



## Public perceptions of rural landscapes in land consolidation procedures in Poland



Adrianna Kupidura<sup>a</sup>, Michał Łuczewski<sup>b</sup>, Robert Home<sup>c</sup>, Przemysław Kupidura<sup>a,\*</sup>

<sup>a</sup> Faculty of Geodesy and Cartography, Warsaw University of Technology, PL. Politechniki 1, 00-661 Warsaw, Poland

<sup>b</sup> Institute of Sociology, University of Warsaw, ul. Karowa 18, 00-927 Warsaw, Poland

<sup>c</sup> Research Institute of Organic Agriculture, Ackerstrasse, CH-5070 Frick, Switzerland

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### ABSTRACT

A high level of fragmentation of farms exists in many parts of Poland, which leads to inefficiency in farm management and a range of logistical problems. Land consolidation is a process that reverses fragmentation by enabling an exchange of plots of equivalent value between participants. The primary aim of land consolidation is to improve spatial and economic conditions for farming by decreasing the number of separate plots that belong to a given farm, adjusting the shape of plots to enable mechanized cultivation of soil, and decreasing the distance between dwellings and cultivated plots. Contemporary consolidation works, performed in compliance with the principles of sustainable development, enable creation of legal and spatial conditions that allow the multifunctional development of rural areas and may be used as an instrument to shape rural landscapes. However, the implicit value of landscape is often not taken into consideration during the plot valuation that is undertaken as part of consolidation procedures.

The aim of this research is to determine the perceptions and attitudes toward rural landscape elements held by three groups of landscape users: (i) visitors, (ii) farmers who live in areas that are not subject to landscape consolidation processes and (iii) farmers who are engaged in consolidation processes. The focus group method and the L-sort (Landscape sort) method were used to assess attitudes and perceptions, with particular focus on whether there are the differences between the groups and how the perception of landscape value is influenced by: (i) the land consolidation process itself; (ii) the development of farm tourism; and (iii) European Union policies. The results revealed a traditional pattern of landscape appraisal that is strengthened by a utilitarian approach to the value of land in the consolidation procedure. This pattern has the potential to change due to a developing awareness that optimally shaped landscapes may contribute to attracting visitors and/or allow the landowner to obtain financial support under European Union programs. The paper concludes that the esthetic and cultural value of landscape elements should be taken into consideration when evaluating land during the consolidation procedure.

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### Introduction

The Polish countryside is characterized by a high degree of fragmentation, which has resulted from the 'principles of inheritance' law that has led to the division of land in rural areas in the past (Trautsohl, 1985). In certain parts of Poland, the average surface area of a farm amounts to little more than 3 ha, while a farm may consist of up to 20 plots of unfavorable shape that are often dispersed in space and located far from dwellings. While

the fragmented agrarian structure is characterized by complex landscapes and high biodiversity, it also causes problems for agriculture. Fragmented farms are economically inefficient because of the increased distances that farmers need to travel to operate their farms and the increase in the number of crop edges. Furthermore fragmented farms necessitate more negotiated settlements with a larger number of neighboring farmers, while reducing control over farm management measures, such as weed control, as a large number of farmers are forced to cross each other's land. It is estimated that more than 3 million ha of arable land in Poland are adversely affected by fragmentation (Woch, 2006).

Land consolidation is one of the main instruments to counteract the ongoing fragmentation of the agrarian structure of Polish

\* Corresponding author. Tel.: +48 692455505.

E-mail address: [p.kupidura@gik.pw.edu.pl](mailto:p.kupidura@gik.pw.edu.pl) (P. Kupidura).

countryside and to shape the spatial structure of rural areas in Poland. The aim of land consolidation is to improve the economic conditions for agricultural and forestry activity pursued on farms by improving the spatial structure of farms, such as by decreasing the number of separate plots that compose farms, and improving the location of arable plots relative to dwellings. Consolidation and exchange of land can play a significant role in the concepts for development of the Polish countryside because the process provides an opportunity to create diverse landscapes with conditions for multifunctional development of rural areas and thereby create additional sources of income, such as with recreation and tourism, for the population of such areas.

Early attempts at land consolidation were conducted on a large scale after World War II and had negative consequences for landscape. The improvement of farms' spatial structure often included the modification of sites with no capacity for agricultural production (e.g. forests, scrub and waste lands), which resulted in significant simplification of countryside landscape structure and consequent deterioration of biodiversity. More recent consolidation and exchange processes have been conducted as a task within the scope of local government administration and were regulated by government legislation with an Act on the 'consolidation and exchange of lands' in 1982. Consolidation works, which change the ownership structure, provide an exceptional opportunity to shape the landscape of the countryside during the land consolidation procedure by creating the spatial and legal conditions for desired forms of land use.

At present, the issue of landscape shaping during land consolidation procedure can be understood very broadly (Pulecka, 2003, 2004). Landscape shaping in land consolidation processes is not limited to shaping the agricultural aspects of landscape function, but also includes esthetic, cultural, social, natural and economic aspects of the space that are connected with application of multifunctional development concepts (Pulecka and Kupidura, 2008). The scope of issues addressed in consolidation plans has the potential to include the creation of spatial conditions for the development of tourism functions in a given area; improvement of water conditions and water management in areas subject to consolidation (e.g. by designating space for the creation of small retention reservoirs); the introduction of forests and shrubs into the agriculturally productive environment in order to prevent wind erosion of soil; and the creation of edge habitats of local importance to connect ecosystems and protect biological diversity (Pulecka and Kupidura, 2008).

However, the reality of the land consolidation procedure is that landscape is often treated as an objective reality that exists outside human perception rather than as a cultural reality, which has resulted in a reduction of landscape to the utilitarian dimension. Participants in a consolidation process take part in the valuation of plots that are subject to equivalent exchange and the value of plots owned by participants in individual consolidation procedures is expressed in 'points', which are retained although in another spatial configuration, within an accuracy defined by law. The main factors that influence the valuation of plots are the soil quality class and the distance between the plot and the dwelling, while the natural, esthetic, historical or cultural values of landscape elements are not taken into account by the land valuation system.

The aim of this contribution is to describe and explain the value of the rural landscape for country dwellers and for short-term visitors. A further aim is to determine whether people recognize separate elements and, if so, what relative value is assigned to these elements. The evaluation of the landscape elements will then be discussed in relation to the land consolidation process itself, the development of farm tourism, and European Union agricultural policies.

## The significance of landscape in Polish land consolidation

Landscape evolves over time. It records the history of the generations that inhabit an area and reflects the culture in the way the space is shaped. The concept or policy behind any development of contemporary countryside should consider the complexity of landscape and integrate local traditions, culture, and values (Raszeja, 2005). The main instruments for implementing the principles of local (communal) spatial policy in Poland are local studies of conditions and directions of spatial planning that lead to the creation of local development plans. However, these plans deal with the issue of shaping rural landscape in a very superficial manner and the lack of attention that is paid to the issue of countryside landscape shaping has resulted in a gradual degradation of landscape in Poland. Raszeja (2000) nominated a list of the main threats to the spatial order of rural areas in Poland, which include:

- Deterioration of historical settlement structures (such as the inappropriate location of built up areas),
- Deformation of the historical structure of villages due to uncontrolled spatial development,
- Appearance of new spatial forms in countryside landscape that are alien to such landscape (such as housing estates typical for towns/cities),
- Unification of village architecture, implementation of town/city architectural standards, which are not adjusted to the rural way of life,
- Destruction of historic buildings and complexes, as well as of other distinctive elements of rural space (small architectural items: shrines, roadside crosses, etc.),
- Unification of landscape structure resulting from modernization of agricultural production (cutting down of trees and shrubs, draining, filling in of small water basins in the fields, etc.).

The protective actions that are undertaken with respect to the rural landscape are usually limited to providing statutory protection solely for areas that have been designated as valuable in prior local studies. These areas are usually dominated by built environments, such as historic buildings and complexes, or are insular areas in the landscape, such as areas of natural interest or beauty. There appears to be no conviction within the collective consciousness in planning and policy that the Polish rural landscape inherently constitutes a special value that is worthy of protection and preserving (Raszeja, 2000; Kowicki, 2005). Furthermore, there is little evidence in Polish planning and policy of an appreciation of the relationship between landscape and wellbeing (Raszeja, 2000, 2005; Kowicki, 2005).

## Understanding the Polish landscape

Sociologists and psychologists have contributed to increased understanding of the key role of landscape in the life of contemporary mankind. Landscape is one of the components that determine fundamental choices we make in our lives, such as where we live and where we work. Moreover, it also influences the general feeling of wellbeing and "sense of place" (Moore-Colyer and Scott, 2005). Arguments have been proposed for several factors, or groups of factors, that could determine landscape preferences, and much of the published study of landscape preferences has nominated either a biological or cultural basis of esthetic preferences, with few attempts to explain the apparently irreconcilable differences between them (Home et al., 2010). Human preferences for landscapes have been found to be remarkably consistent in a range of cultural contexts (Hartig and Staats, 2005), with an attraction to landscapes that are natural, as opposed to urban (Ulrich,

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