Geophysical Research Abstracts, Vol. 9, 00516, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-00516

The creation of stability assessment spatial model of urban relief by GIS technologies (a case study of Yerevan city).

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The relief of urban territories, especially a mountainous one, has an important role for urban life organization. So the stability assessment of urban relief is one of the most important problems in ecological geomorphology of urban territories. The definition, estimation and mapping the quantitative and qualitative indices and characteristics of such urgent for urban construction. This analysis is important for planning civilian, industrial, municipal etc. object, in particular at the stage of designing districts, organizing or more precise definition of general scheme.

The relief of Yerevan city characterized by complicated natural conditions. On the territory of more than 230 sq. km we have variety of qualitative and quantitative characteristics, particularly hypsometry, the inclination of the surface, the predominating exposition of slopes, depth and density of relief dissection. Besides, we have also anthropogenic impact as a deposits. The characteristics of the distribution of which gives us the description of land-use on the territory of Yerevan city.

Hence to define the stability of morpholitological systems, develop and enrich the scheme of micro seismic division into the districts to single out favorable and unfavorable sites within the city limits for urban construction we create a spatial model on the environment of GIS technologies, particularly ArcView GIS using the Model Builder extension. In the result we have got an estimation synthetic map of the relief stability of Yerevan city reflecting the relief impact on urban construction and urban economy.