



The Enhancement of Urbanization in Suburbs to be Ecological Urbanized and as Preferable as City Centers

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Abstract

As world population has grown rapidly recently in a way individuals migrate to city centers that has become over populated. There is such pollution that threatens human life, living organisms, and the plant. Health is really blessed, therefore, there must be some principals taking into considerations while designing to live healthy and to sustain our endurance, as well as usage and protection the natural resources in design that can help to save us. Indeed, it is essential to study principals that lead people to engage with ecological suburbs in order to minimize over crowd population zones. This paper aims to provide suggestions and trend ideas to engage with suburbs more to seek the balance of population between city centers and suburbs, as well as carbon balancing and carbon reduction theories. The achievement of urban balancing development may require learning from the past success and mistakes to develop the current situations for the better now and tomorrow to become liveable. This research is a theoretical qualitative research method which collects valuable data to be analyzed precisely with proposes significant critique methods for planning ecological suburbs.

Keywords: Ecological Urbanization against Over Population. Sustainable Urbanization for Ecological Suburbs. Healthy Materials.

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1. Introduction

1. 1. Urbanization

Urbanization it is the key of moving towards a place whether it is rural or city center, however, the majority is about moving from rural area or country sides to city center. moreover, in all cases it is because of population increase, as long as this naturally or rapidly occur, there will be environmental changes due to consumption and production, import and export, and so on, natural life cycles. "Many researchers have indicated that extensive expansion of construction lands and induced industrial development are the main causes underlying the rapid increase in energy consumption and pollutant emissions (e.g., Huang et al. 2016; Feng et al. 2018)". Moreover, "the differentiation of ecological stress from land urbanization, including the location or spatial position effects under spatially differentiated ecosystems (Dadashpoor, Azizi, and Moghadasi 2019)".

It is obviously because of interaction between environment and living organisms, therefore, urban people change their environment through their consumption of food, energy, water, and land. In return, consequently, polluted urban environment affects the health and quality of life of civilizations so here comes scientific study demand called "Ecological".

Urban needs, the majority might be considered as students or workers that most citizens leave homes during the day for purposes and get back in evenings. They may bring with them happiness or stressful, motivation or imbalances, and more experiences brought with them home, so does the home require to be welcomed, healed, and a place for renewing souls? Indeed, homes need to be such healed places from stress and backwards effects, also the right value of privacy that creating front side bushes and aesthetics trees as buffers, as well as wheelchair accessibility if applicable, eye-level bedroom window with enclosure nature and greenery from outside, whether in suburbs or city centers. Yes like this, otherwise, how individuals can regenerate and get motivated for the next day, week, month, year, and so on. Moreover, from a social perspective, many neighbors do not know each other that is because of lack of social interactions, and lack of common activities such allotment gardens where citizens having more opportunities for meetings and share smiles.

Why Ecological, ecology is transdisciplinary science concentrated on the relationship between living organisms and their surroundings. Focusing more in architecture field, becomes the definition "ecological design" that try to set a great deal of features to a spot whether it is a property or landscape to reduce carbon dioxide to live healthy. Architects has become with main principles recently to take into consideration while designing such; economic, social, environmental, and cultural to continue the design processes. Integration of these beneficial affirmative aspects afford the right perfect design. Furthermore, any lack of these essential elements causes negative effects on humans nor the national globe. For instance, lack of social interactions and activities among people may lead to mental diseases according to medical researches. Another culturally point that some designs can be oriented in specific regions, however, it does not fit elsewhere because of climate differentiations such as sun path, wind, materials. Although location effects differ whether the suburb is in mountain, hill, and water bodies, it is still suitable ecological land zones to be.

1. 2. Items, functions, and object implementations to use in suburbs

Suburbs often surrounds the city centers, conceived as precious places for city workers that scape from city traffic and noise. The suburb distinguishes by its low-rise, calmness, and more greenery. It is, whereas people running away from it because of

low-density and developments. They are, however, in some megacities in such America and Europe that contain tens of million habitants has become less dense and individuals has started to engage with suburbs because of its clam and cleanliness and the core of cities has no longer contain industry primarily, as well as in Latin America, Asia, and Africa. I personally observed that in Tripoli, Libya. This is respectful if it is well-managed ecologically but having limited backgrounds, awareness and priorities still. Here are some valuable fruitful techniques that considered as a kind of utopia allowing individuals to engage to live in pastoral surroundings rather than just vocational or weekend houses. Nevertheless, Architects still everyday making efforts to apply or return sustainability to the suburbs by challenges and wise thinking. In fact impacting the less carbon dioxides is the monumental factor save next and next generations. For example, some houses in suburbs have a massive construction site. It is crucial. Balancing people density between city centers and suburbs is controversial in this study. If urban planners and architects are truly standing to go green, they must take into consideration this issue by reducing individual house size as well as designing semi-detached style building that can help to reduce heating and cooling costs. This allows storage, parking, and mechanical rooms to be shared, as well as sharing gardens to establish socialization among neighbors to do activities in healthy green spaces that effect incredibly significant on personal health.

Thinking about socialization deeper. It is worthy. Socio-Ecological design or lifestyle is one of the most important thing that residents ask for when moving from a house to another. Attachment houses is a great literature concept that impresses the way of community and interaction between dwellers. It is commonly discussed and lectured by designers and urban planners to stimulate social life and more events. Plus, it creates a positive sense of emotions between people and places. More interestingly, while designing attachment houses is to open windows on of active living spaces, distribution to common spaces, and transitional spaces such as porches and entryways as long as keeping privacy maintained, and the presence of promoting walking and cycling opportunities to maximize inhabitant interactions and safety in the pastoral areas.

Turning into healthy materials, ecological principals and features could differ according to location and climate- for instance, using local construction materials is highly appreciated that match its region conditions by using non-toxic ones such SIPS panels or OSB 'oriented strand board' those are super-efficient building materials. "You can figure out a million green features, but in the end it is about the clients how they live, and their health and well-being" Ewing says, pp 65. Therefore, designers play a useful role by explaining the causes and effects of construction items and concepts to the clients to get interest to apply them. Once they get interested in these smart ideas, large amount of humans turning to prefer this life style.

1. 3. Food security and strategies

Food production, processing, access, consumption, and waste management is the common habit of humans for food approach, however, have we ever thought about the logistics of accessible food into the markets that causes traffic and pollution. It is. In Addition to food becomes more expensive than growing own food in own gardens or properties. Vegetable gardens becoming a high trend lately that it may differ to be called allotment gardens. Obviously these gardens increase socialization among family members and neighbors to spend time doing these worthy food activities. Indeed, these sustainable ways are respectful to decarbonizing, cheaper than markets, fresher and most nutritious, and increase socialization in suburbs among dwellers.

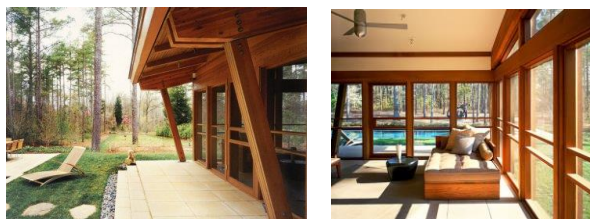
From Architectural point of view, it is important to mind the structural loads to be stiffened enough according to the plants size over roofs. Green roofs has become widely known with its layers and types and its ease to apply. Nevertheless, the design during the preliminary stages has to accommodate areas for all abled and disabled citizens to fully participate in these activities by considering the proper distances according the universal design principles. "In (2006), the United Nations adopted the Convention on the Rights of Persons with Disabilities and its Optional Protocol, geared toward protection of the rights and dignity of persons with disabilities, which requires associated parties to promote and protect their human rights, Unites Nations". Otherwise, "disabled cannot meet with family and friends. This would take its toll on any human being, causing painful experiences loneliness and social isolation (Emma Harries 2016)".

2. Some of Top-awarded ecological projects in suburbs

Focusing more on ecological features, by showing a few of top awarded projects that support suburbs to be more ecological against archaism.

2. 1. Example,

Firstly, Charlotte Residence in North California by William McDonough+ Partners in 2002. "The architect aim was not just a matter of pulling down as few trees as possible. But the outset to create an integration between interior and outside by designing a vaulted roof above the main living areas to outside to expansive sense of a canopy rising above. When you get down to it, we think people deep down would rather spend their days outdoors, so we try to create architecture that gives them this feeling," Ewing says. "Stang A., Hawthorne C. The Green House: New Directions in Sustainable Architecture. (pp. 63)". There is also a shade idea which creating gridded wood windows. Sunlight floods interior in winter when the sun is low enough whereas in summer it does not access.



(The green house, 2005), Figure1

2. 2. Example,

Secondly, Solar Tube house in Vienna, Austria by Georg Driendl in 2001. A solar tube is a tiny light-and-heat capturing device that normally installed on the roofs. In this project it is shaped the design of the entire house by using the principals of radiant heating, thermal massing, and passive solar collection all together. There are also using triple glazed class, concrete core which absorbs heat during the day and slowly releasing it at night, chimney effect, and local materials such as maple wood which grows in the same forest to be used as well for furniture. With these lovely natural views that make residents feel warm and stick with the nature and life beauty courage them to move to such these designs in suburbs.



(The green house, 2005), Figure2

3. Policies and SWOT

3. 1. Urban policies and environmental developments in Suburbs

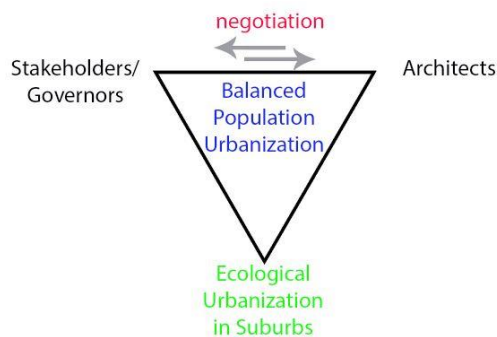


Figure3

As population increasing again that the expectations of suburbs to be pressured and urban, therefore, energy planning, protection and utilization of water resources planning, green building and environmental protection planning must be strictly controlled to endure sustainability for all living souls as well as protecting biodiversity and all species, otherwise, air pollution and environment effects occur unsustainably in various aspects which will be complicated later on and it is civilians responsibility beside the governors. These aspects have to be well monitored in a transparent way. Furthermore, controlling the suburbs in the right way of planning as being mentioned effects on high density areas which can certainly help to decarbonize them and to look forward carbon balancing and carbon reduction, but city centers alone is a major role struggle. In Addition to this, promote a connection framework in transportation is important to encourage green and balance the population between cities and suburbs, which is obviously depend on economic growth to support individuals travel green, as well as conserve and protect the natural beauty and natural resources. In addition to this, repairing damaged landscape structures and regenerate cluttered poor urbanized lands and districts is more likely to be attempted because more random districts seem to exist in suburbs comparing with city centers. This means that sometimes conflict between urban development and ecological protection occur.

Another point is that about increasing walking areas that adapt healthier life-style around greenery in suburbs making citizens exploring the suburbs to get inspired and feeling friendly and more sociable by doing some activities based on ancient philosophy that proceeding the harmony between man and nature. In other words, awakening human consciousness helps to achieve the eco-balance density and urban planning.

3. 2. Comparative SWOT analysis between City centers and Suburbs

| | City center | Suburb |
|--------------------|---|---|
| Strength | Effective Transportation. Developed Infrastructure. Business Area. Safe. | Nature Engagement. Healthy Life-style. Clean Environment. Low-rise Building. |
| Weakness | Stressful and Noisy. Less Healthy. Over-populated Sometimes. | Lack of Infrastructure Developments. Low-density. Away from Business District |
| Opportunity | Job ease. Activity Varieties. Socialization. | More Private recreational spots. Natural Environmental Resources. Meditation Effectiveness. Accessible Eatable Garden. |
| Threats | Flood Risk. Earthquake Danger. | Lack of Security. |

Figure4

4. Conclusion

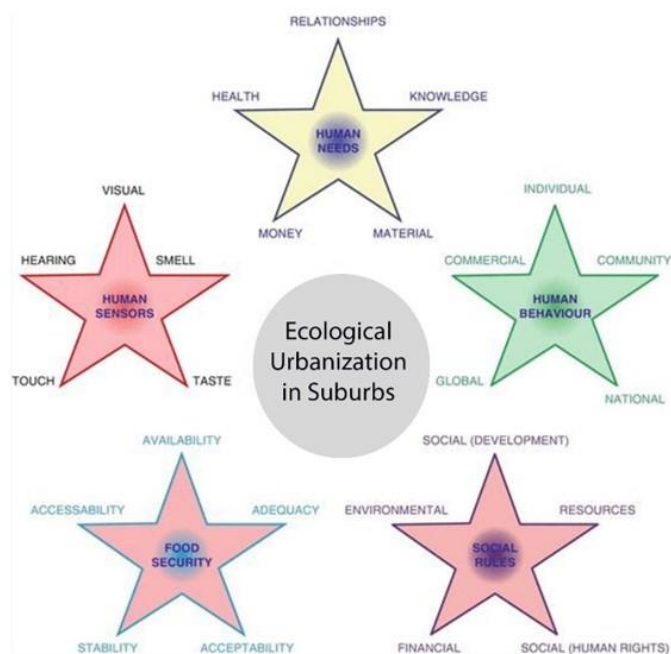


Figure5

Urbanization is inevitable. It is, however, balancing in population between city centers and suburbs is highly recommended for climate adaptation and decarbonization also peri-urban zones play important role to keep the value of people integration between whom living in centers and suburbs.

I personally think plans for natural resources usage, development, and conservation are significantly valuable for all spots around all around the world, as well as sustainable-friendly transportation network which increases or balance population to access or create jobs easily. Another point that as Architects and Urban planners have to discuss widely and deeply the typical design approach from home scale to city scale. During the plan process, design has to fit all individual ages and different group ethnics and culture for inhabitants to afford living around suburbs with full potential approach of activities and social stimulation. According to an American institution that claims the initial proper design cost barely non or 1 percent of total construction design whereas developing or regenerating is expensive, therefore, urbanization towards suburbs is appropriate beneficial solution against over populated city centers if governors and stakeholders manage it correctly and effectively in the right time by corporation with the whole communities to be one hand, otherwise, the next generations will suffer ecological degradation. Further research is yet needed for better precise analysis to compare the ecological land use proportion in different cities accordingly.

Acknowledgements: this paper has been supervised by Prof. Dr. Semih Eryildiz. It was a master student research at Istanbul Okan University. The author would like to thank the Professor for his contributions and advisory to this paper since draft processes till the end.

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