

Sustainable City

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Abstract

On the beginning of 20th century, cities become synonymous for progress, wealth and increasing opportunities when compared with the rural regions. Based on some UN information's, 30% of world population was urban in 1950, this percentage increase to 47% in 2000, and expectations are that in 2030 60% of population will live in cities. If changes in space organization do not happen until 2030, total earth population will increase to 8,1 billion and 5 billion people will live in urban regions with the 2,67 billion that will not have place to live.

This change of the world, from rural to predominantly urban is continuous and cannot convert again, so these changes affect using of water, energy, earth and other nature resources. In the same time cities are primary victims of climate changes. Half of the population lives in urban regions, but they consume 80% of global energy production.

Urban theorists saying that city is dead. In the future we can talk about two models of the cities that are totally different: ecological conscious city that becomes sustainable with the own resources and „slum city“ that is fighting for the healthier life.

How to deal with challenges of the global age that are barrier for progress and sustainability, and in same time keep own identity and diversity?

The cities are kind's social - ecological systems that have a wider range of articulation with ecology. How to produce positive results – results which enabling contribution of sustainability of environment in cities?

Cities are complex systems of consumption and production and that complexity makes them essential for finding solutions.

Differences of the cities come from different politics of the governments, basic economy, and ordinary cultural life of the citizen's. One of those facts is that whole energy flow and materials of the economy become pollution and waste of ecosphere just in different shape.

Are the global ecological conditions result of the urban agglomeration and density, or are they result of specific urban system types?

Long time ago cities become places for innovations, development and starting of complex physical and organization systems. It is important to find solution for the big number of ecological damage and formula for reconfiguration of social – ecological systems that are made because of urbanization.

Keywords: Sustainable Urbanism , Eco – City , Ideal City , Sustainability , Brownfield , Re – Use , Urban recycling , Open Arhitecture , Green Buildings .

1.INTRODUCTION

How we as architects and urban planners can contribute to sustainable development? By following caprices of technique and investors , taking in consideration economic profit all of projects , we all become main actors of global crisis.

This paper presents review of city sustainability problem , the same city that is the main tissue of the physical existence of people. Framework of responsibility and spatial problems were the basic causes of the introducing of brownfield area as a potential space sustainability. Environment limits are decreasing every day.

The goal of the research is to find possible solutions for existing problems of humanity, which will be starting point for sustainable development of city. Possible strategies, ways of acting and implementations that can be applied by architects and urban planners, are summarized in this work. The strategies are sequenced by the problems with a more than one sourced , and way of acting depends on this.

2. URBAN VISION

2.1. Implementation

The city can be viewed as an organism in which all parts must function properly. So the city does not exist independently of all its elements. The implementation should be defined by the zones, points that must be acted on. If we take into account the complexity of cities, historical context and contemporary spirit we need to know different predictable effects on each of these units. Striving for sustainable urban structures involve and sustainable development of the existing structure. Renovation is often associated with the term deportation. Renewal does not necessarily mean that it is sustainable.

During the urban sprawling, urban space becomes close to its resting partly on the old industrial areas, military areas, storage areas or rusty communal areas. These zones represent a break in physical functioning - black holes. Brownfield sites are then negative phenomena in the cities, because they contribute in creating a poor environment, with frequent pollution of soil and groundwater, the potential sources of infection etc.

Brownfield locations are general threats of development and environmental loads. It is evident that because of their previous functions these places make huge untapped areas. Physical barriers also represent a certain psychological barrier. World cities reached very high level of solving brownfield problems, well known and unified methods and systems are established in there.

The goal of brownfield revitalization is to convert these locations to places of public purpose of general interest. The increased risks and costs associated with their reconstruction and re-using discourage private capital from direct economic intervention. Ecological experts in the world want to introduce a circular logic in the function of cities, and the maximize re-use of waste, to reduce it.

3. Sustainable strategy

One of the important questions for every strategy that must be asked, is where to start from? Should it be implemented from local or global level? Taken scale that effects the space could have crucial significance.

Cities are incarnation of urban crisis. Within the urban crisis, also society, economical, ecologic and politic crises are classified. Does it mean when we start to solve elements of other crises, we are on the good way to solve the urban crisis? The mission of the architecture must be encouraging the society on changes, because architecture presents its values.

Ideal city doesn't exist. There are only variations of idealization of certain cities as world powers, which brings us back to the political dimensions. Searching for sustainable planning of cities is future mission.

Eco – city should talk to the eco- revolution. New urban planners as a base to every project should have a green line that will clearly accruable economic benefit or gain of the society.

To achieve a positive result acting should be in the broader spatial and temporal scales , observing the effects of local activities on the macro – level , such as global warming , acid rain formation and global plunder of resource.

Sustainability of cities is not only reflected in the ecological resources and techniques that it have , but also in saves and production of the energy. Buildings are responsible for around 40% of total energy consumption and 36% of CO2 emissions.

By designing in accordance with climatic conditions , the proper organization of existing and open public spaces , we contribute to sustainability. Renewable energy, consumption reduction and energy conservation, need to become the standard of each space.

The sustainability strategy must be based on NEEDS and FUTURE GENERATIONS.

3.1.Social dimension

Develop an social action plan (education , multidisciplinary approach at national , regional and local level)

Cooperation and exchange of information within sectors

Remove vulnerability of space

Marketing

Carbon - neutral lifestyle

3.2. Ecological dimension

Support in construction of green areas, greenfield should be merged with the renewal of zone brownfield

Through the elements of connective tissue, streets, squares and parks connections will be established with other areas of brownfield zones

Green Corridors - environmental arteries

Design with Nature

3.3. Eco - political dimension

Define each of brownfield location in cities and areas with critical parameters

Create a law framework (government, parliament, the ministry)

Set criteria for assessing the status and utilization of these zones

Get rid question of ownership. Public and Private

Develop a national policy for access to brownfield zones

Brownfield zones as a priority investments (public investment projects)

Each of these strategies can be presented through the urban recycling. Recycling is a concept that is very often practice in the world. In architecture it runs through all aspects, so we have a recycling of materials, recycling facilities and recycling of whole urban area. Recycling is closely associated with brownfield , or areas that have become the industrial crisis delays in the area, the black spots, the termination of all activities. Recycling of urban area is deeply into the core of the problem of addressing the issues of land use , materials and man in this area. A well designed concept of brownfield zone regeneration can change the image of the city and become a new catalyst within a space.

Urban recycling and sustainable design are mutually supportive. Urban recycling is needed for visual quality.

4. CONCLUSION

With the expansion and growth of cities the processes of transformation and reconstruction is occurring . The question remains is how to proceed , what is the purpose and by which methods and models. On the question of vision, in the not so distant future, 2050. years, many European cities will try to find the answer, and to prepare the development strategy or provide some alternative proposals.

Focusing on sustainability priorities and stimulating urbanism rather than urbanism of obligations, new methods should be created and effective in the space of continuous change.

Urban transformation as a result of globalization give many negative products in the further development of cities , as already noted in the social, economic and environmental direction of urban development.

In this paper possible solutions are defined that lead to sustainability of the city. Proposed strategy, method of urban recycling and regeneration of brownfield area can be applied to any city.

If sustainable urbanism becomes new form, is it the only way to build the city?

How sustainability should be treated, and is sustainability in time of globalization becoming part of our lives or is it just word for the public?

One thing is sure, urbanism and architecture of new age can be called by any name, but the result that must be produced cannot have bad influence on the citizens and their lives.

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