Quantitative and Qualitative Evaluation of Urban Land Use with Emphasis on Distribution System and Proximity Patterns  
(Case Study: District 1 Gorgan City)

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Extended Abstract

Introduction

Urban land use planning is original core of urban planning system. The purpose of land use planning is for the spatial arrangement and desirable location order for land uses and urban activity, especially in cities that land uses have high combination and variety. To achieve this goal is requires understanding of condition space allocation and land distribution among urban land use that is possible through quality and quantitative evaluation methods. Analysis of compatibility and incompatibility between urban land uses is caused by positive and negative effects that adjacent and neighboring land uses which have on each other. This article is studying quality and quantitative characteristics in district 1 land use of Gorgan city in north of Iran.

Recently, researches related to the construction of cities show that without land use planning it is far from reaching to achieve optimal life pattern in cities. Urban land use planning is spatial - space organization of activities and urban performances based on demands and needs of urban society especially in those cities that the land uses system has considerable combinations and diversities.

The final goal of land use planning is to establish typical ecological balance and social justice in the development process and civil of city and also it should answer to quality objectives like perception of beauty sense of spatial identity and sense of belonging to the environment. Corresponding to failure and limitation of quantitative standards to response to

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urban needs related indexes to quality of life, social welfare public comfort protect natural and historic resources should be considered too.

To Sum up, the target of this paper is to evaluating qualitative and quantitative status Urban land use at district 1 Gorgan city along with the aim of promoting and enhancing quality of life and achieving approaches to correction spatial pattern of urban land use by considering following questions:

How are distribution system urban land use and their proximity at surface District 1?
Are the levels of spatial urban land use and its per capita formed suited to standards and the needs of urban?

Methodology
This article is descriptive - analytic method. Basic information related to demographic characteristics, physical and economical of case study in this district that is provided using library and field methods and are classified and separated to 7 neighborhood study area. This information has been implemented on the city map and evaluate to the two levels of quality and quantitative. In quantitative evaluation of the area extant per capita have been calculated with standards. For qualitative analysis after formation of the compatibility matrix, first users have been scored based on paired comparison then have been evaluated comparison of their compatibility using select by location method. To evaluate land uses spatial distribution pattern has been used of method (RN).

Results and Discussion
The district 1 of Gorgan with area of 1112 hectares and 69625 populations is the greatest urban area of Gorgan that this has 31 percent of area and 26 percent of Gorgan population. This area consists of seven neighborhood and has remarkable combination and variation of land uses. This land uses are not coordinated in existence status and distribution system. Residential land use, green space, commercial, educational, sport equipment deficient respectively 5 m2, 4 m2, 3 m2, 2/3 m2, 4/1 m2 and 2/ 8 m2 per m2 for person, and Parking shortage can be seen especially around main streets. Against industrial workshops, transportation, military and administrative warehouses are level surplus that because of their non-normative distribution in area level have resulted to create incompatibility in the pattern of land use neighboring. Overall, 722 hectares (65 percent) of adjacent system area lands is compatible, at 83 hectares (7/5 percent) relatively compatible, 205 hectares (18/5 percent) incompatible and 83 hectares (7/5 percent) remaining is indifferent. The most important cause of incompatibility is unsuitable distribution of workshop – industrial, urban equipment land uses in district level. Most incompatibility is observed in neighboring with educational land use which 60 percent of them are neighborhood incompatible.

Conclusion
Area population is forecast in the next 10 years to reach 100 thousand. Increasing population and density in region area will intensify over more due to per capitas deficit and Inappropriate
Proximity. Therefore, it is essential the spatial- local arrangement of region areas is corrected in terms of quality and quantitative. Currently, there are 135 hectares of open space in region, that 112 hectares can be used for the deficiencies obviation. Creating order and transfer obtrusive land uses (workshop industry, military, storages) and allocating lands it to public land use and parking and services is priority for reform Proximity system of land uses.

Keywords: Urban Land Use, Compatibility Analysis, Land Use Distribution, Neighborhood Nearest, District 1 Gorgan City.