/projecting construction should be directed towards the existent but damaged areas.

As mentioned before, the objects should be placed in a way that is beneficial to the existing vegetation. Deciduous trees in south, east and especially west sides of the building can reduce the cold, by enabling an additional solar heating in winter. Shrubbery can block out the strong winter winds. Scenery should be dominated by local plants, resistant to drought which would provide long-term land cover. For sustainable planning, institutional integrity is important, along with creating a transparent, competent and participatory local government.

Finally, environmental sustainability involves improvement in the quality of the living environment, through upgrading slums, eradicating poverty, mitigating the impact of disasters, ensuring the judicious use of natural resources, and controlling pollution. These, too, depend upon more consultative planning approaches, especially in terms of identifying ‘hotspots’ and mobilizing communities in formulating and implementing solutions to these. In other words, sustainable urban development cannot be achieved without a new form of planning, one that is pro-poor, strategic and inclusive (Hague, 2004).

### Case of IUP concepts applied in urban development in neighbourhood scale

Case of Identified and Planed urban block A11 in Neighbourhood Mati 1 Prishtina:

Contract with 19 land and house owners
Permission from municipality
Ruined of 7 illegal build new hoses
Start building of apartments


*Picture 2 Neighbourhood Mati1-Bllok A11*

With this project are foreseen to be built from 35000.00 to 37000.00 m² buildings with different destinations such as garages, business, vocational centres, public spaces, housing.
Under the regulatory plan "Mati 1" Block designed as a whole is divided into several spaces which are destined for collective houses business.

This urban-block is designed based on the conditions of urban-architectural data from the KK Prishtine-directorate for Urbanism, suggestions by the directorate as well as investor demands presented in the task design.

Traffic-effective and functional interrelationship of this area with other parts of the city will create attractive public spaces and traffic opportunities for all modalities of movement as pedestrians, bicycles, cars and local buses.

Regulatory Plan "Mati 1" has foreseen an effective traffic system with high capacity and develops roads and intersections in this area attractive street and urban squares
The Regulatory Plan "Mati 1" has been defined roads that form the urban block "A11".

Routes for pedestrians, considered as a priority in relation to all new construction, which helps to promote walking as a primary means of movement for short journeys, as in "Mati 1", as well as in its neighbouring areas, with walking links in downtown Pristina.

To enable comprehensive network of public traffic in connection with the integration of the block "A11“ with other parts of the city, it is important to promote new line of urban bus which offer more local services.

### 4.5 Energy and its usage forms.

It is in the city where most energy consumption takes place. A great deal of that consumption is the result of transportation needs. Also important are the heating and cooling requirements in buildings. There are other major sources of energy consumption, such as industrial production, but this falls beyond the scope of this article.

In the case of transportation, the solutions to reducing energy consumption are well-known.

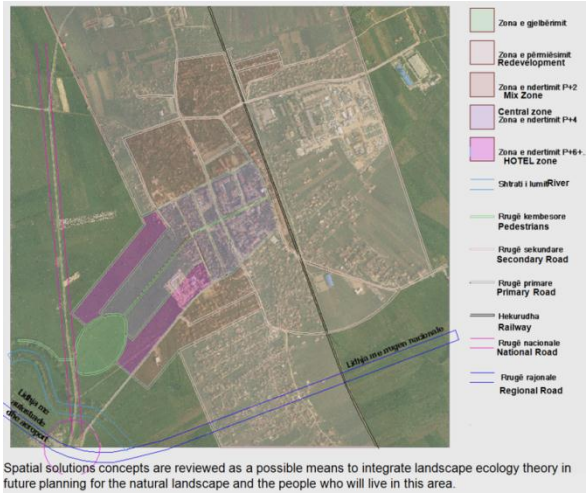
The proper use of landscaping also can play a very important role in increasing the energy efficiency of buildings. Placing deciduous trees around a building allows the warm sun to enter it in winter, but blocks the hot sun in summer, when the leaves grow back on the trees. Evergreen trees are effective windscreens and are very suitable for western exposures since they hinder the cold westerly winds. In addition, greenery reduces the reflection of heat from surrounding surfaces into the building, and cools down the surroundings by drawing heat from the air through the transpiration process.

### Case of IUP concepts applied in urban planning

Satellite town 2 URBAN DEVELOPMENT PLAN - **Lipan (study task)**

**Aero port city** reflects its origins of the city's proud heritage and ambition to develop a sustainable city, creating a vibrant and distinctive environment for working, living in and enjoying the area.

Plan is based on the principles of an ancient walled city, combined with modern alternative energy technologies, dynamic architecture as a challenge to traditional architecture. The mixed-use, high density city will include a university, innovation centre, company headquarters and several economic zones. This project will be sustainable city of the future (entirely self-sustaining). We are creating a synergetic environment; it is a true alternative energy cluster. Construction of this large-scale project will occur in two well-planned phases.




*Picture 3 Satellite town **Lipan (study task)***

In phase one of the project of road from Lipjan and south Kosovo, that is taking the way through Magurë, to airport and a large solar power plant will be built as a central energy source. In phase two, urban growth will occur. An efficient network of rail, road and public transit will link the city to centre of Lipjan with international airport and other vital important centres.

The new city centre itself is car free. With small distance to the nearest transport link and amenities, the compact network of streets encourages walking and is complemented by a personalized rapid transport system. The shaded walkways and narrow streets will create a pedestrian-friendly environment. It also articulates the tightly planned, compact nature of traditional walled cities. With expansion carefully planned, the surrounding land will contain wind, photovoltaic farms, research fields and plantations, so that the city will be entirely self-sustaining.

## 5. Conclusions

### 5.1 Planned or implemented changes based on experiences gained during the project work

In the end, to ensure the implementation of these proposals and application of planning/projecting and constructing standards for sustainable spatial planning, a priority should be given to avoiding the previously mentioned weaknesses, unambiguous distributing of competences, functioning of approved rules and laws, and establishing the Council for Spatial Planning. These can be achieved by clearing the intentions, reducing the time and procedures required, increasing flexibility, transparency, quality and control of project plans. Co-ordination of human resources and important structures is also of primary importance.

### 5.2 Strategies in long term – cooperation (follow-up)

**The likelihood that the project – if not yet completed - will be implemented in due course; Designing and Constructing Sustainable Buildings**

Every day activities have big impact on support processes and influencing main (key) processes. All stakeholders are suggested to use IUP concept especially:

While planning/projecting various apartment and business buildings, a special emphasis should be put in complying with the standards of "low-energy buildings" and "passive buildings" in order to alleviate the problem of climate change and global warming. This would also serve for creating climatic comfort in internal spaces both in summer and winter, and contribute in saving energy required adjusting the internal temperatures during seasons. Application of these standards enables planning/projecting energy efficient buildings. Usage of a high level of insulation, ventilating facades, high performance windows turned in direction of the sun and strong construction, will also contribute to energy efficiency. In the project plan, a special attention should be put to using various forms of renewable energy, e.g. using solar heating for water and "photovoltaic" panels, using a $40 – 55^{o}$ slope of the roof, for optimal absorption of solar energy. Passive solar heating, sunlight and natural air-conditioning can be incorporated in most of the buildings with for an effective price. Other energy sources are earth, water, wind etc. Internal space should be optimized with a good and effective design so the general size of the building and resource usage in construction and functioning should be kept at minimum.

This can be achieved by optimizing material usage, avoiding losses from structural design and simplifying the building's geometry. The recycling process for the residents should be made as easy as possible. Location of recycling equipment should be planned properly, e.g. recycle bins should be placed accordingly in the kitchen, or under the sink. The reservoir system in the roof should be designated for collection of rain water and its usage for watering the yard. The possibility of using grey waters should be considered: used water from sinks, showers, or laundries.

All Human actions alter the systems we live in, so the sustainability issue is a complex one. It covers the way we obtain the resources we use their utilization so we could get the most out of them and eliminate the idea of "loss" from our dictionary. There is no way to exactly predict how complex ecological systems will react to our impact, but it is our undisputable responsibility to act with our best intentions.

The process of legalizing buildings that comply with the set standards should be accelerated so that all the passive capital will turn into lively assets for the society.

Making the construction permit obtaining procedure easier increases transparency, flexibility, and quality and facilitates project control. This way, failure to comply with the set standards will be easier detected and be followed by strict penalty measures.

From the Municipalities' side, a great emphasis should be put to stimulating investors and construction companies by decreasing taxes and other planning/projecting and constructing fees for buildings that comply with the standards of "low-energy buildings" and "passive buildings" Since 2006, various Kosovo Municipalities have been supported in the field of spatial and urban planning by the Municipal Spatial Planning Programmes (MuSPP), funded by Sida and implemented by UN-HABITAT. In its first phase from 2006-2008 the Programme's focus was on-the-job-assistance and guidance to municipal planning bodies in the local government, civil society in drafting Municipal and Urban Development Plans. The second phase of the Programme shifted from this advice to the direct support to the municipalities in drafting municipal/urban plans and urban design projects to full engagement of municipal and MuSPP staff.

Kosovo, one of Europe's poorest countries, requires a lot of support. Sweden has previously provided humanitarian support to rebuild the country after the war part of Sida's work with capacity and institutional development Sida offers international training programmes (ITP) for participants from low-and middle-income countries in priority areas. ITP's methodology takes account of the desire to develop and reform that the participants' organization have expressed in their application to the program.

From my perspective and experience in urban planning field and during last five years: Kosovo needs better coordination between all stakeholders to develop and reform policies and approaches of urban planning development.

Mentioned improvements are as result of big support of my organization and mainly private stakeholders. Trying to increase my contribution in urban planning, applying many times as consultant in urban management field I have experienced bureaucracy and un-coordination of some international organization (UN-HABITAT) working in Kosovo.

From all mentioned above I can conclude that is necessary to continue with follow-up of IUP and coordinate future engagement of all participants in facilitating processes in Kosovo and in the region.