

Land Use of the Geographical Information System (GIS) and Mathematical Models in Planning Urban Parks & Green Spaces

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Key words:

SUMMARY

Motivation

Using the Geographical Information System (GIS) and Mathematical Models in urban planning can effectively help municipalities to update planning and data of existing situation and it will create the possibility of dynamic urban planning at the vast level spacially in making more effective land use.

Freeing from the chain voluminous and less usable reports which are kept in archives for years and having access to the latest information and up-to-date changes in the projects for urban planners and urban managers was an important motivation in doing this research and project.

Objective

Presenting solution for qualitative and quantitative improvement of urban parks from the view point of functional hierarchy, proper and correct distribution at the city body, estimating the real shortages of the city, locating and proper and exact planning with regard to the potentials and accessible pieces of lands in the regions and population density of each of the urban areas, through employing the GIS are among the outstanding objectives of this project and plan. The most important qualitative and quantitative performed researches:

- Complete understanding of the status quo , entering data into necessary soft wares
- Studying Iran and global standards for ideal situation and regulating optimal model
- Defining the criteria of urban hierarchy and hierarchy of urban parks and classifying the existing spaces in the city based on the area, role and location
- Entering the suggested mathematical model into soft wares and calculated regional coefficients for each region to design the domain of the parks by class and region
- Digital analyzing of data by soft ware of system, overlaying the layers and outputting the evaluated map of the city based on the rate of access to green spaces and parks
- Output of the system resulting from the coverage of the previous stage and the map of the city lands with potential of converting into urban parks

Conclusion

- Presenting simple and reliable mathematical model to determine the domain of influence of urban land use.
- Displaying the effectiveness of Geographical Information Systems in dynamic urban planning
- Establishing the possibility of correct and up-to-date decision taking and reducing the waste of capital and time as the outcome of the old planning methods.

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