

APPLICATION OF GIS TECHNOLOGY TO LAND MANAGEMENT AT THE DISTRICT LEVEL IN CROATIA

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As soil is the main natural resource for food production, land management has always been a very important issue. Moreover, as a trend of rapid population growth and thereby also increased food requirements has been present in the last decades in the whole world, and so also in Croatia, and as agricultural and forest land area is diminishing practically every day, sustainable land management assumes the role of providing conditions for survival of the mankind.

Planning of sustainable development and rational use of land resources at the district level in Croatia requires a large amount of good quality and reliable information, on the basis of which correct decisions can be made. Such planning is, however, hampered by the lack of necessary information, or by the fact that provision of such information is a very complex and time consuming task. Thanks to GIS technology, it is now possible to create targeted land information systems (LIS) with databases, which offer a relatively simple way of retrieving necessary information in the form of cartographic bases-thematic maps, and numerical and/or textual data. Hence, the main goal of this paper is to present the needs and possibilities of LIS creation at the district level in Croatia on the example of the Sopje district LIS, which was made as a pilot project in 2009.

Sopje district LIS was made on the basis of available pedological, topographic, geological, climatic and vegetation data, as well as data acquired from applied investigations for the needs of LIS. Methods of LIS creation are based on information technology and are compliant with the methodology of GIS production. Software packages AutoCad, Access, and ArcGIS were used in LIS production.

LIS enables users to retrieve quickly and in a simple manner, by searching or asking questions, a large amount of land information in the form of thematic maps or numerical and/or textual data from polygon or point based databases. Without GIS technology, the way to such information would certainly be much more complicated and time-consuming. Sopje district LIS is primarily intended for the employees of the Sopje district local self-government, the county branch of the Croatian Agricultural Extension Institute, and some county administration bodies creating development policies for agriculture, forestry, water management, environmental protection, and spatial planning.

Keywords: GIS, land, management, LIS, district, Croatia