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Research Paper

Understanding the impact of high-rise buildings on environmental quality and sustainable urban development.

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J. Art Arch. Stud., 8(2): 13-18, 2019; pii:S238315531900003-8

DOI: <https://dx.doi.org/10.51148/jaas.2019.3>

ABSTRACT

Nowadays, increasing population and land prices have made high-rise construction or the vertical growth and development of cities to become inevitable. The benefits of vertical urban growth include preserving arable land to supply and feed the growing population, reducing environmental degradation due to reduced natural land construction, reducing urban traffic and energy consumption, and reducing air pollution resulting from horizontal urban development. The purpose of this paper is to investigate the effects of high-rise building on environment quality and sustainable urban development using a descriptive-analytical research method. The research process has concluded that high-rise buildings can meet the needs of the community based on feasibility studies and design and construction based on appropriate scientific and technical and managerial principles and in accordance with the advanced technologies required for such buildings, such that all the principles and criteria of high-rise building are met.

Keywords: High-rise construction, Sustainable development, Sustainability, Environmental quality.

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Farzaneh Z and Akbari Namdar Sh (2019). Architectural solutions to reduce the effects of salt storms. *J. Art Arch. Stud.*, 8 (2): 19-29. DOI: <https://dx.doi.org/10.29252/scif.2019.jaas4>



Figure 1. Urmia Lake

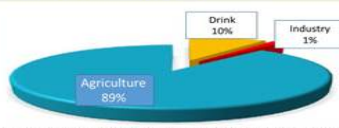


Figure 2. The volume of water consumption in various parts of Lake Urmia basin (<http://urmiabarf.ir>)



Figure 5. How to remove dandruff from stones and bricks

Research Paper

Architectural solutions to reduce the effects of salt storms.

Farzaneh Z and Akbari Namdar Sh.

J. Art Arch. Stud., 8(2): 19-29, 2019; pii:S238315531900004-8

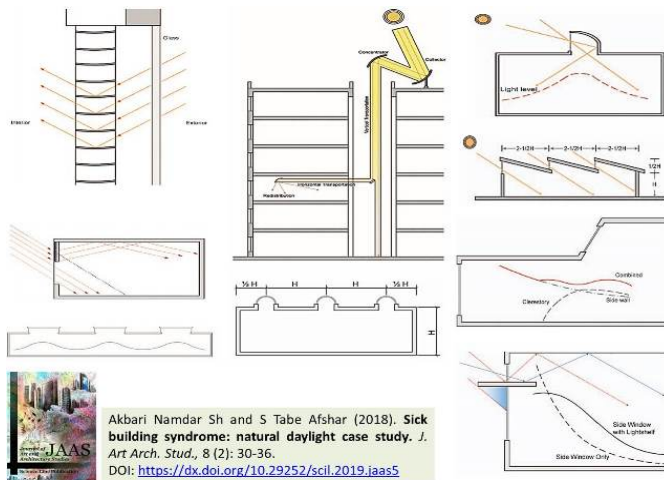
DOI: <https://dx.doi.org/10.51148/jaas.2019.4>

ABSTRACT

With an increased level of salty and saline land in the region around Lake Urmia followed by powerful winds and the creation of salt dust, the agricultural lands of the region progressively move towards salinization and eventually desertification. Environmental adverse effects of salt dust in the dried areas of the lake, which is the chief source of this problem, can be minimized by drainage. In more detail, by continual or sporadic flooding methods or by sprinkler irrigation and precipitation, soluble salts can be washed from saline soil profiles. Object-oriented image analysis (OBIA) techniques are one of the latest means of satellite image processing in the scope of remote sensing. These techniques have significant potential in soil science studies. The application of soil improvers to advance the physical and structural characteristics of the soil is quite common. This study is of review and descriptive type, and the collection of resources in this study was a library method and by reviewing Internet resources. The results of this research suggest relevant architectural and urban design solutions to reduce physical vulnerability to storms. In this respect, solutions have been given.

Keywords: Salt Storm, Architectural Solutions, Soil Improvers, Climate

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Research Paper

Sick building syndrome: natural daylight case study.

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ABSTRACT

In the taxonomy of creatures, human is a complex being, a feature that makes him vulnerable, such that if he lacked the power to reason and intelligence, he would certainly not be able to deal with the threats of the nature. Creating a shelter, from its primitive form for cave dwellers to today's luxurious buildings, all point to the man's need for privacy that primarily guarantees his

security, but a closer look at this physical boundary between man and nature, which is known as residence, reveals that there are a plethora of problems, questions, and requirements besides security, ranging from the extent to which nature suffers as a result of construction to the health problems that this demarcation creates for humans. Evidently, not being attentive to the environment will result in health problems, but since sustainable architecture is not necessarily considered a moral obligation to care for the health of residents, developing building regulations and design policies with an emphasis on human health seems essential. One of such problems, whose consequences are clearly noticeable in current societies and families, is the lack of access to natural daylight as a result of increased unorganized constructions and regardless of environmental conditions, and ultimately the emergence of dysfunctional buildings for their residents in the community, which in turn will eventually bring about irreversible physical and mental problems. In this article, the notion of “Sick Building Syndrome” (or SBS for short), and its underlying causes are reviewed by conducting a series of studies on authoritative and up-to-date sources, articles, and books. Here, the role that natural daylight plays as one of the major elements whose lack or absence will lead to the formation of a sick building in society, along with the factors and elements contributing the increased prevalence of this type of building are studied in the scope of architectural designing. The authors believe that identifying the reasons for the rise of acute health problems in our current society and promoting builders and architects to use appropriate and low-cost solutions, will greatly alleviate these problems.

Keywords: Sick Building Syndrome, SBS, Daylight, Architecture & Health, Architectural Design

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