

Abstract

Rural surveying projects carried out in the Polish countryside are mainly implemented by the land consolidation process. The method of implementation of this process is well known to both contractors and local governments. Till now, on the example of many objects, appropriate schemes were developed, especially the selection of appropriate tools to support the consolidation work. By digitizing the data contained on the agricultural map of soil, it is possible to use them widely in the implementation of land consolidation work. This work proposes to complete the land consolidation works with new elements that have not been considered or marginalized so far, and are presented on the digital agricultural map of soil.

First, the characteristics agricultural map of soil were discussed (the purpose of map preparation, the content of the map), and then the legitimacy and procedure for converting analogue maps to digital form was explained. The conversion was carried out for the Małopolska voivodeship. Based on these works, a spatial database characterizing the soil environment in the voivodeship was created. The next stage describes the possibilities of using the data contained on the agricultural map of soil in the rural surveying projects. Practical possibilities of supporting the implementation of consolidation works with data from the agricultural map of soil were presented. For this purpose, a test object was selected (the work was done on the example of the Przybysławice village, Kozłów commune), the methodology of the research and the tools used were described. Then, on the example of this village, the possibilities of creating different thematic layers, helpful in the process of realizing the land consolidation works were presented - derivative maps were generated from the agricultural map of soil, a study of erosion risk, a study of suggested changes in plot design directions, and a study of suggested changes in land use.

The conclusion of this work is the proposal to integrate the data contained on agricultural map of soil, with the environment for designing a new boundary layout in the process of land consolidation. This was done on the example of MkScal software, which is a tool dedicated to land consolidation work. Thus, new possibilities of data management from the digital agricultural map of soil were presented through their practical implementation in the technological process.

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