



**ANALYSIS OF THE POSTWAR WORKS OF LAND  
CONSOLIDATION IN THE VILLAGES OF THE LEŻAJSK  
DISTRICT IN CHRONOLOGICAL ORDER, AND CADASTRE  
BUILDING IN POLAND**

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***Abstract***

The article raised the subject of the analysis of land consolidation works in the years 1945-2013. The authors present in selected time intervals, the results of Land consolidation in the Leżajsk District (in the Podkarpackie Voivodeship). The study area is located on the territory of the lands historically belonging to the Austrian partition, under the influence of the principles of Austrian cadastre. These problems are described in the compilation with the changes in the law on setting up, maintaining and modernizing the Land and Buildings Registry (EGiB) in post-war Poland. The works of land consolidation are important in the process of creation of the real estate cadastre. Under current regulations the role of cadastre of real estate in Poland plays EGiB. This cadastre however has several flaws, and as a cadastral system of European standards, should constitute the backbone of a functioning real estate management and be the basis for legal, fiscal and planning actions of the state. In each of these aspects of the real estate economy important role play the configuration of borders, optimization of the shape and surface of the land and regulated legal status of the land. In the opinion of the authors land consolidation procedures, can be an effective tool for corrections of the plots geometry and regulations of the legal status of land.

**Key words:** land consolidation, real estate cadastre, EGiB

## **INTRODUCTION**

Spatial image of today's rural areas is the result of centuries of human activity remaining in close connection with the prevailing socio-economic relations and natural conditions. The man, in order to secure means of livelihood was changing the natural landscape adapting it to his needs. Environmental changes occurred as a result of settlement process and of the divisions of colonization space. As a result of these divisions various forms of land use in the configuration of the land, of agricultural land, traffic routes and buildings adapted to land relief were formed. As a consequence of economic development the original spatial layouts of land was undergoing continuous transformations (Noga K., 2001). An important role in shaping the space had the ownership of land, registered in the land cadastre. Studies have shown that as a result of activities, described in detail *inter alia* in (Leń 2009, 2010, 2012, Leń, Noga 2010, Leń, Matysek, Kovalyshyn 2015, Leń, Bal, Kovalyshyn 2015) occurred considerable fragmentation of land in the form of so-called patchwork of land. This problem also applies to many European countries, including Slovakia, of which she wrote extensively Hudecova (Hudecova 2007, 2014, 2015). Mostly narrow and long plots, spread over a large area, separated by land of other owners were formed. A major role in this scope was played by the process of land inheriting under the law of succession over the centuries. The resulting flawed spatial layouts can be converted e.g. through comprehensive land consolidation. However, for legal, technical and sometimes political reasons, it was not possible to carry out in specific places and at selected time intervals (Mika 2010). Therefore, over the years, the problem of incorrect structure of the land grew in many areas of Poland, especially in the south-east and south. Not for all lawmakers and for the directly interested parties (land owners or managers) it was obvious, that the process of land consolidation plays an important role in arranging the rural space, because it stimulates the development of the functions of these areas among others, in economic, social or environmental spheres. Furthermore, this process, through changes in ownership and usage structures, gives the possibilities to separate functional and spatial areas, eliminating in this way the potential spatial, environmental and social conflicts.

## **MATERIALS AND METHODS**

The study area was narrowed to the administrative borders of the Leżajsk district. This article aims to analyze the consolidation works for the years 1945-2013 and to demonstrate the benefits of its carrying out for the construction of real estate cadastre in Poland. Cadastre should form the core of a functioning real estate management and be the basis for legal, fiscal and planning actions. In each

of the aspects of real estate management important role has the configuration of borders, optimization of the shape and surface of plots and regulated legal status of land. Under current regulations the role of cadastre of real estate in Poland plays the Land and Buildings Register (EGiB).

## **THEORY AND CALCULATIONS**

The greatest advantage of consolidations, in the context of the construction of real estate cadastre in Poland – in addition to the reconfiguration of the borders of plots (real estate) is determination of the legal status of cadastral objects. The borders created in the process of consolidation have the legal validity and they are the basis for entry into the register of the legal status of Land and Mortgage Register (KW). As reported in (red. Bielska, Leń 2015) in terms of socio-economic development of rural areas – land consolidation process positively affects the development of agriculture, in particular ecological farming and other non-agricultural functions. Land consolidation is associated with the specific objective PROW 2014 – 2020, which is *„improving the economic performance of all farms and facilitating the restructurization and modernization of farms, especially in order to increase market participation and market orientation, as well as the diversification of agricultural production”*. Carrying out consolidation process facilitates the maintenance of agricultural production by reducing costs at the farm, paves the way for the introduction of modern technologies. It helps in the rational use of the resources of arable land by adjusting the field layout and of the existing infrastructure to meet the needs of farms.

## **RESULTS AND DISCUSSION**

### **1. Analysis of land consolidation works in designated time intervals on the background of legal changes in EGiB**

#### **1.1. Consolidation works in the years 1945-1968, and the beginnings of EGiB in Poland**

When setting up the uniform land cadastre in postwar Poland data were used from the cadasters: Austrian, Prussian and zamojski. This situation came from the historical fact that the Polish lands were belonging to the invaders territories. In the geodesic practice, to this day the source material to other geodetic elaborations is a cadastral map from the periods of partitions (Mika, Siejka 2014). In the Austrian cadastre, the documentation of which covered approximately 14% of Polish territory, the unit of land surface was a parcel. This was an agricultural land or a portion of it, which is the subject of the same use and ownership (Fedorowski 1974). Like in the Austrian cadaster, on the lands of annexed

by Prussia, covering about 45% of the Polish territory, the basic unit of surface area was also a parcel. Then it was defined as a continuous area of land use, being the subject of separate ownership or territorially continuous area of land marked with a separate number in the cadastral documentation, while maintaining the exclusive property of one person (Fedorowski, 1974). Apart from the Prussian and Austrian cadastres, in the area of Poland occurred zamojski cadastre concerning approximately 0.6% of Polish territory. Over 40% of our country is the territory of the former Russian partition, where cadastre in the classical form did not exist in practice (Noga i in. 2003). In the postwar Poland, the concept of the parcel was replaced by the notion of plot, which is today the primary (leading) spatial object EGİB. The definition of the plot is not strictly connected with the right of ownership to it, and the concept of the cadastral parcel is still functioning in everyday language of the owners. The study area was limited to the territory of the former Austrian partition, which representative is analyzed district.

Leżajski district, which covers an area of 58376 hectares, includes 40 registration precincts. So far, land consolidation works were made in 29 registration precincts, area of which exceeds 46113 hectares, which represents 78.99% of the total district. In the connection with the situation formed after the end of World War II on several registration precincts regulatory and interchange proceeding has been conducted setting out plots with regular borders and direct access to roads. The networks of new roads and of detailed water drainage facilities were designed. In the years 1945-1968 regulatory and interchange proceeding covered 4 registration precincts: Dębno, Chałupki Dębnińskie, Słoboda and Dąbrowica with total area of 4488 hectares, which represents 7.69% of the total district area.

## **1.2. Consolidation works in the years 1969-1982 on the background of acts in postwar EGİB**

On January 27, 1968 the Law of 24 January 1968 about consolidation and exchange of land entered into force, published in the Journal of Laws No. 3, pos. 13. This law with the passage of time has been amended several times. With the entry into force of the Act the following provisions on land consolidation were repealed:

1. The Act of 31 July 1923 on land consolidation,
2. Decree of The President of the Republic of Poland dated March 7, 1928 r. on amendments to the decisions made on the basis of land consolidation,
3. Decree of 14 April 1948 on the adjustment of the rules of consolidation procedure, provided for in the Act of 31 July 1923 about land consolidation to the conditions arising in connection with war
4. Decree of 16 August 1949 on the exchange of land.

In accordance with Art. 6 paragraph 1 on of the consolidation and exchange of land the consolidation procedure is carried out request signed by at least half of owners (owners-like possessors) of all farms with an area of over 1 ha, located at the premises of the village or ex officio. (the Law of 24 January 1968. about consolidation and exchange of land (Journal of Laws No. 3 item 13)). It should be mentioned, that the concept of a farm in no way coincides in meaning to the concept of cadastral plot. The most frequently farm consists of several separate plots, sometimes even non-adjacent. In the Leżajsk district, analyzed for the purposes of this publication, land consolidation works carried out during this period of time were initiated ex officio. Land consolidation proceedings involved in the years 1969-1982, the Leżajsk district, 12 registration precincts, area of which is 25 626 ha, which represents 43.90% of the total area of the district. The consolidation of land covered the precincts: Kolonia Polska, Piskorowice, Ożanna, Rzuchów, Kuryłówka and Tarnawiec, Stare Miasto and Przychojec, Kulno, Giedlarowa, Wierzawice, Brzyska Wola and Wólka Łamana, Jastrzębiec, Sarzyna. In EGiB the legal situation in postwar Poland reflected, legal acts together with the relevant implementing rules listed in chronological order in Table 1. Decree of 24 September 1947 on the land and building cadastre abolished all applicable regulations in force, issued by the invaders.

### **1.3. Land consolidation in the years 1983-1989 – stagnation of legislative changes in EgiB**

On 6 April 1982 the Act of 26 March 1982 on land consolidation and exchange, published in the Journal of Law of 6 April 1982. Nr. 11, item. 80 entered into the force. The Act was amended several times and is valid until today. With the entry into force of this Act, the Act of 24 August 1968 land consolidation and exchange was repealed. According to the art. 3 of the quoted above Act land consolidation can be initiated at the request of the majority of the owners of farms, situated in the projected area of consolidation, or at the request of land owners, who have a total area of more than a half of the projected consolidation area. According to the art. 3a, consolidation proceedings may be initiated ex officio after consulting the Village Council, as well as social-professional farmers' organizations operating in the village. In the years 1983-1989 land consolidation proceedings in the district Leżajsk included 2 register precincts with a total area of 500 ha, which represents 0.85% of the total district: Ruda Łańcucka and Łukowa. Over the years in terms of the impact of legislation on the character of EGiB data a certain stagnation can be seen. To 01.01.1989 the Decree of 02.02.1955 on register of land and buildings was in force and The Regulation of Ministers of Agriculture and Communal Management of 20 February 1969 on the land registry. This period is closely linked to the political situation of Poland, being heavily influenced by the policies of the Soviet Union and the ban on the

rights of private ownership and expropriation of property for the benefit of the state. The Act of 17.05.1989 Geodetic and Cartographic Law was introduced only from 1 July 1989. In the version amended several times it was in force until 2015 – until its uniform text was published.

**Table 1.** The legal bases of the cadastre and land register in postwar Poland.

The legal act	Period of validity	Implementing rules	Period of validity
Decree of 24 September 1947 on the land and building cadastre	from 24.09.1947 to 14.02.1955	Regulation of the Minister of Construction of 6 December 1950. relating to a proceeding with the organization, establishing and running land and building cadastre	from 23.12.1950 to 14.02.1955
Decree of 2 February 1955 on the Land and Buildings Registry	from 15.02.1955 to 1.07.1989	Instruction of the Minister of Agriculture of 21 April 1955 on the establishment and management of land registry, principles for preparation of the lists of land and of fees for extracts of maps and for copies and extracts from the records and documents constituting part of the registration report in the area of communes, settlements and towns non constituting districts	from 29.04.1955 to 24.03.1969
		Regulation of the Ministers of Agriculture and Communal Management of 28 June 1955 on the procedures for reporting and making changes in data included in records of land and buildings	from 14.07.1955 to 14.01.1997
		Regulation of the Ministers of Agriculture and Communal Management of 29 July 1955 on the templates for reporting changes in data included in records of land and buildings	from 12.08.1955 to 14.01.1997
		Council of Ministers Regulation of 4 June 1956 on the soil classification	from 16.06.1956 to 28.11.2012
		Regulation of the Ministers of: Agriculture, Communal Management, Finance and Purchase of 31 October 1956 concerning the introduction to the land registry changes in the possession of land and determining in connection with these changes the dimension of the land tax and mandatory quotas	from 20.11.1956 to 1.06.1960

Decree of 2 February 1955 on the Land and Buildings Registry	from 15.02.1955 to 1.07.1989	Instruction of the Minister of Communal Management of 8 September 1956 establishment and management of land registry, principles for preparation of the lists of land and of fees for extracts of maps and for copies and extracts from the records and documents constituting part of the registration report in the Capital City of Warsaw, a city of Łódź and the cities constituting districts	from 29.11.1956 to 24.03.1969
		Regulation of the Ministers of Agriculture and Communal Management of 13 May 1960 concerning the introduction to land records changes in the possession of land	from 20.06.1960 to 14.01.1997
		Regulation of the Ministers of Agriculture and Communal Management of 20 February 1969 on the land registry	from 26.03.1969 to 14.01.1997
Act of 17.05.1989 Geodetic and Cartographic Law	from 1 July 1989	Regulation of the Ministers of Spatial Planning and Construction and the Agriculture and Food Management of 17 December 1996 on the Land and Buildings Registry	from 15.01.1997 to 30.09.1999
		Regulation of the Minister of Internal Affairs and Administration of 4 March 1999 on the method of presentation of data in the register of land and buildings	from 13.05.1999 to 30.06.2000
		Regulation of the Minister of Regional Development and Construction of 29 March 2001 on the register of land and buildings	from 02.06.2001
		Regulation of the Council of Ministers of 17 July 2001 demonstrating in the land and building register data relating to land, buildings and premises, located in the closed areas	from 15.11.2001
		Regulation of the Council of Ministers of 12 September 2012 on the soil science land classification	from 29.11.2012
		Regulation of the Council of Ministers of 17 January 2013 on an integrated information system about properties	from 9.03.2013
	Proclamation of the Marshal of the Polish Parliament from 18 March 2015 On the announcement of the uniform text of the Act – Geodetic and Cartographic Law	Publication Date 14 April 2015 Journal of Laws poz.520	

The legal act	Period of validity	Implementing rules	Period of validity
The Act of 15 May 2015 amending the Act – Geodetic and Cartographic Law	Publication Date 17 June 2015 Journal of Laws poz.831 <b>In force from 1.01.2015</b>	Regulation of the Minister of Administration and Digitization of 6 November 2015 amending the regulation on land and buildings register	Publication Date 11 December 2015 Journal of Laws position 2109 <b>In force after 30 days from the day of publication.</b>

Source: elaboration based on (Mika, Kwartnik and others Monograph UR 2015)

#### 1.4. Consolidation works in 1990-2005, in terms of substantial reforms of EGiB

In 1990-2005, in the Leżajsk district land consolidation works included 6 registry precincts, with total area of 13 509 ha, which represents 23.14% of the total district area. In connection with the implementation of the political reform of the State the bodies competent to perform the proceedings of land consolidation have changed and so: competences of the Head of the Municipality in the field of Land consolidation were taken over by the Head of the Regional Office, and later after the districts were created on 1 January 1999 consolidation proceedings are carried out by the head of the district authorities at the expense of the Treasury as a task of the government administration. Following precincts were consolidated: Maleniska, Jelna, Brzóza Królewska, Wola Zarczycka, Wólka Grodziska, Grodzisko Górne.

In 1990-2005, the legal and technical reform EGiB took quite a fast pace. In the first place, the fact of the upcoming Polish accession to the European Union contributed to this, and therefore there was a need of quick reforms towards alignment of the legislation with the European norms and standards. The Act of 17.05.1989 Geodetic and Cartographic Law was still in force, however, implementing regulations in the field of EGiB have changed. Their implementation has to lead mainly to the computerization of registry data sets. This problem is illustrated in detail in Table 1.

### **1.5. Consolidation works in the years 2006-2013**

After the accession of Poland to the European Union (1.05.2004.) the opportunity was created financing of agricultural land consolidation in two successive EU programs. The first one was carried out in 2004-2006. Land consolidation works were financed under the Sectoral Operational Programme “Restructuring and modernization of food sector and rural development 2004-2006” Priority II “Sustainable development of rural areas” Measure 2.2. „Land re-parceling” – completed in June 2008. ([www.wgik.dolnyslask.pl](http://www.wgik.dolnyslask.pl)). The beneficiary of aid to the “Land consolidation” was the head of the district authority. Assistance followed the signing of the agreement between the beneficiary, ie. the head of the district, and the Board of the Voivodship. On the other hand – from the 2007 land consolidation works are implemented under the Rural Development Programme 2007-2013. Financial assistance is provided under the first priority axis ie. Improving the competitiveness of agriculture and forestry sectors, as a Measure 125 „Improving and developing infrastructure related to the development and adaptation of agriculture and forestry by the land consolidation”(www.prow.sbr.pl).

On 11.04.2007 The Law of 7 March 2007 on support for rural development with the participation of the European Agricultural Fund for Rural Development (Journal of Laws no 64 pos. 427 of 11.04.2007) entered into force. The granting of the aid is regulated in detail by the provisions of the Regulation of the Minister of Agriculture and Rural Development of 24 April 2008 on the detailed conditions and procedures for granting financial assistance under the measure „ Improving and developing infrastructure related to the development and adaptation of agriculture and forestry by the land consolidation” under the Rural Development Programme for 2007-2013 (Journal of Laws no 80 pos. 480). According to the Regulation refunded are the eligible costs incurred by the beneficiary, but in the Podkarpackie Voivodeship it can not be more than 500 euros per 1 ha of land under consideration for land consolidation incurred for the development of consolidation procedures and 900 euros on 1.0 hectare of consolidated land incurred for the execution of post-consolidation works.

On the basis of the EGiB reforms during this period a number of actions to align the standards of the European models can be seen. The key changes can be seen by issuing the Ordinance of the Council of Ministers of January 17, 2013 on an integrated information system for real estates, assuming (among other things) the creation in Poland a central repository of copies of land and buildings data sets, called „central repository”. Land consolidations during this period are intensified in many areas. Including – the area of research. This is caused by the creation of new opportunities (in the system of computerized spatial databases EGIB), which is fast and transparent generating areas of defective geometry of registry borders. Thus the scale of the problem could be observed, which the fragmentation of farms in different registry precincts is. Alas modernization ef-

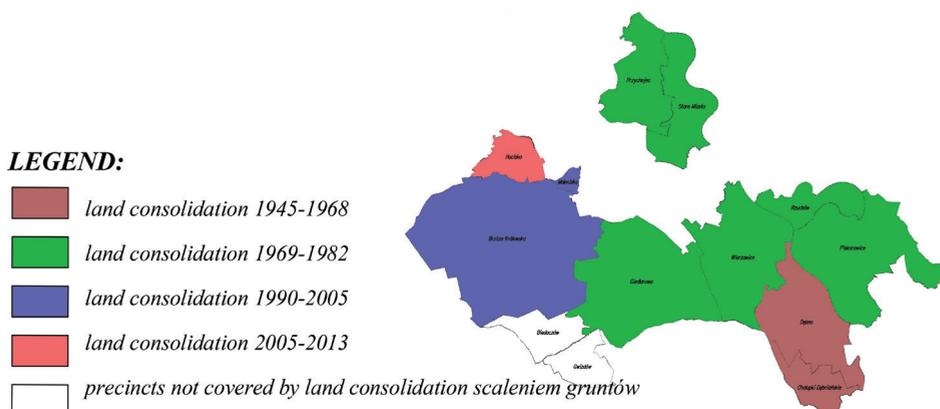
forts towards building registry databases were aimed mainly for repairing topology of plots in the computer system, rather than improving geometry of plots in terrain.

**Table 2.** Summary of the consolidation works done in the Leżajsk district

No.	Municipality	Precinct name	Precinct area (ha)	Period of performing				
				1945-1968	1969-1982	1983-1989	1990-2005	2005-2013
1	Leżajsk	Brzoza Królewska	4909				1992	
2	Leżajsk	Chałupki Dębniańskie	619	1962				
3	Leżajsk	Dębno	1744	1962				
4	Leżajsk	Giedlarowa	2995		1978			
5	Leżajsk	Hucisko	579					2013
6	Leżajsk	Maleniska	105				1995	
7	Leżajsk	Piskorowice	2498		1970			
8	Leżajsk	Przychojec	1283		1974			
9	Leżajsk	Rzuchów	675		1971			
10	Leżajsk	Stare Miasto	1174		1974			
11	Leżajsk	Wierzawice	2102		1978			
<b>Total Leżajsk Municipality</b>			<b>18 683</b>					
12	Nowa Sarzyna	Jelna	2502				1990	
13	Nowa Sarzyna	Łukowa	258			1989		
14	Nowa Sarzyna	Ruda Łańcucka	242			1989		
15	Nowa Sarzyna	Sarzyna	2822			1984		
16	Nowa Sarzyna	Tarnogóra	1411					2013
17	Nowa Sarzyna	Wola Zarzycka	3508				1998	
<b>Total Nowa Sarzyna Municipality</b>			<b>10 743</b>					
18	Kuryłówka	Brzyska Wola	3076		1978			
19	Kuryłówka	Dąbrowica	1449	1968				
20	Kuryłówka	Jastrzębiec	1342		1980			
21	Kuryłówka	Kuryłówka	1984		1972			
22	Kuryłówka	Kulno	2659		1975			
23	Kuryłówka	Kolonia Polska	785		1969			
24	Kuryłówka	Ożanna	1446		1971			
25	Kuryłówka	Słoboda	676	1958				
26	Kuryłówka	Tarnawiec	425		1972			

No.	Municipality	Precinct name	Precinct area (ha)	Period of performing				
				1945-1968	1969-1982	1983-1989	1990-2005	2005-2013
27	Kuryłówka	Wólka Łamana	360		1978			
<b>Total Kuryłówka Municipality</b>			<b>14 202</b>					
28	Grodzisko Dolne	Grodzisko Górne	1856				2008	
29	Grodzisko Dolne	Wólka Grodziska	629				2005	
<b>Total Grodzisko Dolne Municipality</b>			<b>2 485</b>					
<b>Total</b>			<b>46 113</b>					

Source: own study based on data from the District Office in Leżajsk

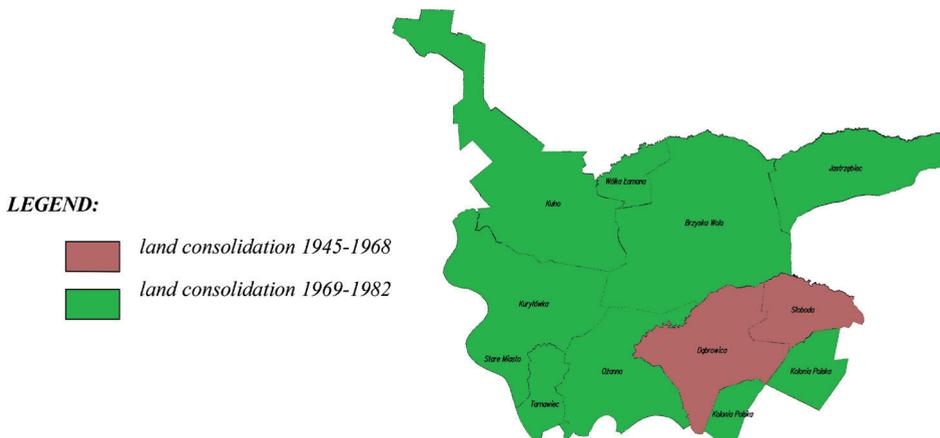


Source: Miazga, 2015

**Figure 1.** Map of land consolidation in the Leżajsk municipality as for 2015

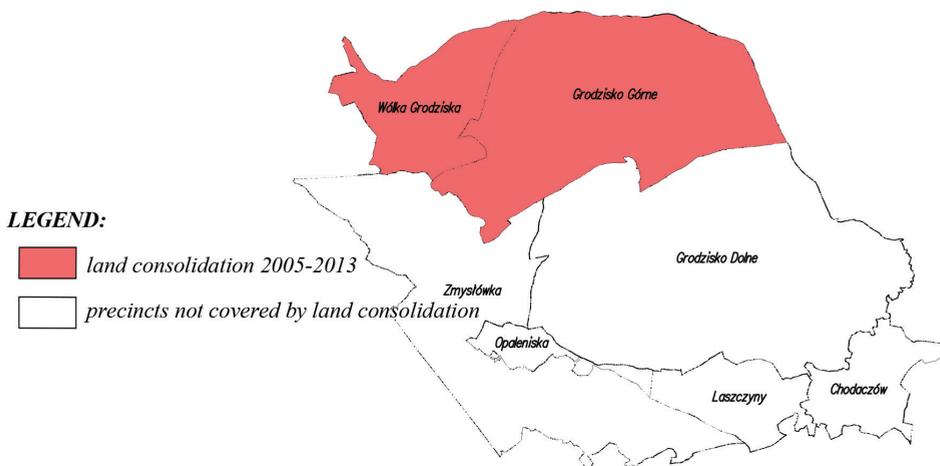
In the years 2006-2013 in the Leżajsk district land consolidation included 2 registry precincts, with total area of 1,990 ha, which represents 3.41% of the total district area. Land consolidation works were carried out under the PROW 2007-2013. The first was Hucisko precinct with the area of 579 ha. Land consolidation was carried out in 2012-2013. Initiation of consolidation proceedings was made under the provisions of the Head of the Leżajsk district Nr.GN.661.30.2012 of 19.07.2012. Approval of the project of land consolidation of the Hucisko village was based on a decision of the Head of the Leżajsk district Nr. GN.661.30.2012 of 27.09.2013. The second precinct subject to land consolidation works was Tarnogóra precinct with an area of 1,411 ha. Land consolidation was carried out in the years 2012-2013. Initiation of consolidation proceedings was made under the

provisions of the Head of the Leżajsk district Nr.GN.661.29.2012 of 19.07.2012r. Approval of the project of land consolidation of the Tarnogóra village was based on a decision of the Head of the Leżajsk district Nr. GN.661.29.2012 of 18.12.2013r. Chronological summary of the land consolidation works is shown in Table 2, and their spatial image, in individual municipalities illustrate figures 1, 2, 3 and 4.



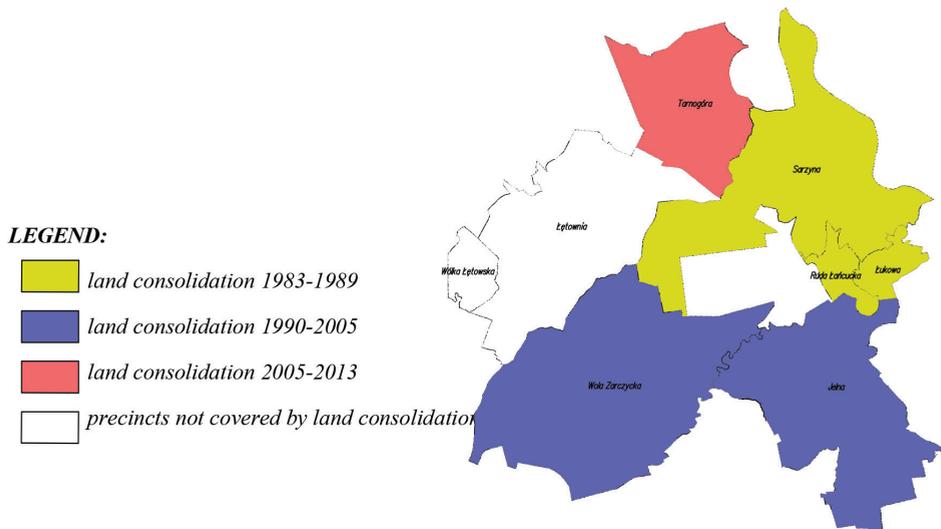
Source: Miazga, 2015

**Figure 2.** Map of land consolidation in the Kuryłówka municipality as for 2015



Source: Miazga, 2015

**Figure 3.** Map of land consolidation in the Grodzisko Dolne municipality as for 2015



Source: Miazga, 2015

**Figure 4.** Map of land consolidation in the Nowa Sarzyna municipality as for 2015

## CONCLUSIONS

The consolidation of land is one of the basic rural area development activities, which, together with the post-consolidation development comprehensively organizes agricultural production area. The changes in the plots layout, created a network of agricultural transport routes providing access to each plot and suitable system of water management facilities have a positive influence on improving economic conditions and on increasing of the productivity of farms. It is also an opportunity to regulate a number of issues related to the construction of the cadastre. The case study limited to the administrative borders of the Leżajsk district, reflects the situation of the whole Podkarpackie Voivodeship where the consolidation of land covered most of the districts lands. In the area of research, so far consolidation was completed on 29 precincts, covering a total area of 46 113 ha, which represents 78,99% of the total county area. Considering the forecasted land consolidation within the PROW 2014-2020 the total area of consolidated land will be 48 803ha, which will constitute 83.60% of the total county area. Analyzing the land consolidations carried out in the Leżajsk district at different times by grouping indicated in Table 2 of this report it can be stated that most of the land consolidations were made in the years 1969-1982. Land consolidations during this period covered 14 registration precincts, with a total area of 22 804 ha, which represents 49.45% of the total land area subject to con-

solidation. Until the entry of Poland into the European Union land consolidation was carried out on 27 registration precincts, with a total area of 44 123 ha, which represents 75.58% of the total land area subject to consolidation. During this period land consolidation activities included only surveying and formal and legal works leading to the approval of the project of consolidation and to the introduction in the new ownership, but it did not include the post consolidation management, because these works were performed by the relevant municipality. Due to limited financial resources allocated from the Agricultural Land Protection Fund for the post consolidation development the works lasted several years. This was the factor adversely affecting the overall assessment of land consolidation.

After amending the Law on the land consolidation and exchange, land consolidation works carried out under PROW 2007-2013 on two registry precincts and projected to perform consolidation of within a single registry precinct under PROW 2014-2020, they are also execution of post consolidation land management, which is a part of the Measure titled “Land consolidation”. Post consolidation land management is carried out by the Head of the District as a task of the government administration. Land consolidations carried out in such a way provide full arrangement of agricultural production space including a network of roads and detailed water management facilities and they constitute the basis for a significant improvement in economic conditions in rural areas. In parallel with the legal and technical activities in direction of land consolidation, organizational and legal activities aiming to modernize EGiB and to the establishment of a reliable cadastre of real estate in Poland can be observed. It seems that both procedures have the same goal with relation to rural precincts – the improvement of the spatial and ownership of land structures. Perhaps tested and for years performed consolidations procedures could be used as a tool to regulate the legal status of land in selected areas? This problem has not been completely solved in this study. However, it can be a contribution to further analyzes in this direction. Studies have shown, however, the importance of the land consolidation works in the construction of cadastre databases in respect of regulation of the legal status of the areas covered by the consolidation.

## REFERENCES

Bielska A. Leń P., Balawejder M., Gniadek J., Król Ż., Kupidura A., Oleniacz G., Sobolewska-Mikulska K., Turek A. (2015) Land consolidation as a determinant of multifunctional development of rural areas, Wyższa Szkoła Inżynieryjno – Ekonomiczna z siedzibą w Rzeszowie, Rzeszów 2015.

Fedorowski W. (1974) Land Registry. Państwowe Przedsiębiorstwo Wydawnictw Kartograficznych, Warszawa, 1974.

Hudecová, L. (2007) Metodický návod na vykonávanie geodetických činností pre projekt pozemkových úprav. In Pozemkové úpravy na Slovensku II. : Zborník referátov zo seminára.Štrbské Pleso,SR,25.-26.10.2007. Prešov : Rokus s.r.o., 2007, s.15-22. ISBN 978-80-89055-76-0.

Hudecová, L. (2014) Pozemková držba na území Slovenska. In Slovenský geodet a kartograf. Roč. 19, č. 1 (2014), s. 4-8. ISSN 1335-4019

Hudecová L. (2015) The Effectiveness of Land Consolidation in Slovakia. In FIG Working Week 2015 [elektronický zdroj] : technical programme and proceedings. Sofia, Bulgaria, 17. – 21. 5. 2015. 1. vyd. Copenhagen : International Federation of Surveyors, FIG, 2015, online, [13] s. ISSN 2307-4086. ISBN 978-87-92853-35-6.

Leń P. (2009) Out-of-village owners lands sizes of and the possibility of their liquidation (on the example of the village in the district of Brzozów, Podkarpackie voivodeship). Development of rural areas – current status and perspectives, Puławy 2009.

Leń P., Noga K. (2010) Analysis of individual land fragmentation in villages of the Brzozów district Podkarpackie voivodship [w]: Infrastructure and Ecology of Rural Areas, PAN w Krakowie, 2010.

Leń P. (2010) Analysis of land fragmentation on the example of the Brzozów district [w]: Infrastructure and Environment of Rural Areas, Wydawca: PAN w Krakowie 2010.

Leń P. (2012) Regularities in the size of occurrence of the out-of-village land on the example of the villages in the Brzozów district. [w]: Infrastructure and Environment of Rural Areas, PAN w Krakowie 2012.

Leń P., Bal A., Kovalyshyn O. (2015) The use of quantum GIS program in the analysis of the spatial structure of the Olszanica village. ВІСНИК, ВОЛИНСЬКОГО ІНСТИТУТУ ЕКОНОМІКИ ТА МЕНЕДЖМЕНТУ. №13 2015.

Leń P., Matysek I., Kovalyshyn O. (2015) Dimensions of plots belonging to out-of-village owners in the village of Będziemyśl, commune of Sędziszów Małopolski. Geomatics and Environmental Engineering 9/2 2015.

Miazga K. (2016) Analysis of land consolidation works in the villages of the district Leżajsk. Thesis Engineering. Rzeszów School of Engineering and Economics, 2016.

Mika M. (2010) History of Polish cadastre. Infrastructure and Environment of Rural Areas., 6, 2010.

Mika M., Siejka M. (2014) The study the digitalisation degree of data and the use of cadastral maps in the EGİB in the area of the selected district in Podkarpackie voivodship. Infrastructure and Environment of Rural Areas, II/2, 2014.

Mika. M., Kwartnik-Pruc A., Leń P., Trembecka A., Bielska A., Dawid L., Deska K., Oleniacz G. (2015) „Selected issues of the development of cadastre of real estate in Poland. Contemporary issues and trends”. MONOGRAPHY, Wyd. Uniwersytetu Rolniczego, Kraków 2015, ISBN 978-83-64758-20-1.

Noga K., (2001) Methodology of programming and implementation of land consolidation and exchange works in a comprehensive approach. Akademia Rolnicza im. H. Kołłątaja w Krakowie, Kraków 2001.

Noga K., Gryboś F., Pałach M., Knoll L., Całka H., Radzio W., Tomczyk-Krause I., Grabczyński R., Beściak P., Kukła A., Łyszczek D., Mączewski K., Brasse M., Pindelski J., Wojciechowski J., Kochański S., Dżinek D., Machnicka G., Niewadziś G., Nieruchalska Z., Michałak M. (2003). Polish cadastre yesterday, today and tomorrow. 2nd Cadastral Congress, Exhibition, Kraków.

Internet sources:

[www.prow.sbrp.pl](http://www.prow.sbrp.pl), date of access 15.04.2016

[www.wgik.dolnyslask.pl](http://www.wgik.dolnyslask.pl), date of access 15.04.2016

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