

Urban Development of Tirana after 90 years and its Environmental Problems

Mirela Tase¹, Manjola Xhaferri²,
^{1,2} University "Aleksander Moisiu" of Durrës

Abstract – The developments in the last two decades in Albania after the fall of communism are associated with major changes, both socio-economic and environmental. In the context of environmental change, Albania is one of the remaining countries with a wide range of problems that have constantly been in the focus of attention of not only the state institutions but also of the non-governmental organizations, which are operating in our country. Tirana is a city that is considering and dealing with its environmental problems. Tirana as the capital of the country has experienced such an extra ordinary transformation in more than two decades that has not been without its environmental costs. Human activities have transformed the environment in Tirana. Greater quantities of waste generated, especially of solid waste, are caused by the major construction boom. Considerable amount of clinical waste is disposed in urban waste in the places where hospitals and clinics are situated. Tirana's clinical waste is burned in special places. As the economy of the city grows, this volume will increase. In this context, our paper will focus on a more extensive treatment of these problems, providing forecasts for the future as well as considering the measures to reduce the negative aspects of urban development to the levels required by the EU.

Keywords – Pollution, environment, development.

I. INTRODUCTION

Tirana is the capital of Albania and simultaneously the largest city of the country. Tirana's history is more modest in comparison with other European capitals. However, as the capital city of the Albanians, it deserves special attention. The history of Tirana begins with its foundation as a city in the seventeenth century. Tirana is a typical example of mixed structures, between the sea and the mountains, also it has united cultural heritages of Illyrian, Roman, Byzantine and Oriental. It unites the elements typical of Mediterranean European Balkan, urban models developed and developing, urban discipline associated with authoritarian communism and the chaos of modern times. Tirana is one of the most dynamic cities in Europe and continues developing today [1]. Tirana represents a transitional period of structural development and urban planning in some historical phases, it is a product of many factors including political, economic, and social events that occurred after 1990 and onwards. [1] As a result of the collapse of the centralized economic system and the atmosphere of political and economic changes in all former socialist countries of Eastern Europe after the year 1990, -even in Albania began a strong wind of change. Tirana has create one of the most unique cases of urban development in Europe, whether for its dynamism and energy or the total chaos and

unfairness created, and the utter lack of planning and development policies. The model of chaotic development during this period reflects the difficult political transition, economic, and social problems that occurred from a centralized economy to a free market society. [1]

These urban disturbances are manifested in two forms:

- Illegal buildings for housing;
- Construction without a permit for business purposes, mainly in the city center, as in the case of the Lana River.

Until 1998 years, Tirana counted 2000 kiosks which were built in an amateur way, and these brought a transformation of the city with a noise polluted environment, and more social conflicts.

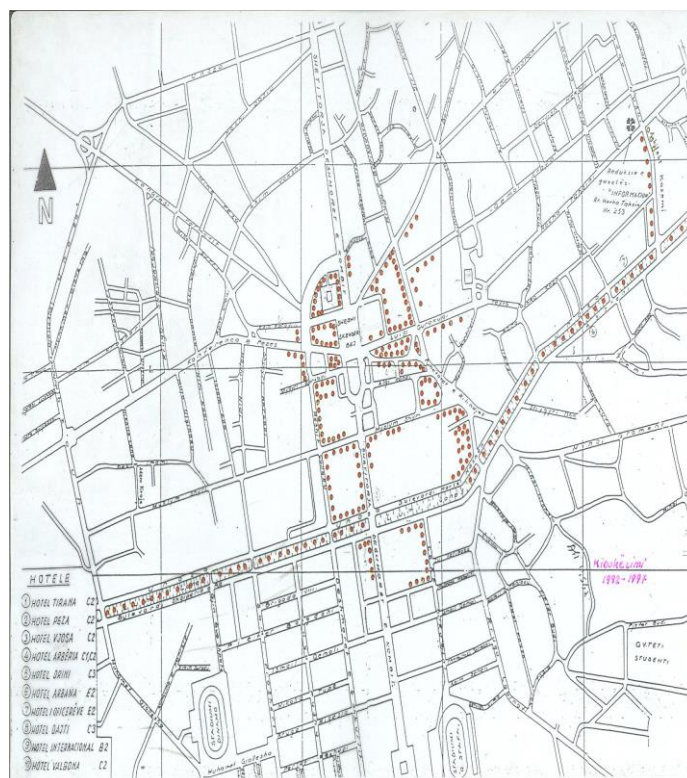


Fig. 1. The number of booths near the creation of 1992 – 1997 years in Tirana.

During this period Tirana experienced extreme degradation of the quality of urban environments. This was because of the occupation of public space from illegal constructions. This caused serious damage to the environment. The lack of roads prevented the development of public transport and garbage collection, and contributed to the lack of efficiency in all urban activities. This boom "construction" was very badly

planned and arranged with some of them were built in an informal manner and without permission [1], [2].

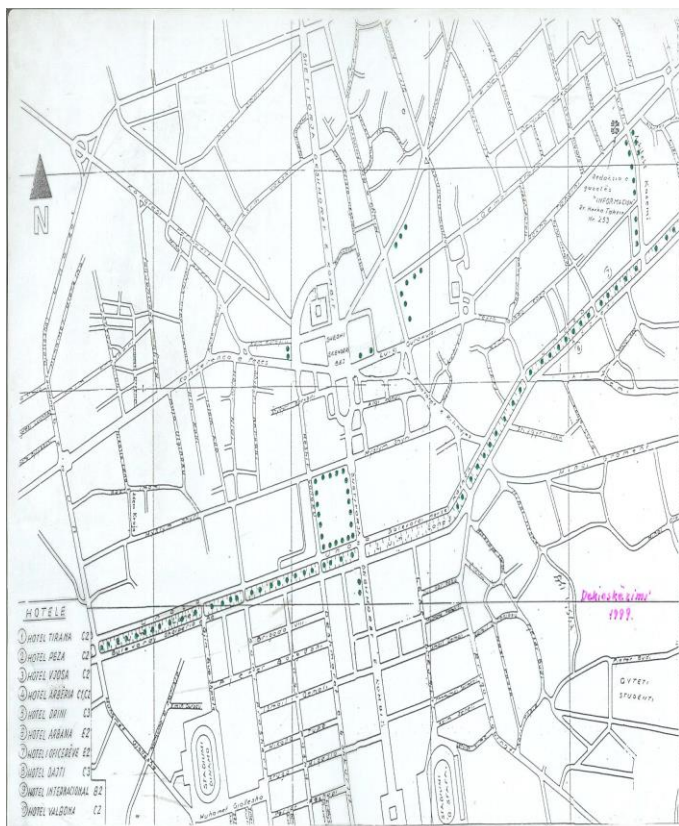


Fig. 2. The number of booths near breaking after 1999 years in Tirana.

After 1998 began action to demolish these buildings, giving back his identity Youth Park. The cost of demolition of these kiosks amounted to about 50 thousand \$. Many people remain unemployed. The self-employed that caused a reduction of revenue of these families suffered lots. This forced the state to accept situation and to do legalization of housing on the basis of a new urban plan that would apply to the city of Tirana since 2003. Urban development is currently still continues to cause significant damage to air quality, water quality and the landscape of this city what is the standard parameters defined by the EU [1][2][3]

II. METHODS AND DATA

In this framework we will present environmental situation in Tirana and the causes that led to this situation and the impact that they reveal the quality of community life. Urban development these past two decades has caused major damage through impact:

a. Air quality or dust caused by numerous constructions in Tirana and emissions from generators and equipment used for heating of dwellings contribute to pollution.

b. Water resources are water extraction does not follow any defined criteria. It is thought that 75% of water lost through leakage from distribution systems;

c. Water quality is not the correct parameters are tense due to the inadequate infrastructure of waste water collection where many sewage channels are connected to the potable water distribution

d. The environmental impact of urban development in the current is relatively high in comparison with the standard of living in this metropolis. Currently the level of air pollution in Tirana Exceeds environmental standards of quality, negatively affecting human health. The monitoring of ISPU in Tirana for the period January to December 2013 will be presented these values are indicators that the particles in the air by the following table nr 1 and figures nr 3, 4, 5. [3]

TABLE.1.

AVERAGE ANNUAL DATA FOR MONITORING INDICATORS (2013)

NR	STATIONS	PM10	PM2.5	NO ₂	O ₃	SO ₂
		UG/M ³	UG/M ³	UG/M ³	UG/M ³	UG/M ³
1	TIRANA CENTER	33.5	17.8	41.6	49.4	-
2	ISHP	31.8	15.3	13	52.66	-
3	VLORE	34.37	16.11	7.25	75.25	-
4	KORÇE	27.52	-	5.06	66.2	5.83
5	ALBANIAN RATES	60	15	60	65	60
6	EU STANDART	40	25	40	-	-

According to current EU standards they should be treated with great seriousness by the relevant structures, or else damage to human health will be inevitable. Vehicular emissions and dust that are created by unpaved urban roads and various construction projects is contributing greatly to air pollution with solid particles which has caused problems with breathing, especially the young and the elderly. Likewise urban heating oil or coal, but wood is considered as another factor that contributes to respiratory diseases. Even for the year 2013 in the first 6months of this year the same values are presented for the city of Tirana, but the last 6-months has seen a reduction of particular concentration of air has also been cleaned up. The city center which is almost in these last three years was a real construction site.[3],[4]

III. RESULTS

Contamination of surface and underground waters in the city of Tirana is a result of all current activities and urban industrialization. The contamination has led to reduction of surface water quality. Urban waste water presents problems due to incomplete collection and treatment of their absence. Expanding existing networks are not and can not afford rapid urbanization that has happened in these last 20 years. A part of this network is disturbed infrastructure making it difficult and costly to procure.[3], [4]

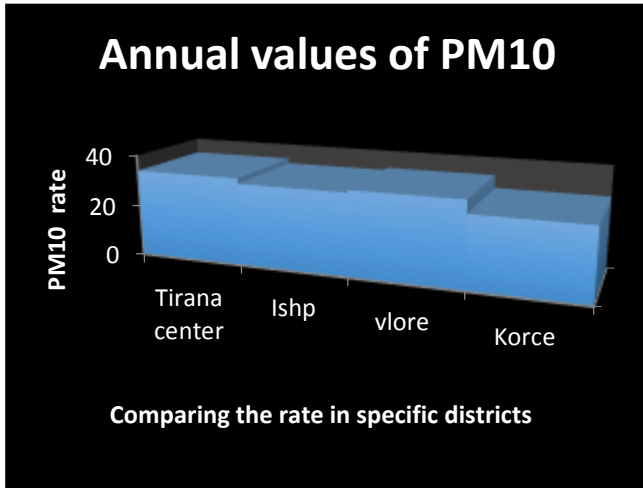


Fig. 3. Level of air pollution in Tirana

PM10 pollution by WHO is the biggest health risk for urban air in Tirana. This pollution comes from vehicle emissions and is characteristic for older cars with diesel engine. [3], [4]

Our residences also suffer from noise pollution due to constant construction. And the eco system that once existed is broken down or disturbance to rest and other human activities, human health risk, causing destruction of the ecosystem, material goods, the monuments, the ambient in habited or that external or such as to interfere with normal composition itself legitimate environment.

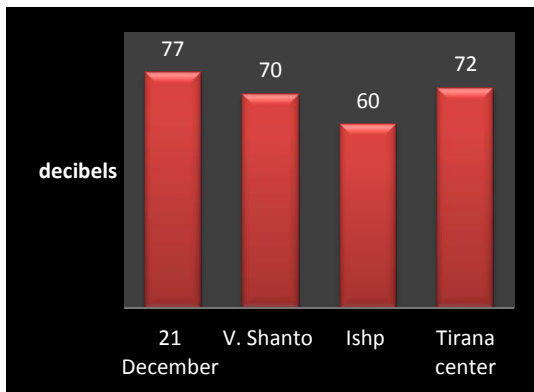


Fig. 4. Analysis of noise in Tirana during the day.

The criteria set by the EU that can perceived noise by the human ear during the day while at night are 55db and 45db but in Tirana where the circulation of cars and recreational activities are numerous at night that these figures do not respect and be over 65db during the day and over 50db at night. [3], [4], [5]

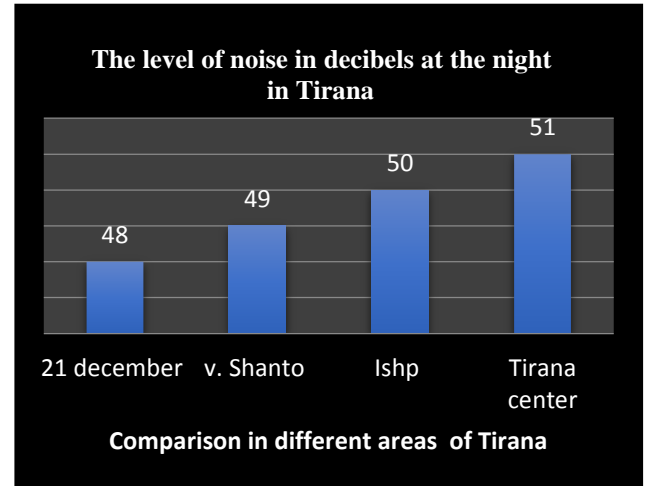


Fig. 5. Analysis of noise in Tirana at night.

Figure 5 above clearly shows the levels increase as the time of day and night, the contribution of a greater flow of vehicles was observed by the specialist who performs the monitoring. This influx is a consequence of the stagnation that created junctions as the large amount of vehicles and the signals do not function with efficiency [6] [7]. Another weighty factor is the movement of heavy vehicles over 10 tons, their presence in intersections such problematic harder to speed the movement, handling and the levels noise increases about 30%.

IV. DISCUSSION

The content of solid particles (LNP of PM10) in the air of our city in a sustainable way in the mass exceeds 2 – 4.5 times the allowed limits of the EU. They are the chronic problem of urban air quality in the city. Not seen or descending upward trend of their level during the last five years, then steadily situation continues to come a health alert. The solid particles from traffic exhaust are becoming a health problem for the population of this city. Nitrogen dioxide NO₂ is steadily growing within the last five years, so the benzene C₆H₆ is expected to be a major problem in the future [7]. These gases are discharged mainly from traffic which is already a problem to environmental health. According to current EU standards they should be treated with great seriousness by the relevant structures or the potential damage to human health will be inevitable. In Tirana, the depositing of controlled waste are not what community the opportunity to let you burn them and causing pollution of the surrounding. It remained on paper, that in 2005a project was undertaken by the city of 1 million euro for the recycling of waste in Sharra. In the event that will be implemented will solve the problem of contamination to the surrounding environment. [4]. Sharra infrastructure building was not in significantly costly. But after the law on waste, things will start to change. For this need, the cooperation of local government and citizens. The cost of infrastructure for the differentiation of waste is estimated around 150 million euros. It is anticipated that by the year 2020 to stop the growth of municipal waste produced and to have a waste recycling to 25%, just behind 2025's switch 50% of urban waste.

Awareness of the population is a major cog and very important, because it is in time that each of us realize that we should cause less environmental damage and this is the best way. [7] [Geographical studies nr 10].

V. CONCLUSIONS

1. Regarding noise pollution, the situation should improve motor vehicles in order to decrease the impact of pollution. By introducing the law on disposal of cars produced before 90 year and tax relief for new cars needs to be added.

2. So in the context of noise pollution must be constructed of tertiary and secondary roads in order to significantly decrease traffic in the main streets of Tirana thing that this brings and reducing pollution.

3. Associated with the state water pollution error measures to improve then existing network and punishment of all persons who abuse and abuse the water for personal purposes.

4. We will finally point out that undertakings state structures must be present in what law enforcement will deter

abuse and would influence the growth of awareness of people for a clean city and more ecological.

5. We are recommendation not to circulate heavy vehicles

6. Establishment of a tram to eliminate the circulation of small cars is necessary

7. The local government must seek to produce another planned project to regulate the public transportation system.

8. The law must be stricter to show respect by community.

REFERENCES

- [1] Aliaj Besnik, Lulo.Keida and Myftiu.Genc,"Tirana Urban Development Challenge" Tirane, 2000.
- [2] Berxholli. A,"Internal migration and its problems "Geographical Studies No.15, Tirane, 2005.
- [3] Institute of Public Health,"Report on key indicators of health and other factors that affect them",Tirane ,Albania , January – December, 2010.
- [4] Report of air quality monitoring for the city of Tirana, made by the Institute of Air Quality Monitoring Tirane, Albania, January – December, 2011.
- [5] National Environmental Strategy, Ministry of Environment Forest and Water Administration, Albanian Government, Nov. 2006.
- [6] Manual for managing environmental problems at local level, made by the municipality Tirane, 2011.
- [7] Ministry of Environment, "Report Environmental State",Tirane, 2014.