

Krakow, 05th June 2017

University of Agriculture in Krakow
Faculty of Environmental Engineering and Land Surveying
Department of Agricultural Land Surveying, Cadaster and Photogrammetry

Bogumiła Wańczyk

**The Methodology of identification of the areas proposed to consolidation
in semi-montane areas**

ABSTRACT OF THE PHD DISSERTATION

Complex land consolidation works are the only instrument which enables in a short time making significant changes in the spatial structure in a large area. Very large needs for those types of work implementation in Poland in connection with the limited pool of funding available for this purpose, indicate the need to develop methods, which in precise way identify areas where implementation of land consolidation works is necessary and where the procedure can give the greatest effects. This thesis contains analyze of the spatial planning issues in the foothills and semi-montane areas, which are especially valuable because of nature environmental resources. Nature resources for agriculture development are very low, so they often need additional support.

This thesis encapsulates the analysis of the current development of the Nowosądecki administrative district taking into consideration socio-economic situation, natural factors, calculation of several indicators and, in its final part, the demand for land consolidation in the whole region. The analysis of land surveying-cartographic data and farming maps enables a precise diagnosis of the present state of the spatial structure of agricultural areas and a proper identification of the areas qualifying for consolidation. The subject matter covers the whole district area, which is comprised of 16 communes, thus the process of the analysis was very laborious. Therefore, using specialised software, It has had to analyse a number of spatial data what let create the maps. It introduces the results of the analysis which have to determine the ranking of parts of Nowosądecki administrative district which shows the urgency of land consolidation works. For this purpose, the results which have been the subject of previous studies were used. The previous studies were connected with spatial differentiation of every parts of administrative district features like: land fragmentation, area structure of farms, areas without road access, the average land classification and the intensity of field obstacles presence, which make difficult in the new plots layout design process.

They have indicated a big diversity of the district in relation to land consolidation. It results from the type of the terrain, existing road infrastructure and land fragmentation. Excessive fragmentation of farm grounds constitutes one of the biggest obstacles for rational and profitable agricultural production. Identification of the areas where this phenomenon occurs with great intensity is an essential element of the identification process of areas which are accepted for the consolidation work.

The restructuring of the rural areas is and will still be one of the most important problems to be solved in our country. The lack of studies on spatial shaping may lead to even bigger socio-economic threats in the future. Acquiring funds is crucial for conducting the analyses and determining consolidation tasks and so analysing, planning, designing and management together with spatial information have a huge impact on administration. As land consolidation projects are very expensive, significant savings can be made in the stage of proper selection of consolidation targets and that should be the area of activity for future research.

Bogumiła Wańczyk