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Formulation Of A Framework For Identifying Potential Development Zones In A City Through The Application Of Spatial Analysis Tools (Space Syntax, Space Matrix And Functional Mix Analysis)

The study is to create a framework to identify potential development area or zone, which can be made available considering its strength on the basis of its road connectivity, built density and function of built use analyzed with the help of spatial analysis tools. First the process of analysis and method to correlate the types of analysis is created. The observation area is cross analyzed with the proposed land use for the area to validate and to understand the potential to create development in the area.

Kerala is a state with population density 859 as per census 2011, and is having a huge pressure on land resource and major cities area facing lack of land available for new development. The selected site is in Kochi Municipal Corporation in Kerala which is the most densified Corporation in the state. It is necessary to find out area which are having good connectivity along with available land and functional characters to develop. The typical method used to create land use proposal in development plans overlook many major factors and strength of the area in the site with potential for development.

The study finds out many such conflicts from its analysis. The method formulated is tested in a smaller area within the site, selected with a criteria created. The road network, built density and degree of functional mix of the area is analyzed with the help of tools of space syntax, space matrix and MXI model and is compared with the land use proposal of the area. From the test it is inferred that there are many area (land parcels), which can be made available and can be developed as per its strength and by creating additional development in some of its parameters could be possible in the selected area. It is also found that potential to develop many area with good strength and developable land are hindered due to restrictions in its classification in the land use proposal in development plan. The study also can be useful in identifying land availability, improvement in road network and possible additional built up area on the basis of its characters within the restrictions of land use proposal.

From the sample analysis, it is inferred that the potential of the area can be identified by analyzing the major factors and strength of the area like road network connectivity, built density and functional mix and new potential and availability of land for additional built area can be created by improvement of these parameters. The study is concluded with the recommendation that, additional parameters and its existing condition, strength and potential should be considered while preparing proposal in development plans otherwise will create hinder in development in areas with huge potential and strength. The framework created in the study is flexible enough to incorporate other parameters related to it.

Key words: *Space syntax, Space matrix, MXI model, Potential development, Functional mix*