



## **Land-use planning of Volyn region (Ukraine) using Geographic Information Systems (GIS) technologies**

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Land-use development planning is carried out in order to create a favourable environment for human life, sustainable socioeconomic and spatial development. Landscape planning is an important part of land-use development that aims to meet the fundamental principles of sustainable development. Geographic Information Systems (GIS) is a fundamental tool to make a better landscape planning at different territorial levels, providing data and maps to support decision making. The objective of this work is to create spatio-temporal, territorial and ecological model of development of Volyn region (Ukraine). It is based on existing spatial raster and vector data and includes the analysis of territory dynamics as the aspects responsible for it. A spatial analyst tool was used to zone the areas according to their environmental components and economic activity. This analysis is fundamental to define the basic parameters of sustainability of Volyn region. To carry out this analysis, we determined the demographic capacity of districts and the analysis of spatial parameters of land use. On the basis of the existing natural resources, we observed that there is a need of landscape protection and integration of more are natural areas in the Pan-European Ecological Network. Using GIS technologies to landscape planning in Volyn region, allowed us to identify, natural areas of interest, contribute to a better resource management and conflict resolution. Geographic Information Systems will help to formulate and implement landscape policies, reform the existing administrative system of Volyn region and contribute to a better sustainable development.