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LAND USE CHANGES IN SPAIN. DRIVERS AND TRENDS IN AGRICULTURAL LAND USE

ZMENY V UŽÍVANÍ PÔDY V ŠPANIELSKU. STIMULY A TRENDY VO VYUŽÍVANÍ POĽNOHOSPODÁRSKEJ PÔDY

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I. Introduction

Land and soil are vital resources. However, the last decades have seen increasing pressures in land use and unsustainable trends. Land use change is both the result and a cause of diverse interactions between society and the environment(1) and is characterized by a high diversity of change trajectories depending on the local conditions, regional context and external influences. Understanding the spatial patterns of changes in the extent and intensity of land use, and how these relate to each other, is important for understanding land-use change trajectories(2).

Natural lands provide essential functions for human life: food security, water harvesting, clean air, other ecosystem services, territorial resilience. However, we face an increasing process of land artificialization in Europe. Land take for urban, infrastructure and industrial purposes exceeds 1.000 km^2 per year in the EU, with over half of this surface being defined as 'sealed', according to the *European Commission's 2011 Roadmap to a resource efficient Europe and The European environment – state and outlook 2015*(3).

Environmental concerns and land take and land degradation processes are being exacerbated by the occupation of new areas (e.g. for the construction of new transport infrastructure linking previously non-connected areas) and the substantial increase in emission levels, energy use and the consumption of natural resources such as water(4).

The European Environmental Agency identified social, economic, and policy and governance issues as the causes underlying these processes in Europe. Social factors include the demographic trends and the changes in lifestyle. While Europe's population growth is slow overall (and negative in some coun-

(1) Petit and Lambin (2002)
(2) Verburg et al. (2010)
(3) EEA (2015)
(4) OSE (2010)

Abstract (EN)

Land is an essential resource and plays a vital role in providing food and food security, water, ecosystem services and territorial resilience. However, the past few decades have generated enormous and increasingly unsustainable pressures on land use. The objective of this research is to analyse the main land use changes in Spain between 1987 and 2011 using data provided by the Corine Land Cover (CLC) project. The general trends in land use change at CLC level 1 in this period, and more specifically the changes occurring at CLC level 3 in land destined for agricultural use are analysed. The main reasons that explain these changes, including policy influences, are then identified. The results show that the area occupied by buildings and infrastructure has doubled, agricultural land has decreased and irrigated land has increased; forested areas have also increased, but their ecological quality has been degraded. These trends question the future sustainability of that land use in the analysed period.

Keywords (EN)

land use change, Spain, Corine Land Cover, sustainability

Abstrakt (SK)

Pôda patrí medzi základné prírodné zdroje a zohráva dôležitú úlohu pri zabezpečovaní potravín a potravinovej bezpečnosti, vody, ekosystémových služieb a územnej odolnosti.
V posledných desaťročiach je však na využívanie pôdy vyvíjaný enormný a čoraz viac neudržateľný tlak. Cieľom tohto výskumu je analyzovať hlavné zmeny využívania pôdy v Španielsku v rokoch 1987 až 2011 s použitím údajov poskytnutých projektom Corine Land Cover (CLC). Analyzované boli všeobecné trendy v zmene využívania pôdy na úrovni CLC 1 v tomto období, konkrétnejšie zmeny, ktoré sa vyskytujú na úrovni 3 CLC na pozemkoch určených na poľnohospodárske využitie. Následne boli identifikované hlavné dôvody vysvetľujúce tieto zmeny, vrátane politických vplyvov. Výsledky ukazujú, že plocha zastavaná budovami a infraštruktúrou sa zdvojnásobila, rozloha poľnohospodárskej pôdy klesla a rozloha zavlažovaných pôd sa zvýšila; rozloha zalesnených plôch sa tiež zvýšila, ale ich ekologická kvalita sa zhoršila. Tieto trendy spochybňujú budúcu udržateľnosť takéhoto využívania pôdy v analyzovanom období.

Kľúčové slová (SK)

zmena využívania pôdy, Španielsko, Corine Land Cover, udržateľnosť

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tries), internal migration, in particular, can lead to an increase in the demand for land use in some parts of Europe, and, at the same time, contribute to the decline of cities and villages elsewhere and the abandonment of farms in rural areas. Migration from outside Europe can also be a pressure for land use, in particular in urban areas. Nonetheless, land take is also seen in EU Member States with overall stable or declining populations, such as Portugal. Additionally, new trends in culture and lifestyle influence where people wish to live, the food they buy, etc. These issues are often addressed as consumption patterns[5].

Among the economic factors are mentioned the economic growth and affluence that stimulate commercial, industrial and service activities, which, in turn, can fuel demand for construction – and, in turn, land take. They also influence the demand for food and other land-based products, as well as for larger homes and second homes and, potentially, increases the use of private transport, which, in turn, can influence preferences for housing location. Additionally, global market trends link EU food production to global demand, and thus can influence agricultural practices and their impacts on land. The technological change can affect land-related developments in a range of sectors via, for example, changes in the costs of infrastructure and the methods used in agriculture.

Finally, policy and governance issues highly influenced land use changes. Some EU policies, such as the Cohesion Policy, the Environmental Policy, the Transport Policy, the Energy Policy and the Common Agricultural Policy (CAP) have had important impacts on land take and land degradation in Europe. Many of them have been negative, but potential positive impacts can also be identified. The impacts of EU policies need to be considered in terms of Europe's complex, multi-level governance system, from EU to national, regional and local levels. The specific contexts, including the policies and institutions within each Member State, play a key role in shaping the impacts of EU policies.

With an area of 506,023 km^2 and a coastline of 8,000 km, Spain is one of the largest countries in Europe and has experienced the greatest changes in land use in recent decades [6]. The objective of this study is to analyse the changes in land use in Spain between 1987 and 2011 using data provided by the Corine Land Cover (CLC) project, with a particular emphasis on changes in agricultural land that occupies approximately half of the country's surface. The different demographic, socioeconomic or political causes that explain these changes are analysed.

II. Methods

This research is based on the land use data provided by the CLC project managed by the European Environmental Agency. The CLC is the most spatially and temporally homogenous cartographic source that exists for land cover monitoring in Europe. It follows a hierarchical structure based on three homogeneous levels. At CLC level 1, five cover classes are defined. These classes expand to 15 at CLC level 2 and, finally, the inventory distinguishes 44 cover classes at CLC level 3 (see Appendix 1).

The CLC uses data at a resolution of 1:100,000, a Minimum Mapping Unit (MMU) of 25 hectares (ha) for areal phenomena and a minimum width of 100 m for linear phenomena. CLC also provides information on changes between land uses. In this case, the MMU for the resulting land use change layer is 5 hectares.

The advantages of using these data are that they use the same standards and land use criteria for all European countries with a common base year and that the system is interoperable and the same for all public administrations. Using these data allow for making comparisons at a spatial and temporal scale and providing open-source data.

Currently, the CLC project has published data for Europe in 1990, 2000, 2006 and 2012, which, in the case of Spain, correspond to the Landsat and Spot satellite image analysis for 1987, 2000, 2005 and 2011. The project management, data collection and data processing for Spain are performed according to the standards of the European Environment Agency by the National Geographic Institute (IGN).

In this study, an analysis is carried out of the changes occurring between the five uses of level 1 cover in Spain. Next, the changes in level 3 cover for agricultural land uses are studied in more depth. Finally, the possible causes, including the policy influence, that explain these changes are identified. The analysis was carried out with land cover data provided by the CLC project in Spain for satellite images corresponding to the mentioned years (1987, 2000, 2005 and 2011)[7].

III. Results

3.1 Land use changes at CLC Level 1

Table 1 shows the changes in land use that occurred in Spain in the analysed period using CLC level 1 data. Between 1987 and 2011, the most substantial changes occurred in the land dedicated to agriculture, with a reduction of approximately 1,650,000 ha, and in forest areas, where the surface has increased by almost 1,000,000 ha. However, in relative terms, the greatest variation has been the increase in artificial surfaces (urban settlements, infrastructure) that has almost doubled during this period.

The area dedicated to agricultural use in Spain occupies essentially half the national territory. Between 1987 and 2005, the amount of land dedicated to this use remained relatively stable at approximately 25 million hectares. However, the data collected in 2011 show that the area devoted to these agricultural uses has been significantly reduced, to 23.7 million ha.

Forest areas, although initially the second-most important land use, have become the most important. Forest surface increased between 2005 and 2011, in clear contrast with the trend from 1987 to 2005, and now occupy more than 25 million hectares.

Although artificial surface only represented 2.49% of the total national surface in 2011, this category has experienced

[5] EEA (2016)

[6] Ibid.

[7] IGN (2012)

Table 1: Land cover changes in Spain CLC Level 1 (1987–2011). Hectares

CLC Level 1	1987	2000	2005	2011	Changes 2011–1987
1. Artificial surfaces	669.888	895.981	1.017.360	1.260.414	590.526
2. Agricultural areas	25.411.955	25.387.248	25.364.294	23.762.385	-1.649.570
3. Forest and semi natural areas	24.192.357	23.953.657	23.852.221	25.179.341	986.984
4. Wetlands	110.259	111.083	111.082	100.660	-9.599
5. Water bodies	284.119	325.174	328.184	569.991	285.872

Source: IGN (2012)

Table 2: Land cover changes in agricultural lands in Spain CLC level 3 (1987–2011). Hectares

CLC Level 3	1987	2000	2005	2011	2011–1987
2.1.1 Non-irrigated arable land	10.374.685	9.918.940	9.756.262	10.013.557	-361.128
2.1.2 Permanently irrigated land	2.032.630	2.185.803	2.201.034	2.449.032	416.402
2.1.3 Rice fields	99.896	137.922	144.767	136.645	36.749
2.2.1 Vineyards	833.644	815.157	838.102	1.076.040	242.396
2.2.2 Fruit trees and berry plantations	796.200	869.320	891.096	1.147.440	351.240
2.2.3 Olive groves	1.728.146	1.806.683	1.865.182	2.273.136	544.990
2.3.1 Pastures	660.794	639.085	648.922	876.357	215.563
2.4.1 Annual crops associated with permanent crops	147.561	141.222	140.997	28.670	-118.891
2.4.2 Complex cultivation patterns	3.866.061	3.895.653	3.880.505	1.861.946	-2.004.115
2.4.3 Land principally occupied by agriculture, with significant areas of natural vegetation	2.481.812	2.503.725	2.499.950	1.424.654	-1.057.158
2.4.4 Agro-forestry areas	2.390.525	2.473.738	2.497.475	2.474.908	84.383
TOTAL	25.411.954	25.387.248	25.364.292	23.762.385	-1.649.569

Source: IGN (2012)

the most profound and transcendental changes given their irreversibility. The number of artificial hectares has almost doubled during these years, especially in the interior of the country and along the coastal strip. The extent of urban areas has almost doubled from 1987 and industrial areas and infrastructure have tripled, as have mining activities, dumps and construction sites. Artificial green areas have also increased significantly, quadrupling since 1987. Areas occupied by rail networks have also significantly increased.

Wetlands and water bodies represent approximately 1% of the surface in Spain and have also increased significantly during the period analysed, although it is necessary to distinguish between natural and artificial wetlands (reservoirs, salt marshes and artificial channels). In the analysed period, the natural areas have decreased and the artificial areas have increased.

3.2 Land use changes in agricultural lands (CLC Level 3)

Among the different agricultural land uses included in CLC level 3 (Table 2), the largest area corresponds to 'non-irrigated arable land'. This area has seen a net loss of 361,128 ha and is the use that has indicated the most marked decrease. It is worth noting that between 1987 and 2005, its size decreased by more than 600,000 ha but increased again in 2011. The initial loss of this land cover type was the result of the transformation of rainfed lands into irrigated lands, as well as new plantations of olive groves, fruit trees and vineyards. A portion of these lands was also transformed into artificial surfaces by the development of new construction and infrastructure. The subsequent gain in surface area has been made at the expense of the area dedicated to 'complex cultivation patterns' and 'land principally occupied by agriculture', as subsequently discussed.

Irrigated land has continued to increase, with 20% more area

dedicated to these types of crops in 2011. The number of hectares dedicated to rice cultivation has also increased, although this crop occupies a very small proportion of land in the national territory because of its special agronomic needs.

Permanent crops (vineyards, fruit trees and olive groves) have continued to increase in the period analysed. Fruit trees have experienced the largest increase in relative terms (44%). Vineyard area has increased by approximately 30%, although a slight decrease occurred between 1987 and 2000 because of European policies that encouraged the vines grubbing up. Land dedicated to olive groves have increased, gaining more than 540,000 hectares in these years or equivalent to a 31% increase in the area devoted to this crop.

The land surface dedicated to pastures and rangelands has also experienced an overall increase, although there was also a downward trend. Between 1987 and 2000, the land surface for pastures decreased but has since increased and experienced a net gain of more than 200,000 ha (32%).

The following land use categories have experienced surface area losses. The cover of annual crops associated with permanent crops has decreased cover by more than 80%, although they represent a very small portion of land use in Spain. These losses are much more significant for the complex cultivation pattern category, which has lost more than 2,000,000 hectares or almost 52% of its area. A very similar trend has occurred in the land category principally occupied by agriculture with significant natural vegetation areas—this surface area has decreased by more than 1,000,000 ha (42%).

Finally, agroforestry systems have maintained a relatively stable surface area, with a small net area gain (3%).

IV. Discussion

4.1 Reasons behind the land use changes at CLC Level 1

The main change in land use at the CLC level 1 has been due to the enormous urban sprawl. The rate of change was 1.9%, far exceeding the EU average rate, which was 0.68% for the 23 European countries covered by this project between 1987 and 2000, according to the CLC project data[8]. This fact implies not only a change in the use of land but also a profound degradation of soil and land.

The average annual rate of urban expansion in Spain was 2 hectares per hour between 1987 and 2000[9]. Since 2000, the trend has been even more dramatic, with a natural surface to artificial surface conversion rate of 3.37 hectares per hour between 2000 and 2005, almost doubling the number of urbanized hectares between 2005 and 2011[10]. Although the data do not reflect this increase because it is based on two fixed satellite images (2005 and 2011), this trend was much more intense in the early years of this period, before urban sprawl in Spain was halted by the 2007 financial crisis.

Between 1987 and 2005, the increase was the result of the conversion of agricultural and forestry surfaces into artificial surfaces. Approximately 62% of the new urbanized areas originated from agricultural areas and 25% from forest areas[11]. It is worth mentioning that these processes have not uniformly affected the Spanish territory but have been much more intense in the coastal areas (initially more intense in the Mediterranean, although in recent years, these processes have extended to the Atlantic and Cantabrian coasts), in regions of the interior near Madrid and around the medium- and large-sized cities.

Among the main causes of this significant increase are: i) the Spanish economic growth model from the late 1990s until the 2007 financial crisis that excessively concentrated growth in the construction sector; ii) European and national public policies that have fostered an economic growth dependent on high land-consuming sectors, such as construction, transport and tourism; iii) the transformation of the urban model, shifting from a vertical to a horizontal land use model and the consolidation of a new, dispersed city model[12] and iv) substantial investments in infrastructure, especially communication networks but also energy, ICT and water networks, driven by the significant investment of European Structural Funds[13].

The Spanish economy grew at rates higher than 3% between 1985 and 2007, being considered as a reference model for other countries at that time. An important part of this economic growth can be explained by the enormous importance of the construction and real estate sectors that allowed absorbing a large amount of low-skilled labour and that created significant employment and consumption opportunities. This situation generated an enormous housing bubble that caused the price of homes to increase throughout Spain by an average of 183% in nominal terms and by 117% in real terms. Not only did the price of homes increase significantly, but more than five million new homes were built during this period. The unsustainability of the model became evident in the wake of the financial crisis, which in less than two years generated more than 2,000,000 unemployed and put the sector in a deep recession[14].

The technological gap and the lack of a transport infrastructure in Spain meant that, since the beginning of the accession to the EU, investments in transport infrastructure were considered a strategic objective in all Strategic Reference Frameworks for Spain. The importance of such infrastructure to economic growth and competitiveness has meant that a large part of their cost has been co-financed by the Cohesion Policy and the European Regional Development Fund (ERDF)[15]. However, we must not forget the negative aspects of such infrastructure, such as spatial land fragmentation, environmental impacts or soil sealing and destruction of the bio-physical soil matrix.

The changes in agricultural land use are analysed in depth in the following section.

Transformations in the land surface and the state of the forest areas have enormous importance in both maintaining biodiversity and fighting climate change. This relevance is even

[8] EEA (2013)
[9] Moreira (2011)
[10] OSE (2010)
[11] Ibid.
[12] Guerrero et al. (2012)
[13] EEA (2016)
[14] Campos Echeverria (2008)
[15] EEA (2016)

stronger if we consider that Spain has the third-largest forested area in the EU, after Sweden and Finland[16].

As mentioned, in the analysed period, the forest area increased by almost one million hectares for several reasons. Much of the agricultural activity has been abandoned in recent decades, especially in low productivity and mountain areas given the lack of profitability and competitiveness of these farms and the lack of generational succession. In addition, in many areas, the extensive livestock activity that controlled the scrub in vast areas of the territory has also diminished or disappeared, which has facilitated forest recolonization, transforming formerly agricultural areas into forest areas.

Different policies have also had important repercussions for the increase in forest area, including reforestation policies. According to the *Third National Forest Inventory*, since the beginning of the major reforestation policies in 1940 and until 2008, more than five million hectares have been reforested in Spain, representing 17.9% of the Spanish forest area[17]. These policies were strengthened by the application of the CAP which promoted the conversion of agricultural land into forest land, from 1994-1999, although the new approaches and CAP reforms in the 2000-2006 implementation period reduced the importance of these policies.

Another policy with high impact on the forest area situation has been the conservation and environmental protection policy. In 1989, Spain passed the Law for the Conservation of Natural Spaces and Wild Flora and Fauna (Law 4/1989 of March 27). As a result, between 1987 and 1996, close to 600 protected natural areas were declared that covered approximately 2.7 million hectares and added to the 1.8 million hectares corresponding to the 77 spaces previously declared, placing 7.2% of the Spanish surface under some type of environmental protection[18].

This national policy was considerably reinforced by the implementation of the Habitats and Birds European Directives into Spanish legislation through Law 42/2007 on Natural Heritage and Biodiversity (which replaced the aforementioned Law 4/1989). This law also regulates Natura 2000 areas, the natural protected areas and the Areas Protected by International Conventions and Agencies. It is worth mentioning that Spain has 22,227,600 hectares recognized as Natura 2000 areas, representing approximately 18% of the European total and giving Spain the distinction of being the country with the most surface by far under this type of protection[19]. Some authors estimate that these policies have had an important impact on the maintenance and growth of forest areas[20].

However, other policies have had negative impacts, such as transport policies. The development of infrastructure has fragmented the forest territory, preventing continuous forested tracts that are the most important for the recovery of ecological processes because they allow connectivity between ecosystems.

In the analysis of changes in forest areas, it cannot be forgotten that there have been important trade-offs in these areas (losses - mainly fires, logging, urbanization - and regeneration - mainly over burn areas)[21], although this type of information is not reflected in the CLC. The incidence of forest fires has been very important in Spain during the period analysed. Between 1987 and 2011, 3.7 million hectares burned[22]. In addition to forest areas, there has been a significant regeneration of scrub in burned areas and abandoned agricultural areas that have led to an abundance of shrubland ecosystems[23]. Additionally, the growth of urban and industrial areas occurs at the expense of forest areas, and all of these factors cause a significant reduction in the ecological quality of forest areas.

Although the increase in forest area is positive, its continued growth is vulnerable to threats derived from abiotic factors, such as their geographical distribution or climate changes, which determine the potential distribution of forest species. Global warming is causing higher temperatures and droughts in Spain[24]. Additionally, most of the Spanish forests are located in mountainous areas or on generally poor soil. Both factors increase the vulnerability of the forest tracts.

Finally, with respect to wetlands and water bodies, the increase in the surface area has been the result of the creation of artificial water bodies, such as reservoirs for the urban water supply or irrigation. The occupied surface of rivers and natural channels has decreased. Coastal wetlands have also disappeared or been transformed into agricultural areas.

4.2 Reasons behind changes in agricultural land use (CLC Level 3)

In this section, the changes occurring in agricultural land use are analysed in greater depth. The 'non-irrigated arable land' use shows an uneven trend. Between 1987 and 2006, the area for such land use lost more than half a million hectares (negative net balance of 540,379 ha), experiencing one of the greatest decreases in agricultural land. However, 2011 data show a significant increase of 257,295 ha, which - although failing to match the 1987 figures - implies an important recovery of this land cover according to the CLC.

Cereal, oil seed and protein are the main crops grown on these types of land. Among the reasons for the losses mentioned are the low average Spanish yields of these crops compared with those in other European countries, where water is not a limitation. In addition, generational renewal in the agricultural sector is lacking because of emigration, few labour incentives offered by the sector to young people (for example, hard-working conditions, contingencies, low profitability, low social recognition) and the difficulties in being able to access holdings of minimum viable size given the high land price, the scarce and/or variable profitability of agricultural production or the variability in agricultural prices controlled by global markets. In addition, many rainfed lands, especially those close to cities and towns, have been urbanized because of ur-

[16] EUROSTAT (2012)
[17] MAPAMA (2009)
[18] MAPA (2005)
[19] EC (2018)
[20] Ruiz-Benito et al. (2010)
[21] OSE (2016)
[22] MAPAMA (2018b)
[23] OSE (2016)
[24] IPCC (2014)

ban sprawl, the advancement of secondary residences and the development of transport and communications infrastructure.

European policies have had an important influence on the changes presented. Direct aids from the CAP has partially slowed this trend, which has also been influenced by the fact that, in general, they are highly mechanized crops with few labour demands and little agronomic risk. The recovery of rainfed agricultural lands partly derives from the almost structural irrigation water shortage in Spain and the worldwide meteorological events that occurred in 2007–2008 that generated a food crisis triggered by a shortage of cereals and other commodities, thus raising their prices and making these crops more attractive to cultivate[25].

In contrast to the rainfed agriculture land is the increase in 'permanently irrigated land', which significantly expanded in 1987–2000 (net increase of 214,070 hectares) and then significantly slowed from 2000–2006 (with an increase of only 15,412 hectares). These lands increased again between 2006 and 2011 to 247,295 ha. These lands are mainly devoted to intensive horticultural crops that are in high demand in Europe and as such are highly productive and economically valuable.

The differences between periods have much to do with the changes of water policies, with a slowdown in the implementation of new irrigation areas, in contrast with the modernization and consolidation of those already existing occurred in the second period analysed. With respect to the increase in irrigated lands between 2005 and 2011, there has been an influence from the efforts made in the last decade for more efficient water use that enabled the same amount of water to irrigate more hectares, use groundwater through wells, reorganize and convert existing crops to those with higher productivity and profit and use desalination plants in production areas of intensive crops, such as those in the Spanish Mediterranean areas.

In any case, although these increases in the irrigated area have important benefits from an economic point of view, they must be approached with caution from the environmental point of view. The climate in Spain is characterized by recurrent droughts that require Special Drought Plans[26] and do not guarantee water availability to maintain this type of crops. This increase presents important environmental sustainability problems and raises the pressure to use water.

In Spain, other land covers that have experienced important increases are those related to permanent crops, such as olive groves, fruit trees and vineyards. Between 1987 and 2011, there was a continuous increase (44%) in 'fruit tree and berry plantation' areas. Although the use of 'fruit trees and berry plantations' includes high tree heterogeneity, for the Spanish case, a large part of the increase in area is explained by the increase in the number of citrus hectares. In 2011, this crop occupied 60.9% of the cultivated fruit tree area and its surface increased from 257,108 ha in 1987 to 317,605 ha in 2011. Spain is the main European country in the market for these products, accounting for 45% of all intra- and extra-community trade, being the main markets to which Spain exports Germany, France and Poland. The quality of the Spanish product and the growing European demand for these products explain the increase in surface area[27].

The olive is another crop whose surface cover has not stopped increasing since 1987. Spain is the leading country in the world for olive oil production. The growing demand for this oil derived from its nutritional and organoleptic properties. The special climatic and agrological needs that its cultivation requires make the Mediterranean basin the ideal place for its expansion (although in recent years, new production areas have appeared in South America, the United States and Australia).

Although oil prices show significant annual fluctuations and have almost failed to cover crop costs in some agricultural seasons, the olive is a crop with deep roots in the Spanish culture. In addition, the groves adapt to soils and climatic conditions in which other crops would not thrive. These conditions, together with the high prices that premium quality olive oil can obtain and the increasing entry into new markets and demand in international markets, lead to continued increases in the olive grove area in Spain.

The increases in olive groves and citrus areas have materialized in the creation of new farms with smaller footprints and varieties adapted to mechanization (thus substantially reducing unit costs), more business-oriented and making a more efficient use of irrigation, which seeks to respond to the growing demand for these products. This demand has generated a dichotomy between these 'modern' farms – generally located in areas of good fertility – and the 'more traditional' ones (which in the case of olive groves are usually located in mountain areas) with greater difficulties in competing for prices because of high structural costs.

The notable increase in the area dedicated to 'vineyards' in Spain demonstrates that, together with Italy and France, Spain is among the leading wine-producing countries[28]. The fluctuations in this area between 1987 and 2006 are largely related to the rigid regulations of the sector by the CAP Common Market Organisations, which in this period limited vineyard areas to farms that had certain rights. After Spain entered the EU, subsidized initiatives were established to grub up vineyards, which explains the net decrease in area between 1987 and 2000 (6,249 hectares), to which must be added the difficulties faced by many farms, such as the lack of generational renewal or the difficulties of the wine market that hindered its viability.

However, since 1996, such initiatives have been significantly curbed by a reduction in European subsidies. In 2000, Royal Decree 1472/2000 established that, to receive the premium for abandoning a vineyard, the area had to be within the area defined by the Abandonment Plans that were approved by the regional governments. But, none were approved in Spain.

The 2005 data show a change in the trend, with a moderate increase in surface area (22,945 hectares) that was significantly accentuated between 2005 and 2011 (237,938 hectares). These positive net balances are explained by the implementation of new vineyards, all in the context of transforming the Spanish wine sector through conversion and restructuring programmes to better adapt production to market needs (especially in Castilla-La Mancha region) and the emergence of new

[25] FAO (2009)
[26] MAPAMA (2018b)
[27] Aznar et al. (2015)
[28] OEMV (2018)

vineyards associated with high-quality wines[29]. The relevance of the sector in Spain and the profound modernization that the wine sector has undergone in recent decades, with a notable commitment to quality production and the international positioning of Spanish wines, explain this increase.

In analysing the evolution of the agricultural-forest transition zones, it is necessary to point out that the CLC data for these areas are not as accurate as for other types of land cover. The mapping accuracy of CLC (25 hectares) for the transition areas between agricultural and forestry uses, such as 'agroforestry areas' and 'land principally occupied by agriculture, with significant areas of natural vegetation', may not identify small, dispersed forest remnants or those in the growth or regeneration phase, which require a more precise working scale. Hence, the data analysis for these 'agricultural' expansion areas at the expense of 'forest' expansion can lead to conclusions that are less reliable than those of the other changes analysed.

With this exception, the importance of CAP aids directly linked to the presence of livestock can be noted through the increase in areas classified as 'agroforestry areas' (84,383 net hectares between 1987 and 2011). Agri-environmental policies and the greening proposed by the CAP have also contributed to increasing this type of land cover.

V. Conclusions

The analysis shown reflects the phenomenon that the trends in the changes in land use in the period analysed in Spain do not follow a clear direction to sustainable development. As mentioned, behind the changes are socioeconomic causes but also a notable influence of policies.

The main change has been the expansion of artificial areas at the expense of mainly agricultural land, sealing the soil and leading to irreversible changes. The enormous importance of the construction and tourism sectors in the country's economy and changes in lifestyles have led to an expansion of urban areas and high infrastructure development.

Changes in agricultural areas confirm that the number of hectares devoted to these uses has decreased, leading to a reduction in the capacity to produce food. In addition, there has been a notable increase in irrigated areas, which calls into question the viability of these approaches in a country with structural rainfall and water availability deficits and for which the predictions are that this phenomenon will increase with climate change.

Forest areas experienced an appreciable increase during the study period, which is undoubtedly an advance towards sustainability given the important work of these spaces in providing ecosystem services and fighting against climate change. However, we cannot fail to mention that the ecological quality of these areas has decreased as a result of the high incidence of forest fires, forest fragmentation, abandonment of agricultural land that has led to scrub and subsequent forest recolonization and the fact that many of these forest tracts are subject to abiotic stress.

To conclude this study on a positive note, some of these trends have changed since the last year analysed by the CLC. Therefore, it is expected that in the project's next set of data on Spain, the analysis outcomes will be more positive.

[29] Sánchez-Hernández et al. 2010

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PROVISION OF PUBLIC SERVICES IN THE LIGHT OF CURRENT GLOBAL TRENDS

POSKYTOVANIE VEREJNÝCH SLUŽIEB VO SVETLE SÚČASNÝCH GLOBÁLNYCH TRENDOV

Monika BUMBALOVÁ*

I. Introduction

The activity of the public sector and, consequently, the operation of its agencies should primarily focus on the fulfilment of the four basic public functions, namely allocation, distribution, stabilization and regulatory functions. The essence of each of these functions is to promote public interest, with emphasis on the provision of public services. Views on the characteristics of public services vary according to the viewpoint of the discipline. Economists believe that public services are those in which state interference is justified by market failures; politicians perceive public services as activities necessary for their re-election and therefore do not hesitate to invest part of public budgets and the last is the "common sense" that public services are those, in which the provider is subject to a public service obligation, while the second characteristic is that parliament recognizes the need for their regulation by the state[1].

Numerous activities can be defined as public services, including agriculture[2]. From expanding and developing markets for products and services, to improving safety and nutrition, governments' agricultural services are critical to the nation's health and well-being[3]. The rate of engagement of the public sphere in the national economies varies between individual countries. It is influenced by the trend in the public management sphere, which is currently dominant. Additionally, overall societal climate plays a crucial role. Especially in the European context, the persistent fiscal burden on public finances and the reduction in the number of employees have been noted, while the severity of the situation has been further supported by rising social security costs as a result of the financial crisis and demographic change. On the other hand, public authorities face increasing demands and expectations of the public on high-quality and affordable public services and the need to apply innovation[4].

The overall societal climate influencing the shape, rate and functioning of public sector is created by external and internal factors, which can be grouped into following areas: political, economic/financial, social, technological, environmental and

[1] Bovaird and Loeffler (2016, a)
[2] Nogueira (2006)
[3] Capgemini (2018)
[4] Bosse et al. (2015)

Abstract (EN)

Provision of services by public sector is a concept, which has been implemented for many decades in various forms of economic arrangement. Public sector policies and public services have significant impact on almost all spheres of life including agriculture. Throughout the history, there were times with smaller and bigger importance of public sector within the economy. The conditions of public sector always depend on the actual trend applied in the sphere of public administration and public management. After the period of New Public Management accompanied by leaning away from the "public" concept, a return to stronger statehood and more intensive public sector can be seen. There are several reasons for such development, which are also called megatrends. Urbanization, demography and social changes, climate changes and development of technology belong to the most intensive ones. The presented review paper deals with the description of the mentioned trends and provides a reflexion on their influence on the public sector and provision of public services in particular.

Keywords (EN)

public sector, public services, megatrends

Abstrakt (SK)

Poskytovanie služieb verejným sektorom je koncept, ktorý sa uplatňuje po desaťročia v rôznych formách ekonomického usporiadania. Verejné politiky a verejné služby významne ovplyvňujú takmer všetky oblasti každodenného života vrátane poľnohospodárstva. Historicky možno nájsť obdobia s väčšou aj menšou dôležitosťou verejného sektora v rámci ekonomiky. Nastavenie verejného sektora vždy záviselo na momentálnych trendoch uplatňovaných v oblasti verejnej správy a verejného manažmentu. Po období Nového verejného manažmentu, ktoré bolo sprevádzané odklonom od konceptu "verejného", možno badať návrat k štátnosti a intenzívnejšiemu vplyvu verejného sektora. Pre uvedený stav existuje niekoľko dôvodov, ktoré sa v odbornej literature nazývajú aj megatrendy. Medzi najvýraznejšie megatrendy patria urbanizácia, demografia, spoločenské zmeny, klimatické zmeny a rozvoj technológií. Predkladaný prehľadový príspevok sa zaoberá popisom spomínaných trendov a poskytuje reflexiu na ich vplyv na verejný sektor a poskytovanie verejných služieb.

Kľúčové slová (SK)

verejný sektor, verejné služby, megatrendy

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legal [5]. Many of these trends have been in place for many decades and do not create significant fluctuations in public sector approaches and activities, while others have been phenomena in recent years and require a rapid and flexible response.

Furthemore, they have been percieved so intensively by the professional public that they have begun to be called "megatrends" and increased attention is being paid to them within the public sector studies. In particular, they are: ever-increasing urbanization, demographic and social change (including inequality and migration), climate change and technology development [6],[7].

II. Material and Method

The presented review paper is focused on identification, description and evaluation of the mentioned megatrends and their influence on the provision of public services and public sector as such.

Since the nature of the paper is purely theoretical, the content analysis of the existing sources of literature and the method of synthesis of the gained information were the main methods used during the paper elaboration.

The literature contains books and papers of experts from the field of public management, reports of international organisations (such as the World Bank, the United Nations and the European Union) and even publications of companies for example PricewaterhouseCooper (PWC) and OMB.

III. Urbanization

From a global perspective, more than half of the population currently lives in urban areas, and 1.5 million people add up to the urban population each week[8]. The proportion of the urban population in different parts of the world is as follows: North America (82%), Latin America and the Caribbean (80%), Europe (73%), Asia (48%) and Africa (40%)[9]. Such development dramatically increases the demand for infrastructure, services, job creation, climate and environment, which are all spheres of public sector competence. As a response to this situation, Resolution 71.256 called New Urban Agenda was adopted at the United Nations platform[10]. The document states that the increasing concentration of population, economic activities, social and cultural interactions and environmental and humanitarian impacts in cities is linked to major problems with housing, infrastructure, basic services, food security, health, education, decent jobs, security or natural resources. Therefore, in their vision, the signatories of the document have committed themselves to such functioning of cities that fulfill their social functions, in order to gradually achieve the full realization of the right to a reasonable standard of living, universal access to safe and affordable drinking water; hygiene facilities as well as equal access to public goods and quality services in areas such as food safety, health, education, infrastructure, mobility and transport, energy, air quality and food for all.

The UN, however, is not the only platform dealing with urbanization and its impact on the public sector. The European Union also reacts to the above-mentioned problems in the document EU Urban Agenda, where the Preamble states that the development of urban areas will have a major impact on the future of the European Union's sustainable development (economic, environmental and social) and its citizens [11]. The strategy for urban development implied by the document is built on three key areas: better regulation, better funding and better knowledge.

The principle of better regulation is based on the fact that the EU legislation is largely applied in urban areas and it has an impact on the local level of governance (whether in the area of state or self-government administration). The European regulations, though, often have conflicting character or insufficiently take into account the specificities of the different levels of governance, which should be prevented in the future by more active dialogue between the stakeholders involved in local development.

The principle of better funding stems from the fact that local government is a major beneficiary of the EU funds. However, the use of these funds is often administratively demanding, and therefore the EU Urban Agenda aims at improved availability and coordination of existing funding opportunities and contributing to their simplification.

The principle of better knowledge is based on the fact that there is fragmented knowledge about how urban areas are developing and the transfer of experience and good practice is often difficult. The EU Urban Agenda deals with the way how to improve the knowledge base of urban policy and the exchange of best practices[12].

The action plans resulting from the above-mentioned documents will not be implemented without a dialogue involving all stakeholders, including the public sector agencies active at all levels, since many problematic areas caused by increasing urbanization fall precisely within the sphere of the public part of economy.

IV. Demography and Societal Changes

The world population is expected to increase by more than 1 billion by 2030, bringing the total to more than eight billion. 97% of this growth will come from emerging or developing countries[13]. Equally significant is the opposite trend prevailing in developed countries, where birth rate is declining and population is aging. As a result, the population over 65 years is the fastest growing segment[14] and currently accounts for up to 12% of the world population[15]. This situation affects the public sector on several levels. On the one hand, the growing

[5] Bovaird, Loeffler (2016, b)
[6] PWC (2015)
[7] Lethbridge (2016)
[8] PWC (2015)
[9] Lethbridge (2016)
[10] United Nation (2016)
[11] European Commission (2016)
[12] *Ibid.*
[13] PWC (2015)
[14] Lethbridge (2016)
[15] PWC (2016)

number of young people (under the age of 24) in developing countries is putting pressure on employment and is likely to be increasingly reflected in the gradual labor migration. On the other hand, in the prosperous countries, the proportion of the economically inactive population is steadily rising, causing both tax breaks in state budgets and a growing demand for social and health care[16].

The impacts of demographic trends on the public sector has also other implications, namely the aging of the workforce employed in the public sector. According to OECD statistics, more than 30% of central government officials in 13 countries will leave in the next 15 years. The public sector must, therefore, rely on a much older workforce, which will have to work longer in the future. In this context, European governments must respond and re-evaluate the important elements of the current management of human resources in the public sector[17].

The mentioned facts indicate potential problems in restoring the workforce in the public sector, and therefore steps need to be taken to solve the problem. Increasing the official retirement age is key in this respect, but the legislative measures themselves are not enough to ensure that employees remain "working" and "fit for work" up to a high age. Some authors highlight the need for a more holistic approach, which is essentially preventive, and takes into account a range of factors such as personnel policy, education and training, anti-discrimination based on age, health, job satisfaction, and working conditions in general[18]. However, it should focus not only on older employees but on all employees according to their different needs.

Part of this demographic megatrend is another phenomenon, namely the migration of the population and hence of the labor force. Migration and displacement of large numbers of people have emerged as global problems caused by the economic, social, political and environmental crises. There is evidence that local authorities are increasingly active in defining local policies for third-country nationals. In some countries, strong national policies are complemented by strong local policies; in other countries where national migration policies are absent, local authorities play an important role in promoting the integration of third-country nationals in society and the local economy[19]. The importance of the public sector in the reception and integration of migrants is indisputable. Organized and regulated integration of migrants, mainly linked to housing, employment, social protection, education and healthcare, is largely dependent on the efficiency of the public sector, which, as has already been said, is struggling with budget cuts and labor-related problems[20].

Despite the fact that at present the society copes mostly with the negative aspects of migration, it should not be forgotten that migration could also be used for the benefit of the public sector, for example by filling in the labor market outages. Although the status of third-country nationals on the labor market is often weak. In particular, the situation of women and people with low levels of education is problematic. There is, therefore, a need for strategies aimed at facilitating and speeding up the recognition of their existing qualifications and training, mentoring and networking[21]. However, not all migrating labor force is low-skilled. Based on PWC data, the number of mobile workers has increased by 25% in the last decade and it is likely to increase by 50% by 2020. Moreover, while in the past "talent" tended to flow from east to west, by 2020 the globally interconnected markets will cause the labor force to move in all directions[22]. New ways of employing, including freelancing, work during extended business trips, virtual employment, or work on short-term projects, will increasingly be used.

Public sector activities should therefore focus on opportunities, not just on the threats posed by migration and other demographic trends. Only in such a way, the public sector will confirm its irreplaceable status and at the same time be able to cope with the established global situation while maintaining activities in public service provision and defending of public interest.

V. Climate Changes

Third of the megatrends, which in the context of the importance of the public sector is not often inflamed but undeniably puts pressure on it, is the increasingly intensifying effects of climate change. Floods, typhoons, forest fires and earthquakes can lead to the destruction of housing and infrastructure, causing death, injuries and displacement of the population. In such cases, basic services such as food, water, hygiene, housing and health care are essential. The consequences of these disasters and their removal are addressed by public sector employees such as firefighters, cops and other rescue forces[23]. Particular importance should also be attached to preventive measures, for example in the field of education and awarness spreading. These activities are again linked to increased expenditures and intensification of public sector activities.

The impact on the functioning of the public sector is obvious, but any calculation of the cost of climate change is challenging. One problem, for example, is that the manifestations, and hence the impacts, of climate change are specific and reflect different conditions in different countries. However, there are also countries that perceive the benefits of climate change, or see new opportunities. Examples include knowledge sharing of water and coastal engineering (Netherlands), reduced winter mortality rate (UK), new tourism opportunities (Holland, UK, Sweden, Finland), longer agricultural production period (Denmark, Finland, Germany, Latvia) or better conditions for water and wind energy (Sweden, Finland, Latvia, Denmark) [24].

Probably the most significant step in reducing the impacts of climate change is their formal recognition at the global level. Although individual states still play a central role, the growing number of agreements at global level increasingly influence de-

[16] Wolf, Amirkhanyan (2010)
[17] Bossaert, Demmke, Moilanen (2012)
[18] Bossaert, Demmke, Moilanen (2012)
[19] Lethbridge (2016)
[20] EMI (n.a.)
[21] Lethbridge (2016)
[22] PWC (2015)
[23] Lethbridge (2016)
[24] Burch (2010)

cision-making at national level[25]. Several transnational documents dealing with the issue have been adopted so far. The newest is the Paris Climate Change Agreement of 2015, which follows on the Kyoto Protocol.

An important area of coping with the impacts of climate change is identification of level, at which the necessary measures can be effectively implemented. In national contexts, these measures are summarized in the National Adaptation Strategies (NAS). NAS represents an action plan to address the impacts of climate change. It includes a combination of policies and measures to reduce the vulnerability of the landscape. Depending on the circumstances, it may be a comprehensive strategy adopted at the national level, covering cooperation between sectors, regions and affected populations, or may be more focussed only on one or two sectors or regions[26]. The NAS configuration and formulation thus indicate, which actors should be included in the implementation. Responses to climate change will, therefore, depend not only on the knowledge of the impact of extreme climatic events but also on the use of a 7comprehensive approach that takes into account all stakeholders at different levels, availability of resources and institutional capacity[27].

Management systems, even in the case of NAS implementation, are often categorized as either hierarchical, market or networked, where each regime reflects and highlights the role of individual authorities and the form of interaction among actors[28]. As in other spheres of public administration, also in the case of NAS implementation, the hierarchical regime with dominant central government status was gradually weakened and the market principle was being promoted. On the other hand, some authors[29] identified several reasons why the market regime could fail:

- lack of knowledge – if the relevant actors are not sufficiently informed about ongoing environmental changes, the need to adapt or the available options,
- lack of capacity – if social actors do not have sufficient resources for early adaptation,
- lack of (self) interest – if ability and responsibility to adapt are not on those, who are ultimately hit by the negative impacts of climate change or if the long-term effects are not taken into account and
- lack of consensus – if several actors have to work together to achieve effective results.

In such cases, appropriate government interventions are needed, for example, the government can manage and process necessary information, take timely action, promote adaptive capacity building, internalize external effects, and resolve conflicts through effective regulation, tools and incentives[30]. Furthemore, contrary to the lower level of governance, the central government to smaller extent faces the lack of information and limited resources. That is why those are mainly centrally set policies that send a clear message on what matters should be of interest and in what order.

VI. Technological Development

The rapid development of technologies and the associated implementation of innovation in all spheres of life belong to the most striking trends currently resonating in the circles of the professional and lay public. Even in the past there have been periods of intense change such as industrial or agricultural revolution, but contrary to them, the digital revolution is not bound by borders. The development of digital technologies is constant, omnipresent and fast. 51% of CEOs around the world are currently implementing significant changes in how they use technology to assess and meet the expectations of all involved stakeholders[31]. Technological progress also puts pressure on the public sector, primarily through the expectations of customers, i.e. the population. In practice, these changes are reflected through digitization, which subsequently transforms itself into a concept known as e-government.

Digitization is, in principle, the acceptance or enhancement of the use of digital or computer technology by an organization, industry, country, etc. In the broader sense, digitization is defined as an economic and social transformation that has prompted massive adoption of digital technologies for generating, processing, sharing and gathering information[32]. Consequently, the e-government is considered to be any ICT adoption to facilitate the daily agenda of public administration and/or production and provision of public services to citizens through ICT[33]. Examples of the use of ICT in the public sector include software for automation of administrative processes, database systems, working process management systems, automated systems for supporting the decision-making, web services, e-services and information sharing cloud systems[34].

There are several reasons for the implementation of e-government elements in the public sector. The most frequently mentioned are the reform of inefficiencies caused by the nature of bureaucracy[35], ensuring efficiency and democracy in a cost-effective way, while ICT provides governments with the opportunity to compromise between these conflicting goals and the fact that new technologies enable effective regrouping of rights and obligations of stakeholders[36].

All technological changes implemented within the e-government could be seen as introducing innovations in the public sector. Numerous publications deal with the phenomenon of public administration innovation, while the main reason of such attention is the difference between private and public sector. While in case of innovations, the private sector is driven by competitiveness, such stimulus is absent for the public sphere. However, this does not mean that public sector innovation is not important; contrary, the reasons for the importance of innovations in public sector could be summarized in the follow-

[25] Juhola, Westerhoff (2011)
[26] Niang-Diop and Bosch (2004)
[27] Laukkonen et al. (2009)
[28] Treib et al. (2007)
[29] see e.g. Berkhout (2005)
[30] Biesbroek et al. (2010)
[31] PWC (2015)
[32] Katz, Koutroumpis, Callord (2014)
[33] Cordella, Bonina (2012)
[34] Cordella, Tempini (2015)
[35] Clegg (2007)
[36] Gatautis (2008)

ing five points:

1. The size of the public sector – in majority of the OECD countries, the size of public sector is between 20% and 50% of GDP. The underlying logic of economic growth is that productivity growth is reflected in lower input costs, better organization, or increased output. Public sector innovation is potentially influencing all three of the aforementioned aspects.
2. Public sector entities have specific objectives that can be achieved through the introduction of innovative institutional measures[37].
3. Creating of indexes, benchmarks and similar measures to guide public sector innovation goals by comparing best practice[38].
4. The evolving economy, with technical and institutional changes, puts pressure on politics and the public sector simply to keep pace.
5. Taking into account the ever-evolving forms of public-private institutional partnership in the creation of innovation systems, one of the major intersections of private and public sector innovation is through the public setting of "the rules of game" for innovation in the private sector[39].

In principle, it can be said that not only the private sector but also the public sector is constantly transforming. Transformation of governments and public administration is due to public expectations for increasing efficiency and productivity, but also to changing attitudes and demands for greater transparency and openness. In order to ensure smooth running of the public sector, it is essential that the central government with all the decentralized levels and with all the implemented public policies and provided public services will bear this pressure.

VII. Conclusions

Even though the importance of public sector, including public policies and provision of public services, has been changing throughout different decades of economic development, it still influences almost all aspects of everyday life in countries worldwide. There are numerous fields, which belong to the public framework, while agriculture is one of them. The position of public sector heavily depends on the philosophies applied within the agencies of public administration but also on the trends presented in the society. Although recent history claimed lowering of importance of public area, latest societal development proves otherwise. In particular there are specific phenomena presented, which creates pressure on public sector involvement. These phenomena are also called megatrends and they include urbanization, demography and social changes, climate changes and development of technology. Urbanization represents migration of people to urban centres, what creates a pressure on offering of public services including food safety and environment. In order to cope with this situation, some documents have been adopted at international platforms such as the UN or EU, which committed the signatories to adopt measures securing the right to a reasonable standard of living and sustainable development. Demography and societal changes, as the second megatrend, are reflected in the position of public sector mainly by increased unemployment in the one part of the world accompanied by increased pressure on social and health care system in the other. This imbalance leads to migration influencing the demand for social services. Another effect of demography is ageing of workforce in public sector. A possible way how to deal with this situation is look for positive aspects and turn them into opportunities. Both of the previously mentioned megatrends contribute to worsening situation regarding the third one, which is climate change. Due to the range of climate changes these days, they no longer can be sufficiently addressed by individual actions taken at the local level. Contrary, coordinated measures and activities in the form of public policies must be adopted at the global scale. The last mentioned megatrend – the development of technology – influences the public sector mainly through the stakeholders and satisfaction of their needs, what is in the centre of the customer focused approach currently used in the public management. Due to this approach, innovations, reforms and new philosophies must be gradually implemented by the public sector; furthermore, the public sector needs to create suitable institutional environment for their creation and implementation also in other sectors.

Based on the conducted theoretical research it can be concluded that the global situation does not suppress the importance and activities of public sphere. Contrary, the nature of current development trends require strong, self-confident and adaptable public sector, which is able to secure smooth implementation of public policies, which get reflected in well-being of inhabitants.

[37] Shockley et al. (2006)

[38] Kouzmin et al. (1999)

[39] Potts, Kastele (2010)

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THE EFFECT OF LAND ACQUISITION POLICY ON MARKET TRENDS IN HUNGARY

VPLYV POLITIKY NADOBÚDANIA PÔDY NA TRENDY NA TRHU V MAĎARSKU

Zsolt ORLOVITS, László KOVÁCS*

I. Introduction

After accession to the European Union, Hungary was allowed derogation from the provisions of the EU regulations on equal access for all EU citizens to the acquisition of agricultural land up until April 30, 2014. Therefore, this was also the deadline for establishing and reorganising the institutions and provisions of the acquisition, ownership and use of agricultural lands in such a manner that equal access is ensured and legal procedures were applicable to all EU citizens and legal entities. The introduction of completely new regulations on the ownership and trade of agricultural lands meant that it was essential to address a number of related issues, such as usage of lands, lease and rental, the maximum allowed farm size, etc; thus making transactions and ownership as transparent as possible, and attempt to minimise transactions with the sole purpose of speculation.

Abstract (EN)

The aim of the present paper is to provide a comprehensive overview of the major regulations related to the acquisition and ownership of agricultural and forestry lands in Hungary and the effect of these regulations on the trends and changes in trade and ownership structure. The four pivotal points regarding policy–making have been the following: (1) maintaining national ownership of agricultural lands, (2) preventing the registration of ownership when the aim of the transaction is speculation, (3) maintaining the limitation and strict regulations on the possibilities for new acquisitions by corporately owned farms, (4) supporting the acquisition and usage of agricultural lands by privately and family owned farms. In order to achieve these aims, the government of Hungary decided upon a framework for agricultural land acquisition and ownership that integrates a number of rules and limitations already applied by land administration authorities in other EU member countries. However, their systematic and cumulative use raises major questions in the application of the relevant laws in real–life situations; in addition, there are serious concerns about their compatibility with EU principles on legislation and jurisdiction(1). This paper summarises typical situations to illustrate the controversies of the regulations related to agricultural land acquisition and use in Hungary.

(1) Korom (2009)

Keywords (EN)

pozemková politika, nediskriminačné nadobúdanie pozemkov, vlastníctvo a využívanie poľnohospodárskej pôdy

The complete overhaul of the relevant regulations meant that over the past 3 years, farmers as well as the authorities that are stakeholders in various aspects of land transactions and land usage had to face new challenges.

The current paper addresses two aspects of the emerging questions and issues related to this topic. The first section is an overview of the regulations on the acquisition of agricultural and forestry land, and their effect on market trends and processes. The second section is a summary of a number of selected practical aspects and problems of the regulations on the usage of agricultural lands.

II. Material and Methods

For the current analysis, the starting point was Act CXXII of 2013 on the trade of agricultural and forestry lands, and Act CCXII of 2013 laying down provisions and procedures in connection with its implementation, as well as other relevant direc-

Abstrakt (SK)

Cieľom predkladaného príspevku je poskytnúť ucelený prehľad o hlavných právnych predpisoch týkajúcich sa nadobúdania a vlastníctva poľnohospodárskych a lesných pozemkov v Maďarsku a vplyvu týchto predpisov na trendy a zmeny v obchode a štruktúre vlastníctva.

Pri tvorbe politík sa brali do úvahy štyri kľúčové body a to: (1) zachovanie národného vlastníctva poľnohospodárskych pozemkov, (2) zabránenie registrácii vlastníctva, ak cieľom transakcie je špekulácia, (3) zachovanie obmedzenia a prísnych predpisov pre prípad nadobudnutia pôdy farmami vo vlastníctve korporácií, (4) podpora získavania a využívania poľnohospodárskej pôdy súkromnými a rodinnými poľnohospodárskymi podnikmi. Na dosiahnutie týchto cieľov sa maďarská vláda rozhodla pre prijatie rámca upravujúceho získavanie a vlastníctvo poľnohospodárskej pôdy, ktorý zahŕňa niekoľko pravidiel a obmedzení, ktoré už uplatňovali pozemkové úrady v iných členských štátoch EÚ. Ich systematické a kumulatívne využívanie však vyvoláva zásadné otázky pri uplatňovaní príslušných zákonov v reálnych situáciách; okrem toho existujú vážne obavy z ich zlučiteľnosti so zásadami EÚ o legislatíve a súdnej právomoci. Tento dokument sumarizuje typické situácie, ktoré ilustrujú spory o predpisoch týkajúcich sa získavania a používania poľnohospodárskej pôdy v Maďarsku.

Kľúčové slová (SK)

pozemková politika, nediskriminačné nadobúdanie pozemkov, vlastníctvo a využívanie poľnohospodárskej pôdy

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tives and decrees.

For the impact study, reports published by banking and mortgage institutions in Hungary were considered, and we also analysed problematic cases as reported by affected farmers and representative associations in the agricultural sector that were directly related to the agricultural land ownership policies of the government.

III. Results and Discussion

When the basic principles of the new regulations affecting agricultural and forestry land use and ownership were announced in the spring of 2012, the market reacted instantly. It was evident that the government was aiming to control and regulate the process of land transactions very closely, and prevent the self-evident possibilities that would have been available for speculators, by cherry-picking practices and regulations that were in effect in other EU member countries in Western Europe.

The government considered so-called "pocket contracts" as the main factor in speculations affecting land acquisition and ownership structures. Up until May 2014, EU citizens were limited by regulations stipulating local residency for a minimum of 3 years, as well and certification in the field of agriculture. Therefore, the procedure invented to circumvent the regulations was the following: at the time of the transaction, a lease contract was drawn up between a Hungarian owner and an EU citizen, and a separate document registered the transaction or an option to purchase. This way, the transaction of ownership or an option was recorded in a contract; however, it was "left in the pocket", i. e., it was not registered on the title deed. As land registry office procedures have set deadlines, such "pocket contracts" had no date of transaction written on them. The partners were speculating that after the 10-year moratorium on the ownership of land by foreigners, the discriminative regulations would be cancelled, and the more lenient and favourable regulations applicable to Hungarian citizens would also be extended to other EU citizens. However, the government chose an opposite method of ending discrimination: it tightened regulations on ownership and acquisition of agricultural lands for Hungarian citizens as well. Most importantly, a new requirement was a degree or certification in agriculture or farming, and registration as a farmer after relevant vocational training and practical experience. Since "pocket contracts" had been drawn up based on the technical requirements and regulations in effect before 2014, a number of formal requirements were also added, such as printing ownership transaction contracts on special, security watermarked paper, and stating the intent to work the farm by the owner himself, which made the previously drawn up contracts useless. In addition, in order to forcefully prevent the subsequent use of "pocket contracts" for speculative purposes, the Criminal Code also introduced the offence of "unlawful acquisition of agricultural and forestry land"[(1)].

The news of expected tightening of regulations resulted in a dramatic increase in land transactions. Up until April 2014, Hungarian citizens were allowed to purchase agricultural land with the maximum value of 6000 golden crowns or 300 hectares even without registering as farmers. From May 2014 onward, however, there was a dramatic decrease in the number of prospective buyers. The number of registered farmers currently stands at around 150,000. The land ownership act allows all EU citizens ownership of a maximum of 1 hectare of land area; however, this size limitation includes and applies to previously purchased land as well as non-agricultural plot segments under the same topographical lot number. In addition, a number of stakeholders, one of them being the state of Hungary, have preemptive right to purchase agricultural lands when other prospective buyers are not registered farmers, which limits the chances of a successful transaction, at least from the point of view of the original buyer included in the "pocket contract".

The outstanding number of transactions in the year 2016 was generated by the government-organised land acquisition program called "land for farmers". This agenda meant a stark turning point in government policies: up until 2014, the aim had been to increase the land area owned by the state, which was leased to the farmers. The typical case was that lease contracts were drawn up for decades well under market prices, but then subsequently it was reversed and privatised in larger, consolidated plots.

The success of this policy was debatable: small and medium-sized family farms were unable to finance the expansion of their land area, even despite a heavily subsidised credit program targeted at them. Instead, the privatisation and large-scale sell-off of state-owned lands resulted in huge acquisitions by wealthy stakeholders and their family members. The current regulations of the land acquisition act are often criticised for their approach to acquisitions by family members. Up until 2014, the land area owned by a private citizen and his / her close family members in the vicinity of any given settlement was limited to 1000 hectares or a maximum of 25% of the total agricultural land area nearby. This limitation was completely omitted from the new legislation. Moreover, the new regulations allow the transaction of up to 300 hectares of agricultural land among close relatives; paving the way to amassing thousands of hectares of agricultural plots by having just one registered farmer in the family, and then transferring them to close relatives with a deed of gift.

Agricultural land ownership policies since 1994 have been consistent in limiting ownership by corporations; the reason being that the subsequent changes in owners or shareholders in the company may mean that non-citizens would be granted ownership of agricultural lands. There are currently no other EU members that make it practically impossible for legal entities to purchase and own agricultural lands; moreover, according to the European Commission, this goes against the basic principles of the EU.

It is interesting to read closely the relevant chapters of the land act. Paragraph 6 stipulates that agricultural lands may be purchased by natural persons and legal entities, as regulated by law. However, later on, paragraph 11 goes on to list legal entities as the state of Hungary, local and municipal governments, registered religious groups, and finally, with significant restrictions in place, banks and mortgage or credit institutions. The European Commission has also been critical of the regulations stipulating that in case of transition or changes of

(1) Bányai (2016)

Table 1: Statistics on the trade of agricultural lands in Hungary (2012–2017)

Year	Number of changes in ownership (transactions) [1000]	Area involved in transactions [1000 hectares]	Average price [EUR/ hectares*]	Turnover [%**]
2012	128	136.0	2172.1	1.90
2013	123	126.0	2360.7	1.70
2014	80	100.5	2514.5	1.38
2015	44	46.7	3254.9	0.64
2016	56	165.5	3587.2	2.26
2017	39	50.0	3881.5	0.69

Source: Calculations based on estimates by OTP and FHB banks
* calculations based on the exchange rate on 1st July of each year respectively
** percentage of agricultural land involved in transactions out of total agricultural land area

Table 2: The use of arable lands in Hungary (2003–2017) [1000 hectares]

Year	Individually / family owned	Owned by corporations	Other	Total
2003	1821.1	1804.8	889.6	4515.5
2010	2096.5	1840.0	385.6	4322.1
2013	2125.5	1812.4	387.8	4325.7
2014	2171.4	1779.8	380.0	4331.3
2015	2247.0	1722.9	361.9	4331.7
2016	2357.5	1673.9	301.0	4332.4
2017	2527.0	1645.3	162.0	4334.3

Source: Calculations based on data by the Central Statistical Office (KSH)

Table 3: The number of agricultural farms owned by individuals / families and corporations, by farm size [2013–2016]

SIZE [hectares]	Individually/family owned		Owned by corporations	
	2013	2016	2013	2016
Under 1 hectare	299790	209712	200	288
1.00–9.99	101534	100899	1339	1889
10.00–99.99	40146	40922	2443	2627
100.00–299.99	4347	5048	1227	1334
300.00–999.99	411	671	1041	1177
1000.00–2499.99	3	4	477	467
Over 2500 hectares	–	–	112	61

Source: Calculations based on data by the Central Statistical Office (KSH)

ownership by corporations owning agricultural lands legally acquired before 1994 (currently amounting to a total of approximately 140,000 hectares), their dispositional authority will be severely limited.[2]

Regarding regulations about the right to use agricultural lands, the aim of the current policies is to reduce corporate ownership from 50% in 2003 to around 20%, and favour family / privately owned farms. In order to promote this aim, private citizens have more favourable conditions and subsidised access to lease contracts.

In addition, there is a limit on the maximum allowed agricultural land owned by each farmer. The land act stipulates that family and individually owned farms as well as corporately owned farms may expand up until 1200 hectares, with some notable allowances made for registered seed crop farms and livestock farms with a recorded minimum number of livestock.[3]

There are two favourable opportunities left open for corporately owned farms. Up to 1800 hectares, corporations are allowed to lease agricultural land from their own members or shareholders. Also, corporations that entered into contracts before the land act came into effect in 2014 are allowed to keep farming those lands up until the end of the lease contracts, even if it means that they exceed the new maximum agricultural land ownership limitation.

Therefore, it was a logical and wise step on the part of corporations to extend their existing lease contracts for a further 5–10 years (maximum of 20 years) before the new land act came into effect in 2014, but in many cases, these leases will be up soon. However, government-backed lease contracts on state owned lands for 50 years will come in handy for all those corporations that were favoured for such contracts.

However, the new regulations on subsidies that came into effect in 2015 also severely limit the profitability of extended farm sizes for corporations. According to EU regulations[4], direct payments to large farms of over 150,000 euros are liable to a minimum of 5% absorption. Hungary has a unique regulation: 100% of the EU-supplied area-based direct payments are withheld by the government. So, in practice this means that over 1200 hectares, corporations are only entitled to other supplementary payments, such as greening farm subsidies. The relevant EU directive stipulates that the absorbed subsidy may be reduced by the wages and social security contributions of the employees; however, the Hungarian regulations do not allow for this possibility.

Under the new land act, corporately owned farms came under an umbrella term, "agricultural cooperatives", irrespective of their specific ownership or management structure. There are two main groups of cooperatives. In the first group, the corpo-

[2] Olajos, Andréka (2017)
[3] Csák, Kocsis, Raisz (2015)
[4] Reg. no. 1307/2013

Table 4: Average price and average rental fee of arable lands in Hungary [2012–2017]

Year	Average price of arable lands [EUR/ha*]	Average rental fee of arable lands [EUR/ha*]	Average rental fee/average price	
			[%]	Coefficient
2012	2388,6	133,9	5,6	17,9
2013	2731,7	137,9	5,1	19,6
2014	3031,6	137,8	4,5	22,2
2015	3307,1	145,3	4,4	22,7
2016	4116,3	156,1	3,8	26,3
2017	4622,9	184,2	4,0	25,1

Source: Calculations based on data by the Central Statistical Office (KSH)
* calculations based on the exchange rate on 1st July of each year respectively

ration has been active for more than 3 years, its chief activity and source of income is agriculture or forestry, over half of its annual net revenue is from agricultural activity, and at least one manager or owner is certified in the field of agriculture or has over 3 years of vocational experience. Corporations created after the land act came into effect are in the second group. They exclude corporations formed by change of organisational structure, de-merger, or legal succession. In order to prevent speculations based on de-mergers, newly formed corporations are obliged to consider land areas owned by their predecessors for 5 years for their calculations on allowed land area. This means that corporations that attempted to overcome the limitation on maximum land area by de-mergers or change in organisational structure were trapped. However, if they had already had spin-offs for over 3 years (originally because of taxation purposes), many of those were eligible for registration as agricultural corporations.[5]

The land act stipulates that lease contracts are subject to the same procedure as acquisitions (public announcement, official approval, registration), only with shorter deadlines and a simplified procedure. There are, however, several way to circumvent certain administrative limitations or restrictions, such as metayage and sharecropping, which prevent those with first right of refusal from access. In addition, the land act has sections dedicated to internal lease contracts between the owners, the employees and the corporation itself, as they are also exempt from public announcement of the lease option and approval by the land authorities. These lease contracts are typically for a minimum of 5 years and well over market prices; therefore, the owners or shareholders of the corporation and their family members as well as their employees who may also be proprietors can easily generate extra revenue, tax free, disguised as "rental fee".

However, there are more disadvantages than advantages of these contracts in the case of large farm sizes. For instance, these internally leased plots are registered as part of the total land area, so area-based direct payments may be lost. Internal lease contracts may in other cases add significant "wiggle room" in cases when the owner of the land terminates the lease contract by mutual consent, reclaims the land for farming, and then outsources it back to the corporation. In such a case, it is not the corporation that officially farms the land, and the owner is allowed to farm his own plot even without registration or certification. He loses out on rental fees as a source of income; however, on the other hand, he may apply for area-based direct payments that would have been lost if the corporation exceeds the maximum land area.

Determining the rental fee in lease contracts has always been difficult and at times controversial. Due to regulations and business trends, it is easy to foresee an increasing trend; therefore, owners have always been reluctant to sign contracts with fixed prices for extended periods of time. Previously, rental fees were open to modifications only with mutual consent, with an amendment of the lease contract. Lessees have obviously been reluctant to amend the original contracts to their disadvantage, they preferred to postpone that until the end of the contract, and then agree on increased rental fees for the renewed contract. Subsequently, owners were reluctant to sign lease contracts for periods over 5 years. Five-year rental contracts have become the norm, because this is the minimum period of time required for lessors to be exempt from being subject to income tax on rents. In order to promote lessors signing lease contracts for longer periods, the "land for farmers" program that came into effect alongside the land act in 2014, the modifications allow for special procedures for changing rental fees in the case of lease contracts exceeding 10 years. In such cases, both the lessor and the lessee may initiate a procedure to modify rental fees after a period of 5 years, even forcing a judicial procedure to modify (increase or decrease) rental fees to the locally acceptable market rates, based on valuation by a certified land evaluation expert.

It is to be noted though that the procedure to modify rental fees is a two-edged sword. In the past 15 years, it has been self-evident to expect increasing rental fees. However, it is expected that area-based direct payments will be significantly amended and their conditions tightened around the year 2020, which may open the gate to a wave of forcing lessees to decrease rental fees by judicial procedure.

According to the legislative intent, rental fee modification procedures may also be applied with retroactive effect, i. e., it also applied to contracts that were signed before the relevant act came into effect. Therefore, the regulation may also apply when there is a change of ownership on the part of the lessor, and state-owned land is at stake. The state typically signed lease contracts for up to 50 years for a fraction of the market prices, which the new owners may challenge in court.

The land act allows for the possibility of unilaterally terminating a contract at the end of the economic year if negotiations on rental fee modifications were unsuccessful, in cases when the new, market-based rental fee would differ at least by 20% (in either direction) from the original rental fee laid down in the contract. The parties also have a possibility to request a court procedure at any time to modify rental fees, and in cases when the experts appointed by court determine a market-based fee that is at least 20% different from the rental fee laid down in the contract, the contract may also be terminated after a final and binding court ruling.

[5] Orlovits (2015)

IV. Conclusion

1. The Court of Justice of the European Union has ruled in several cases that generally speaking, restrictions on land transactions are acceptable, under certain circumstances. Such acceptable restrictions being a previous registration and certification procedure, a limit on maximum land size, and preemptive rights to purchase by stakeholders such as local residents, owners of the neighbouring plots, or co-owners. The Court has also ruled that it is not discriminative when a member state significantly tightens its regulations on land acquisition and ownership, as long as the new requirements apply equally both to its own citizens and other EU citizens, even in cases when the latter face significant hardships in conforming to such requirements, as long as they are justifiable and proportionate. EU laws and regulations do not allow for local residency as a requirement for land purchase; however, Court precedents also show that it is often ruled unjustifiable and disproportionate to require owners to farm their own lands, to limit the ownership by corporations, or demand certification and vocational training as a prerequisite to land purchase or ownership.
2. Even though the new land act aims to prevent and minimise abuses and speculative procedures, we consider that this intent has lead to overcomplicated regulations. Other, simpler methods and approaches could have been used to achieve the same legislative aims.
3. In our opinion, promoting and strengthening individually and family owned farms may only be successful in the future if maximum allowed land size is regulated appropriately. The currently lax regulations allowing for ownership by close family members and for amassing plots in the vicinity of a settlement result in large areas of land concentrated in the ownership of wealthy oligarch families, which makes other farmers in the area overly vulnerable and disadvantaged.
4. The government has so far failed to establish a kind of legal entity that is allowed to engage in agricultural activities as well as own agricultural land in the form of a family enterprise, in line with the currently prevalent policies on land ownership structure.
5. In order to promote its aims to transform land ownership structure in Hungary, the government has relied excessively on the framework determined by the common agricultural policy of the EU (such as withholding area-based direct payments and refusing to allow for deduction of expenses). In our opinion, it is hazardous to build a new land ownership structure on the possibilities and subsidies provided by the EU, which may be subject to unilateral changes at any time.

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LAND CONSOLIDATION IN SLOVAKIA
POZEMKOVÉ ÚPRAVY NA SLOVENSKU

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I. Introduction

The current state of ownership and use relations to agricultural land and the reason for the existence of land legislation can hardly be understood without further study of historical context. In particular, it is important to understand the causes that have led to the fragmentation of land and land ownership in Slovakia, which are considered to be one of the biggest problems of the development of the agricultural land market. At present, it is quite common that one hectare of land has more than ten owners and that an owner of the agricultural land does not have one or several plots of land with a size reasonable for farming but he/she is a co-owner of a number of small-scale plots scattered in the vicinity or more distant surroundings. If one of the co-owners is an unknown owner, it is impossible to dispose such land (sell, donate, exchange), it is possible to dispose only with the share. As a result, ownership of agricultural land loses its value. Land consolidation seems to be a solution for such situation, however, in practice, there are numerous of administrative and factual obstacles.

Land consolidation is an important legal institute for fragmented agricultural land in Slovakia but also in other European countries e.g. Czech Republic, Germany, or Austria[1]. The fragmentation of land makes it difficult to transfer land to the agricultural land market, as well as to the rational and efficient use of agricultural land for agricultural purposes. The necessity of land consolidation was realized by the peasants in Slovakia at the beginning of the 20th century, when they began to voluntarily exchange land for the purpose of obtaining land with an area sufficient for rational management.[2] Though, the institutional environment and legal regulation of land relations then did not allow for realizing of these intentions[3]. The law maker in Slovakia, however, did not realize the need for the arrangement of land relations until the year 1989, when the Law No. 229/1991 Coll. on the regulation of ownership relations to land and other agricultural property and Law No. 330/1991 Coll. on land arrangements, settlement of land ownership rights, district land offices, the Land Fund and land as-

[1] Muchová, Konc (2010)

[2] See e.g. Bezáková et al. (1996), Fábry (1977), Kolesár et al. (1980), Gajniak (2010)

[3] Štefanovič(2006)

Abstract (EN)

Land consolidation in the Slovak Republic is an important legal institute for fragmented agricultural land, which makes it difficult not only for the agricultural land market but also for the rational and efficient use of agricultural land. The necessity of land consolidation was already realized by the peasants in Slovakia at the beginning of the 20th century, when they voluntarily began to exchange the land. The law maker in Slovakia, however, did not realize the need for the arrangement of land relations until the year 1989, when the Law No. 229/1991 Coll. on the regulation of ownership relations to land and other agricultural property and Law No. 330/1991 Coll. on land arrangements, settlement of land ownership rights, district land offices, the Land Fund and land associations as amended were adopted. Moreover, land consolidation also addresses the development of the countryside and, last but not least, increases rural attractiveness for the inhabitants themselves. Rural development also belongs to the priorities of the EU. Thus, the implementation of the land consolidation projects is not only a wish of the owners or private investors, but also one of the ways to realize the goals of Slovakia and even of the European Union.

Keywords (EN)

land consolidation, fragmentation of land ownership, agricultural land, land ownership

Abstrakt (SK)

Pozemkové úpravy sú nevyhnutným právnym inštitútom pre rozdrobenú poľnohospodársku pôdu na území Slovenskej republiky, ktorá sťažuje nielen trh s poľnohospodárskou pôdou, ale aj racionálne a efektívne užívanie poľnohospodárskej pôdy. Pozemkové úpravy riešia aj usporiadanie poľných a lesných ciest, vodohospodárske, protierózne a ekologické opatrenia, ktoré pozitívne ovplyvňujú vidiek, zabezpečujú ochranu a rozvoj vidieckej krajiny a v neposlednom rade zvyšujú atraktívnosť vidieka pre samotných obyvateľov. Nevyhnutnosť komasácií si uvedomovali roľníci na Slovensku už začiatkom 20. storočia, kedy si začali sami dobrovoľne zamieňať pozemky. Zákonodarca na Slovensku si túto potrebu usporiadania pozemkových vzťahov uvedomil až po roku 1989, kedy bol prijatý zákon č. 229/1991 Zb. o úprave vlastníckych vzťahov k pôde a inému poľnohospodárskemu majetku a zákon č. 330/1991 Zb. o pozemkových úpravách, usporiadaní pozemkového vlastníctva, pozemkových úradoch, pozemkovom fonde a o pozemkových spoločenstvách. Po legislatívnej úprave sa vyskytol finančný problém realizácie pozemkových úprav, preto pozemkové úpravy napredovali iba veľmi pomaly. V súčasnosti je možné finančný problém riešiť čerpaním finančných zdrojov zo štrukturálnych fondov EÚ alebo prenechaním realizácie jednoduchých pozemkových úprav na súkromných investorov.

Kľúčové slová (SK)

pozemkové úpravy, rozdrobenosť pozemkového vlastníctva, poľnohospodárska pôda, pozemkové vlastníctvo

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sociations as amended (hereinafter as Land Consolidation Act) were adopted.

Provisions of § 19 of the Land Act defines land consolidation as changes in the arrangement of land on a given territory made for the purpose of creating land-wise unified economic units according to the needs of individual landowners, with their consent and according to the requirements of society for landscape, environment and investment construction. Based on that, it can be said that the content of land consolidation is not only a rational spatial arrangement of land ownership in a particular territory together with other immovable agricultural and forestry property associated with it, carried out in the public interest, but also it takes into account the requirements and conditions of environmental protection, the creation of territorial system of ecological stability, functions of agricultural landscape and operational - economic aspects of modern agriculture and forestry and support for rural development.[4]

In accordance with the § 1 section (2) of the Land Consolidation Act, land consolidation includes not only the identification and arrangement of ownership and use conditions, other material rights in the area of land consolidation and the new division of land in the form of consolidation or fragmentation or other modification but also technical, biological, ecological, economic and legal measures related to the new arrangement of land. That is why experts from various scientific disciplines, especially geodesists, as well as farmers, forestry and landscape engineers, construction engineers, water managers, ecologists and many others are involved in the land consolidation projects and their implementation. The land consolidation process involves *ex lege* both the land consolidation participants, whose rights are affected (in particular landowners, land tenants, owners of other immovable agricultural property, natural or legal persons whose other rights may be affected by the land consolidation, investor or another natural or legal person in whose interest the land consolidation is carried out, the Slovak Land Fund, an administrator of forest property owned by a state, a municipality or a higher territorial unit) and, on the other hand, state administration bodies (the Ministry of Agriculture and Rural Development of the Slovak Republic and district offices).

II. Objective and Methodology

The objective of the paper is to focus on the legal regulation of land consolidation in Slovakia. Firstly, the process of complex land consolidation is described. Secondly, we point out the legal institute of simple land consolidation, which is realised by a private investor. For the purpose of this paper, literary sources available on this subject, the national laws, and explanatory memoranda were used. Basic methods of legal science such as legal analysis and comparison were used.

III. Land Consolidation Procedure

It is not possible to understand the complexity and, in many cases, also the reasons for the failure to implement land consolidation projects without detailed explanation of the land consolidation procedure enacted in the Land Consolidation Act.

Land consolidation procedure may be initiated either by a proposal of a participant of land consolidation or by the Land and Forest Department of the District Office from an official duty. The result of the procedure is a decision about the proposal, by which the administrative authority will either allow land consolidation or stop the procedure if the conditions for land consolidation are not met.

After the decision about the permission or regulation of land consolidation enters into force, the next stage of the procedure starts, in which the administrative authority ensures the preparation of the initial documents (operator of district of the land consolidation project, the updating of the maps of the bonited land-ecological units, the land value, the register of the original state, for the purpose of land modifications, local territorial system of ecological stability for the purposes of land consolidation, the general principles of the functional arrangement of the territory in the area of land consolidation) and the design of the new land arrangement in the area of the land consolidation project.

Subsequently, the district office will display the register of the original state in the municipality for 30 days and deliver an extract from the register of the original state to each participant, whose place of residence is known. Participants may file objections in a written form within 30 days from the display or delivery. If the objections are justified, the district office agrees with them and the contractor re-elaborates the register of the original state upon the decision of the administrative body. If the objections are unjustified, the district office will reject them, which needs to be duly justified in the decision. After the decision about the objections, the district office will approve the register of the original state.

The district office will also publish the general principles of the functional arrangement of the land consolidation in the area at an appropriate place in the municipality or its part for 30 days, deliver it to the association of participants and invite the participants of the land consolidation to submit the proposal within 30 days from the publication or delivery. At the same time, it will notify all relevant government authorities that the general principles of the functional arrangement of the territory were published. They are required to communicate their standpoints towards the proposal of the general principles of functional organization of the territory within 30 days from the day of delivery. If the authority concerned does not communicate any standpoints within that time, it is assumed that it has no objections towards the proposal.

The district office will consult all objections with the association of participants. Based on the results of the discussion, the office will decide on the approval of the general principles of the functional arrangement of the territory. The decision shall be delivered by a public notice. The approved general principles of the functional arrangement of the territory in the area of land consolidation replace, for the purposes of construction of common facilities and measures, the decision on the location of construction, the decision on the land use drawn up in accordance with the binding part of the land use planning documentation, the decision on the withdrawal of the agricultural land and the decision on the withdrawal of forest land.

[4] Štefanovič(2006)

Once the initial documents have been approved, the district office will prepare a land consolidation project, which will consist of an accompanying report, initial documents and a proposal for the new arrangement of land in the land consolidation district. The proposal for the new land arrangement includes the principles of the placement of new plots, a plan of public facilities and measures serving municipal residents (e.g. recreational facilities, sports facilities), a plan of common facilities and measures serving landowners (e.g. roads, water management facilities), a distribution plan (a plan for a new spatial arrangement in the land consolidation project), and a list of financial settlements.

The district office will deliver the land consolidation project to the association of participants and publish it in the municipality for 30 days. At the same time, it will deliver an extract from the distribution plan to each participant, whose stay is known. The participants of the proceeding and the association of participants may lodge an objection against the distribution plan within 30 days from the publication or delivery. About the objections, the district office will discuss with the participants of the land consolidation. If the objection is not solved during the discussion, the district office in the seat of region shall decide upon it.

The administrative authority may approve the land consolidation project in cases when the land consolidation has been authorized and there is an agreement of participants owning at least two-thirds of the land on which the land consolidation has been authorized. If the owner does not lodge an objection or the objection is unfounded, it is also deemed as an agreement. If, even after the redesign of the distribution plan, it is not approved by the participants who own at least two-thirds of the land, on which land consolidation has been authorized, the district office shall stop the proceedings.

If the land consolidation were ordered, the consent of the participants of land consolidation is not necessary. The decision to approve the land consolidation project is announced by a public notice. The decision approving the implementation of the land consolidation project cannot be appealed.

After approval of the land consolidation project, the district office will order its execution. Execution of the project means the demarcation and marking of the breaking points of the new plot boundaries. The order will be accompanied by the procedure of transfer to the new arrangements, which will be also published. Land consolidation project is the basis for land-use planning documentation and forest management plans. For the construction of common facilities and measures, the approved land consolidation project replaces the land use decision, the decision on location taken in accordance with the binding part of the land use planning documentation, the decision on withdrawal of the agricultural land and the decision on withdrawal of the forest land.

The date of the decision on approval of the execution of the land consolidation project or later date specified in the decision is the date of obtaining the property right to the new land or the right to financial settlement. At the same time, rent relations to the original real estate expire.

The implementation of the land consolidation is time and financially demanding. The period of implementation of complex land consolidation projects exceeds five years. Moreover, does not always lead to the successful implementation of the land consolidation project.

IV. Simple Land Consolidation

The implementation of the land consolidation is both time and financially demanding (as shown by the procedure described above) and it does not always lead to successful implementation of the land consolidation project. The most frequent reason of failure to implement the land consolidation, which was authorized, is the impossibility of obtaining sufficient votes from participants to approve the project, especially if they disagree with the land exchange or with the financial compensation. In the case of land consolidation ordered by the district office, where the owner consent is not required, this risk is avoided. The reasons for these concerns must be sought in the recent past, particularly in the process of collectivization of ownership and use relationships, the expropriation of property without compensation and similar measures that caused property crimes to owners of land and agricultural property and, on the other hand, inadequate information of landowners on the purpose, content and procedure of land consolidation. Greater awareness leads to the state that not only investors but also the landowners themselves pursue the land consolidation projects.

Due to these facts, the legislation allows for land consolidation implemented only in a part of the cadastral territory, in the form of simple land consolidation with simplified documentation. An investor calls for the simple land consolidation and, if the state allows it, the investor also bears the costs..

An investor uses this option usually when it is impossible to resolve ownership relationships in that location otherwise. The time of simple land consolidation is generally half the time of the "complex" land consolidation[5]. Simple land consolidation is usually implemented within the horizon up to three years

Simple land consolidation is performed for agricultural use, if the owner of the land wants to farm on his land, but also for non-agricultural use, e.g. for the purpose of identifying a site for residential development, recreational facilities or the establishment of a landfill. The project of simple land consolidation is also an option for investors to build motorways, roads; railways that de facto degrade the land of the owners and therefore they cannot use it anymore.

On the other hand, simple land consolidation brings also disadvantages consisting mainly of the fact that it concerns only a small part of cadastral area; primarily focusing on the arrangement of ownership of this little part and it does not address comprehensively all ecological, biological, territorial and regional aspects of the land consolidation, as some of the priorities of land consolidation lie in the arrangement of agricultural and forest roads, water management, anti-erosion and ecological measures that have a positive influence on the countryside, ensure the protection and development of the countryside and increase attractiveness of the rural areas for the inhabitants. This cannot be fully reflected when land consolidation is implemented only at a limited territory or a part of the cadastral area.

[5] Bažík, Muchová (2013)

V. Conclusion

The implementation of the land consolidation is time and financially demanding and does not always lead to the successful implementation of the land consolidation project. Complex land consolidation is financed from the state budget and after accession of Slovakia to the EU, also through the EU structural funds. A measure concerning land consolidation is also included in the Rural Development Plan of the Slovak Republic for 2014–2020. Additionally, there is the legal regulation allowing simple land consolidation financed by investors. These facts, however, do not significantly contribute to solving the long-term problems of land ownership in Slovakia, such as fragmentation of land and land ownership and access to land.

Land consolidation addresses the development of the countryside and increases rural attractiveness for the inhabitants themselves. Rural development also belongs to the priorities of the EU and rural development policy is part of the EU Common Agricultural Policy and it should lead to the sustainable development of rural areas in the member states. Thus, the implementation of the land consolidation projects is not only a wish of the owners or private investors, but also one of the ways to realize the goals of Slovakia and even of the European Union.

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THE SUPPORT OF AGRICULTURAL LAND THROUGH THE "CENTRAL EUROPEAN INITIATIVE ON AGRICULTURAL LAND PROTECTION"

PODPORA POĽNOHOSPODÁRSKEJ PÔDY PROSTREDNÍCTVOM "INICIATÍVY STREDNEJ EURÓPY NA OCHRANU POĽNOHOSPODÁRSKEJ PÔDY"

Lucia PALŠOVÁ*

I. Introduction

Agricultural land is typically land devoted to agriculture, the systematic and controlled use of other forms of life-particularly the rearing of livestock and production of crops-to produce food for humans [(1)]. Agricultural land is currently considered as vulnerable natural resource, which is affected by diverse human activities - on one hand, 'land take' for housing, industry, roads or recreational purposes, on the other hand intensification of the agricultural production resulting in the use of chemical preparation, fertilizers, heavy machinery for big plots, etc. These processes lead to the progressive erosion, loss of humus in the land, contamination and compacting of the land. Decreasing of the agricultural land quality has an impact on reducing the capability of agricultural land to ensure food security and food self-sufficiency in the EU.

A number of studies, political statements and non-binding political documents aimed at detecting soil quality in Europe pointed out the deteriorating state of this area.

Competences in the field of agricultural land protection are exercised by concrete European states because until now, at the EU level, political will to adopt legally binding actions is missing. In spite of this fact, European and international environmental documents encourage European states to set up actions to maintain and protect agricultural land based on the sustainable principles.

II. Material and Methods

The aim of this paper is to present the objectives and activities of the international project Jean Monnet "Central European

(1) Oxford English Dictionary (2012)

Abstract (EN)

The protection of the qualitative aspects of agricultural land is in the interests of both Slovakia and the European Union. Several policy documents have emerged in the European Union over the last few years, however, they have not been legally binding, as the EU Member States refuse all binding legal acts in this area. Therefore, solving the problem of agricultural land protection is left to the exclusive competence of the EU Member States. On the other hand, problems related to agricultural land cross the borders of states and that is why the Department of Law, Faculty of European Studies and Regional Development, Slovak University of Agriculture in Nitra submitted an international research project under the Erasmus + program, Key Action 3: Jean Monnet entitled "Central European Initiative on Agricultural Land Protection". The aim is to strengthen the dialogue between key stakeholders in the protection of agricultural land in Central Europe what will have a positive impact on the achievement of the EU agri-environmental and food policy objectives.

Keywords (EN)

Erasmus+, agricultural land protection, agricultural land, legal acts, European Union

Abstrakt (SK)

Ochrana kvalitatívnej stránky poľnohospodárskej pôdy je v záujme jednak Slovenska a jednak politiky Európskej únie. Na pôde Európskej únie vzniklo v priebehu posledných rokov viacero politických dokumentov, ktoré však neboli právne záväzné, nakoľko členské štáty EÚ dlhodobo odmietajú v tejto oblasti akékoľvek záväzné právne akty. Riešenie problematiky ochrany poľnohospodárskej pôdy je teda ponechané vo výučnej kompetencii členských štátov EÚ. Problémy týkajúce sa poľnohospodárskej pôdy však prekračujú hranice štátov, a z tohto dôvodu podala Katedra práva, Fakulty európskych štúdií a regionálneho rozvoja, Slovenskej poľnohospodárskej univerzity v Nitre medzinárodný výskumný projekt v rámci programu Erasmus+, Kľúčová akcia 3: Jean Monnet pod názvom „Iniciatíva strednej Európy na ochranu poľnohospodárskej pôdy". Cieľom projektu je posilnenie dialógu medzi kľúčovým aktérmi ochrany poľnohospodárskej pôdy v strednej Európe, čo pozitívne ovplyvní dosiahnutie cieľov agro-environmentálnej a potravinovej politiky EÚ.

Kľúčové slová (SK)

Erasmus+, ochrana poľnohospodárskej pôdy, poľnohospodárska pôda, právne predpisy, Európska únia

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Initiative on Agricultural Land Protection", which was selected for co-funding through the program Erasmus+, Key Action 3: Policy- Jean Monnet Project, No. 600441-EPP-1-2018-1-SK-EPPJMO-PROJECT.

III. Results

Thematic Strategy for Soil Protection (2006), Strategy 2020, Road Map for Resource-Efficient Europe (2011), results of the conference "Land as a resource" (2014), have given formal recognition to the severity of the soil and land degradation processes within the European Union and its neighbouring countries. Available information suggests that, over recent decades, there has been a significant increase in soil degradation processes, and there is evidence that these processes will continue if no action is taken. Agricultural land degradation processes are driven or exacerbated by human activity, especially by a trade-off between various social, economic and environmental needs. At the same time, in many regions, soil is irreversibly eroded; it has a low content of organic matter or is contaminated.

As it is demonstrated in several EU documents, the competition for land resources creates serious risks of geopolitical imbalances both worldwide and in the EU. The EU will thus be even more dependent on its land resources and their sustainable use in the future.

The project proposal originated from the need to contribute to processes aiming at sustaining the quality of agricultural land and food security in Europe. Therefore, the objective of the international project is to foster a dialogue between the key stakeholders of agricultural land protection in Central Europe affecting the achieving of the objectives of the EU agri-environmental and food policy. Central Europe is a specific geographical region with significant share of agricultural land in Europe with a good quality and climate conditions [(2)]. For the project purposes, following states were selected as the Central European states: Austria, Croatia, Czech Republic, Germany, Hungary, Lichtenstein, Poland, Slovakia, Slovenia and Switzerland.

Specific objectives of the project are:

- to promote discussion about sustainability of the agricultural land quality in Central Europe;
- to boost knowledge about the quality of agricultural land in Central Europe.

Objectives of the proposed project will be achieved through the cross-sectorial approach used for the project implementation. Project activities will promote discussion and reflection on agricultural land protection in the Central Europe and will enhance knowledge about the EU.

The following outputs were designed to achieve the project aim:

1. International conference - for the conference stakeholders at different competence level will be invited in order to strengthen mutual multispectral synergy between them:
   • academics/researcher from the educational and research institution, who introduce and present high theoretical and research expertise on agricultural land protection in a concrete Central European country;
   • expert from the managing or controlling authority (depending on which authority has wider competence in the field) who will discuss about the practical cases of land protection in terms of managing/control competences;
   • expert from the agricultural practice who could explain everyday practical experiences with the protection of agricultural land.

   International conference will be held in Nitra, on April, 2-5, 2019. 31 experts from the Central European states are expected to participate at the event.
2. Proceeding from the conference - online proceeding will contain all scientific papers from the conference "Central European initiative on agricultural land protection" from significant researchers, academics and experts on agricultural land protection in Central Europe. The scientific papers will analyse and evaluate socio-economic, ecological, legal and political aspects of agricultural land protection in the Central Europe within the context of the EU agri-environmental policy and the effort to sustain quality of the agricultural land in Europe.
3. A book, which will present the European legal regulations and requirements that are necessary to sustain the quality of agricultural land and will summarize analyses and expertise of agricultural land protection from the Central European countries. The book will contain the best practices in maintaining the quality of agricultural land.
4. Presentation of the land protection in the Central European countries - will be used as a didactic material to provide basic information about the land protection in the Central European countries and to provide overview about the research activities in the area of land degradation in the project research institutions.

All relevant information concerning the project and results are available at the project website: www.ceiland.uniag.sk. Dissemination outputs contribute to the transparency and visibility of relevant information about agricultural land protection in the Central Europe for professionals and civil society that may lead to increase awareness of land value in the EU and neighbouring states.

IV. Conclusion

The approved international project will contribute to the political discussion about the agricultural land protection in the Central Europe. The discussion and reflection on the specific European issue from the wide angle will have relevance in the following:

- to increase knowledge about the agricultural land protection in the Central Europe with the impact on encouraging further research and educational activities within the field;
- to stimulate cooperation between stakeholders individually and across their competence levels with the impact on developing pointers for further actions in agricultural land protection in the Central Europe;
- to raise awareness about the value of agricultural land in

[(2)] World Factbook (2009)

the Central Europe for academics, researchers, professionals and civil society.

Impacts of the project in the short term and long term are:

- to sustain the quality of agricultural land in the Central Europe within the context of the EU agri-environmental and food policy;
- to contribute to development of land footprint of the EU for Central Europe;
- to harmonize the political tools and implementation measures related to agricultural land protection in the Central Europe;
- to increase the awareness of the land value for civil society.

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