



Analysis on the Change of the Istanbul Bosphorus Silhouette Zincirlikuyu-Maslak Route

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Due to the improving technology and global competition, since sky now is the only limit for the high towers of metropolitan areas, the increase in the number of high rise has been ruining the silhouette of the cities all over the world. Just as the identity and image of Istanbul have also been destroyed by the high rise dominating the seven slopes on which the city once was built. The urbanization in Istanbul has somehow become homogenous and destructive over the topography. Settlements have been planned as if they had been located in a plain city. Hence the unique silhouette, steeped in twenty seven centuries history, has been demolished. Although having been built proper to planning requirements and legal arrangements, high rise in the region boundaries of Bosphorus specified by conservation laws, have come up with divergences and negative effects to the silhouette because of topographic features. Despite of raising debates on the critical issue now and then, no analytical approach has ever been introduced. The research therefore, aims to analyze the change of the Bosphorus silhouette caused by the erection of high rise blocks in Zincirlikuyu-Maslak route since it was defined as a Central Business District and high rise development area by Bosphorus Conservation Law in 1991. With the effects of globalization reflecting on urban space, tall buildings since 1950's have become geographic phenomenon of cities. Guttman(1967), suggested that tall buildings had started to become dominant in the silhouette of cities and some cities were even affiliated with their high blocks. Despite their magnificent, dominant and modern postures enriching the city, these blocks may bring many physical, economical, psychological and sociological problems on issues such as; conservation, urban landmark, silhouette and strategic viewpoints, climatic effects etc. Understanding the relationship between man and environment has become a multi-disciplinary problem. Architects, city-planners and developers seek to understand the visual impacts of built environment on people. Computer-based mathematical models allow measurability and hence carry important potentials for the evaluation of urban aesthetics. Through visual character assessments, these mathematical models can determine the visual complexities of physical elements and environments and relate this quantitative data objectively with aesthetical qualities of the cities.

In the project, ArcGIS software and its 3D Analyst extension are used for the mapping, analysis and evaluation phases. The findings from the model are discussed on the context of introducing new planning criteria for high rise that are peculiar to the specific topography and unique silhouette of the Bosphorus. The application is considered to be the initial step for a decision support system which will support the testing and decision phases of assigning ground for high rise buildings in Istanbul. The further suggestions imply that the methodology of pre-testing urban planning and design principles on GIS modeling in order to achieve the introduction of more open space and greenery to the cityscape, the consideration of view corridors, wind corridors and access to the waterfront, the design of more effective forms for high blocks and the preservation of heritage buildings.

KEY WORDS: GIS, Bosphorus, silhouette analysis.