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**Land tenure security and access to land - the
comparative study in France and in the Czech
Republic**

Diploma Thesis

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Objectives of thesis

The aim of this study is to answer the questions, such as: What types of tools and initiatives for farmers exist in France and the Czech Republic in order to help them to access agricultural land? How to facilitate access to land to new entrants in France and in the Czech Republic? The recommendations and suggestions to establish the organisation supporting access to land in the Czech Republic are based on analysis of current situation in France. The main inspiration is French organisation Terre de Liens that was established to foster access to land in France in 2003. The results should help creating the guideline how to establish the access to land organisation in the Czech Republic. The spatial target is focused on specific tools dealing with land tenure security within the French organization to create better conditions for farmers with respect to access to land, to design organisational structure and to fund the organisation.

Methodology

The author will analyse the access to land situation in the Czech Republic and in France. The analyse of the situation in France will be completed by description and assessment of Terre de Liens organization. Considering practice of Terre de Liens and current situation in the Czech Republic, the guideline how to establish the access to land organisation in the Czech Republic will be introduced.

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RIOUFOL, V. (2013). An Essential Prerequisite for Developing Local, Organic Agriculture in Europe: Securing Access to Land for New Farmers. *Ecology & Farming* , 1, 19-23.

Scientific articles from WOS

SKLENICKA, P., JANOVSKA, V., SALEK, M., VLASAK, J., & MOLNAROVA, K. (2014). The Farmland Rental Paradox: Extreme land ownership fragmentation as a new form of land degradation. *Land Use Policy* , 38, 587-593.

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Declaration

I hereby declare that the work presented in this thesis is, to the best of my knowledge, original work, except as cited in the text. The research was completed under the direction of Ing. Vratislava Janovská, Ph.D.

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Abstract

This thesis focuses on access to land situation in France and in the Czech Republic. The main aim is to create the recommendations for Czech Republic in order to develop A2L organisation to help small farmers with access to agricultural land and enter the agricultural business. The guidelines for functioning of the organisation are based on a case study of successful French access to land (A2L) organisation Terre de Liens and in-depth analysis of land tenure security and farm structure in France as well as in the Czech Republic. The main obstacle for the new entrants to agricultural business in the Czech Republic is an extreme ownership fragmentation causing high rental rate and supporting existence of large industrial farms. The newly proposed organisation helps the small scale farms to start their agricultural business and overcome the obstacles that they are facing. The goal of the organisation is achieved by several activities. Firstly, it serves as source of information for the farmers, as well as for the population to raise awareness about sustainable agriculture. Secondly, it helps directly to the farmers to access the land and assist when setting up their farm.

Key words

Land tenure security, farmland ownership fragmentation, access to land, Terre de Liens, land bank, land acquisition

Abstrakt

Práce řeší problematiku přístupu k zemědělské půdě v České Republice a ve Francii. Hlavním cílem práce je navržení organizace, která by pomohla řešit problémy malých farmářů a umožnila jim vstoupit na trh. Doporučená struktura organizace, je založena na případové studii úspěšné francouzské organizace Terre de Liens a podrobných analýzách držby půdy a struktury zemědělských podniků ve Francii i v ČR. Hlavní pro české zemědělce je vysoká vlastnická fragmentace zemědělské půdy, jež má za následek vysoký podíl pronajímané půdy a rozšiřování velkých industriálně zemědělských podniků. Nová organizace je navržena tak, aby pomáhala malým farmářům překonat překážky, kterým čelí při zakládání farem. Cílem organizace především sloužit jako zdroj informací pro farmáře, stejně tak jako pro běžnou veřejnost. Zvýšení povědomí o udržitelném zemědělství je klíčovým bodem pro zlepšení situace. Další činností organizace je především přímá pomoc se získáním vhodného pozemku a asistence při zakládání farmy.

Klíčová slova

Držba půdy, fragmentace vlastnických vztahů, přístup k půdě, Terre de Liens, půdní banka, koupě půdy

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1. INTRODUCTION

The actions of humankind cause serious environmental consequences. Climate change, destruction of the earth surface and population growth are leading us to the tipping point. Our kids will most likely grow up in the world where food, water and oil will be hard to find (LEVY 2015). People like books, films and computer games about fictional catastrophes like alien or demon domination over the humankind. What about stories concerning the catastrophes that are really imminent? There is a very small part of population that is aware of what we are experiencing today. Industrial agriculture, as it is common nowadays, is becoming a big threat. Due to the human development and raising living standards, we are reaching the limits of the environment and the land and its unlimited use, is not endless. Agriculture has changed dramatically during the last century, which is obvious mainly from the increase of productivity provided by new technologies, mechanization, use of chemical fertilizers and government targets to maximize production. These changes have made life easier for many people and reduced many risks in farming. However, they brought many supplementary drawbacks as topsoil depletion, groundwater contamination, the decline of family farms, socioeconomic problems in rural communities and others (FEKETE-FARKASH, 2006). Small scale and sustainable agriculture might be the solution for these problems. Unfortunately, small farmers are facing issues with access to land.

Nowadays private investors control significant part of agricultural land to operate large industrial farms and therefore potential new small farmers are blocked from entering the market. Moreover, these private investors usually don't own the land and irresponsibly overexploit the soil and disrespect ecological practises (FNH, 2016).

Given the fact that most of the agricultural production in the world comes from large monoculture farms, local overproduction of certain products and lack of others increases. As a consequence of this situation a large amount of agricultural products is being shipped from distant places to be consumed on the other side of the world, which of course also effects fuel consumption. Depletion of fossil fuels encourages the production of biofuels that is spread of big part of agricultural land that could be farmed. This is the point, where the circle closes.

On the other side there are small family farms which have owned their agricultural land for several generations. Small scale farms are usually using the land in a sustainable way to protect its fertility. Moreover, local production ensures for the consumers several direct advantages, primarily freshness and healthiness of the products. Consuming local products is one of the major points of sustainable development.

How can we support small farmers to enter the market and to compete with the large industrial farms? In response to concerns about sustainable use of land and environmental issues in general, in many countries special organizations are founded to introduce strategies in order to promote access to agricultural land and raise people's awareness about sustainable farming and land management.

Despite very difficult situation in agriculture in terms of access to land in the Czech Republic, there hasn't been any access to land organisation (A2L) established yet. Therefore, the topic of development of such an organisation in the Czech environment based on a French case study has been chosen for my master thesis.

2. GOALS/AIMS

The aim of this study is to bring insight into the already existing tools and initiatives that help farmers access agricultural land in the Czech Republic, challenge the today's procedure and present ideas and thoughts on how to facilitate access to land to new entrants. The idea of establishing an organisation to support land access for small farmers in the Czech Republic comes from the analyses of the current situation in France. The main inspiration is the French organisation Terre de Liens which was established to foster access to land in 2003. The outcome of this thesis should be a proposal of potential guidelines on how to form such an organisation in the Czech socio economic environment and Czech legal system. The special attention is focused on specific tools dealing with land tenure security within the French organization. How to create better access to land conditions for farmers with respect to the environment? How to design structure of access to land organisation and how to fund this organisation? These are the question that should be answered by the results of this study.

3. LITERATURE REVIEW

3.1. Access to land

Throughout the history land has always been recognized as primary source of wealth. It is the basis for shelter, food, and economic activities, it guarantees plenty of employment opportunities in rural areas and is becoming to be a scarce resource in urban areas. Access to land is governed through land tenure systems (FAO 2002). Effective land governance systems that provide improved access and rights to land resources and are a necessary condition for achieving food security and better nutrition (USAID 2013). Considering the fact that nearly billion people in the world suffer from hunger, with over 90% of them living in developing countries, mostly in rural areas, the access to land becomes a major issue nowadays.

The most part of the population, mainly from the developed countries, is not aware of the importance of access to land. Contrary to popular belief, the present problem of hunger is not caused by insufficient amounts of food produced globally, nor is it most of all an effect of armed conflicts or natural disasters (GERWIN 2011). Legal access to land is a strategic prerequisite for the development of sustainable human settlement affecting both urban and rural areas (UN-HABITAT 2003).

3.2. Land tenure security

According to FAO land tenure is *“a relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land”*. Land tenure should primarily be viewed as a social relation involving a complex set of rules that affects the way that land is owned and used (FAO 2003). Land tenure security than refers to the right of individuals and groups of people to effective protection by their government against forcible evictions (MERCANTUS 2009).

The most important point of land tenure security is ensuring a sufficient perpetuation of land rights (PAYNE 2013). The duration of property rights is particularly important in agriculture, as landholders will not invest in their land if they are unsure if they will benefit from these investments (MERCANTUS 2009). Ideally, there should be no limit

making the property rights temporary; the owner should hold the land at his or her discretion (MERCANTUS 2009).

The ways in which a society allocates title and rights to land are an important indicator of the nature, character and organization of that society, since one can say that rights to land reflect rights in other areas of public life. There are therefore as many systems of land tenure as there are societies (PAYNE 2013).

3.3. Land tenure systems

Land tenure systems determine who is authorized to use resources, for how long, what kind, and under what conditions (FAO 2003). In a given jurisdiction the land tenure system comprises of a set of possible bases under which land may be used. This range encompasses both rural and urban tenures and includes ownership, tenancy and other arrangements for the use of land (FAO 2003). There is a great variety of land tenure systems functioning around world, whose formation was affected by natural conditions as well as social factors (FAO 2002b). Most of them they are a reflection of local culture, customs, tradition and mainly law.

Systems of land tenure are not immutable and they are subject of a continual process of change. Changes in the natural growing conditions and economic factors, technological innovations, changes in the size of the population, and political situation are the most common impulses that bring changes to the land tenure system. Land tenure systems are institutionally established and are, therefore, difficult to alter. Political power structures; cooperative ties and class, cultural, and ethnic interests and motives all work towards maintaining the established forms (KUHNNEN, 1980).

First main issue regarding land tenure system is a question of land ownership and rights to the land. In general, there are two forms of rights to the land, the right of disposition over the land and the right to use the land. The owner has the right of disposition and he is entitled to decide whether to sell, lend or bequeath a piece of land (FAO 2002b). By contrast the tenant doesn't have the right of disposition, he is only entitled to use the land. The conditions of the tenancy agreement than regulate the way in which the land is used.

The big question regarding the land rights is: Who should own the land? We distinguish two basic types of land ownership. Firstly, we have private ownership of land that was initially introduced in the western countries, whereas the developing countries followed later. However, until today, some societies still haven't developed any form of private right to land that would grant the right of disposition (KUHNNEN 1980). Secondly, we have publicly owned land that is allocated for the usage to the farmers. The belief about the advantages or disadvantages of public and private ownership of land is strongly affected by the ideological point of view. On the one hand it is argued that the owner is not indifferent in what is going on with his land and he makes efforts to keep it in good condition. On the other hand, according to the socialistic viewpoint, private ownership of the land factor has led to exploitation and should, therefore, be abolished (USAID 2013). Nevertheless, the agricultural development is not only dependant on the fact, whether the land is private or public, far more important are the individual land tenure systems (FEDER 1987).

Each of the tenure types has advantages and disadvantages. The most common land tenure systems in Europe are freehold, leasehold and private rental. Freehold means ownership in perpetuity and can be found in all market economies around the world. This type of tenure system provides a high degree of security and ensures maximising of commercial value. People are enabled to realise substantial increases in asset values. On the contrary the disadvantages might be a high cost and a financial uncertainty, to the effect that the property values can go down as well as up (PAYNE 2012). Another tenure system is leasehold, which can be negotiated for a long period of time, usually 90 years, but can last as well up to 999 years. Leasehold tenure system is limited by lease conditions providing restrictions on cultivation, stocking levels etc. (HBA 2016). The security of leasehold system is given only by the length of the period specified in the lease and strong legal framework. Last major tenure system is private rental that exists in all countries with private property. Good security is ensured only if protected by legally enforceable contract (PAYNE 2012). This is the point where most of the problems occur.

Firstly, we have to mention the fact that the tenants have greater access to informations compared to landlords. We regularly observe that landlords live far away from where their land is located and are so called absentee landowners (PETRŽELKA, 2014).

They are often out of touch with current farming practices since they either have been gone from the farm for decades or otherwise obtained the land through inheritance or marriage, and often are elderly people. Meanwhile, tenants generally are intimately aware of market rents and land values, and typically recognize the possibilities and limitations of current farming practices. (KASTENS 2006). Therefore, the rental contracts are often predisposed to be unfair and poorly arranged. Secondly, private rental tenure system might cause problems when this type of a system is overused due to the high farmland ownership fragmentation (SKLENICKA 2016).

3.4. Farmland ownership fragmentation

Farmland ownership fragmentation is specified by number of owners and size of their parcels, which is one of the important drivers of land-use changes. It is a process that in its extreme form can essentially limit land management sustainability (SKLENICKA 2016). The extent of farmland ownership fragmentation is highly affecting land tenure security, therefore it is an important issue in Europe, mainly in post-communist countries. Even though the ownership fragmentation is different in every single European country, in general it is caused by several main factors that includes historical consequences, heritage and farmland market (CRECENTE 2002; DEMETRIOU 2013).

The high ownership fragmentation slows down the development of farmland market (BUDAY 2011). Since a very small parcel is not easy to cultivate nor to sell, they are usually rented to big production companies. The phenomenon, where very small parcels tend to create large production blocks by being rented to larger farmers and therefore significantly homogenize the land-use pattern, was named Farmland Rental Paradox. The parcel size established as the threshold for this phenomenon is 1.07 ha. Below this threshold, the smaller the parcels are, the larger the blocks they tend to create (SKLENICKA 2014). One of the consequences of farmland rental paradox is land concentration that is significant within the large conventional farms occupying mostly the rented land. On the contrary, the bigger parcels with one owner are likely to be economically effective for the agricultural use, considering lower costs (GONZALES 2004). Due to this fact, bigger parcels are much more often cultivated by its owners.

Europe is currently experiencing significant land concentration. In 2010, the top 3 % of farms, in terms of the size, controlled half of the total UAA (Utilized Agricultural Area) in the EU-27, while 80 % of farms, all below 10 ha, controlled only 12 % of the total UAA (EU 2015). Moreover, the process of land concentration is obvious from the number of small farms in Europe. Between 2003 and 2010, the number of holdings with less than 10 ha dropped by a quarter. The most extreme situation within the EU is for example in the Czech Republic, where large agricultural holdings (>100 ha) are cultivating 86 % (EU 2015) of the UAA. In deep contrast with the Czech Republic are Slovenia, Austria and Netherlands where the large farms are cultivating 6 – 18 % (EU 2015) of the UAA.

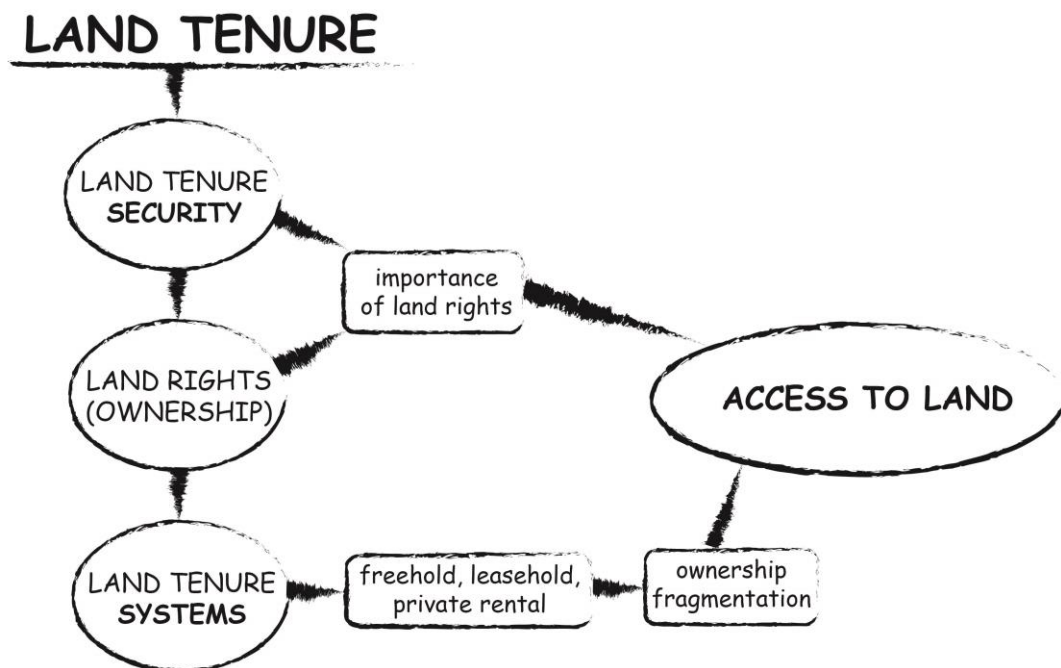
The extreme farmland ownership fragmentation is not only affecting the size of the farms and the percentage of rented land, but has also an effect on land prices. In the countries where the small plots are creating big agricultural blocks the land prices are quite low (SKLENIČKA 2016).

3.5. Agricultural land prices in Europe

Agricultural land prices play a big role in agricultural development. There are large differences between farmland prices in Europe. Since the political and economic stability has increased in many European countries, the enormous potential of their farmland is increasingly recognized for the food production (CIBUS 2016). Farmland prices in Western Europe have risen considerably during the last 20 years (CIBUS 2016). In rich countries such as Denmark and Netherlands, where the land price raised rapidly, there is no potential for future farmland prices growth. The situation differs in post-communist countries, where the growth of farmland prices was also recorded in last 10 years, but was not far that significant. Considering this fact, in these countries there is still potential for further farmland prices growth (CIBUS 2016). The current growth is largely stimulated by the entry of those countries to the EU. When entering the EU, the most important role play subsidies allocated to the agricultural sector that make agricultural business more attractive and the demand of the agricultural land increases.

The most expansive land within the EU is in Netherlands, where in 2013 the average price per hectare was 49,575 € (EUROSTAT 2016). Since 2000 the prices grew by 36 % (EUROSTAT 2016). Second most expansive farmland is in Denmark, where in 2013 the land was being sold for 23,355 €/ha (EUROSTAT 2016) the prices grew since 2000 by 106 % (EUROSTAT 2016). High farmland prices are also in Germany, Italy and Great Britain, where in 2013 the price was around 20,000 €/ha. The highest growth (324 %) (EUROSTAT 2016), since the year 2000 within these countries was recorded in Eastern Germany. By contrast there is quite cheap farmland in France, 5,420 €/ha (EUROSTAT 2016), recording the growth of 193 % (EUROSTAT 2016) since the year 2000. According to the table 1, France is the Western European country with the lowest farmland prices, which make its agricultural environment in some parts similar to Eastern countries. This is one of the reasons for choosing France as a case study for this paper. In the Czech Republic the average price of farmland is 5,000 €/ha (EUROSTAT 2016) however we have been recording high growth in the past ten years, as well as we expect further future growth (KUNZEL 2014).

All above mentioned factors: land prices, measure of farmland ownership fragmentation and type of a land tenure system, specifying the land rights are the key points that actually affect access to land situation in different countries (Picture: 1).



Picture 1: Land Tenure (author: Klára Janoušková)

4. METHODOLOGY

4.1. Analyses of current condition about access to land

Analyse of the current situation about access to land was made for the Czech Republic and France. The selection of France was based on the fact that France is very active in promoting and supporting sustainable agriculture and that many non-profit and state organizations are acting in this field.

At the beginning the historical background of land management was analysed in both countries. Nowadays, the historical development reflects the problems with access to land in both countries and is very important for comprehension of the current farm structure. The French part of the historical analyses is completed by description of the role of SAFER organization in development of access to land situation.

Subsequently the analyses of current farm structures in those countries was proceeded. The most important analysed figures are: the development of the UAA compared to the whole area of each country, size of the holdings, employment in agricultural sector, size of the farms and its development, percentage of rented land and share of the UAA owned by legal persons.

Last part of the analyses of current state is the comparison of different organizations supporting access to land and the services providing helpful information to the new entrants who are searching for suitable land. The existing services are divided into two groups: public (free) services and private (commercial) services.

4.2. Case study selection

For a deeper analysis, the French organization Terre de Liens (TDL) was selected. The selection was based on the fact that TDL presents a very good example of complex solution for access to land problems that many farmers are facing nowadays in France.

Firstly, the organisational structure was analysed. The main focus was given to the analyse of financial tools, that represents different means of land acquisition. The main

target is to create understandable description of the organizational structure, its activities in the matter of agricultural projects assistance and results of their activity. The integral part of the results of TDL's activity is the assessment of the problems and obstacles that the organisation is facing in different periods of its existence. The results of the analyses should help to find solutions for access to land issues as well as to gain inspiration for the potential similar organization in the Czech Republic.

4.3. Data gathering for analyses

The detailed data for the case study of TDL was gained during personal visit in France (17.11.-25.11.2016). Firstly, the meeting with the co-founder of the organisation Véronique Rioufol was organised, directly in her office in Lyon. Secondly, the gained information was completed by participation on two days seminar in Massif Centrale in France, which was focused on sharing practices with agricultural projects assistance. Projects assistance is one of the main activities in TDL. The seminar, that attended about 30 persons, offered me plenty opportunities for discussion and interviews with TDL's managers, employees, volunteers, local authorities and farmers. Finally, detailed information on functioning of La Foncière, which is one of the key financial tool of TDL for land acquisition, was gained during the meeting of its committee in Paris. During this reunion the projects applying for TDL's assistance, were discussed, assessed and final voting about their acceptance or non-acceptance was executed. All together: participating on TDL's reunion, seminar and meeting the co-founder of the organisation, offered me a great possibility to gain complex information about functioning and mainly about the nature of TDL movement.

4.4. Processing of results

The main aim of the thesis is to create guidelines for potential A2L organisation that would be suitable for the Czech conditions. The results are based on practices of French organisation. The assessment of the practices was based on comparison of the current situation in the Czech Republic and France.

5. ANALYSES OF CURRENT SITUATION

This chapter contains separate analyses of access to land in the Czech Republic and in France. First part of the analyse of both countries is dedicated to historical development of land tenure security. Second part relates to current farm structure by describing the changes in agricultural area compared to whole territory of the country, size of the farms, employment in agriculture and proportion of rented land. Last part of the analyses refers to the existing services and organisations helping new entrants to access agricultural land.

5.1. Access to land in the Czech Republic

5.1.1. Development of land tenure in the Czech Republic

The land tenure situation in the Czech Republic is similar to the situation in other post-communist countries. In the Czech Republic, collectivization of agriculture began in 1948. Individual land ownership was not generally abolished, but the use rights were given to the state and cooperative farms, and under pressure many owners simply gave their agricultural land to the state (SKLENICKA 2013). Prior to commencement of the most recent land reform, 68% (FAO 2016) of agricultural land was in cooperatives. State farms were also important and held about 28% (FAO 2016) of agricultural land. After revolution, the land was returned to their owners.

The restitution process resulted in a farm structure dominated by large agricultural businesses that are operating mainly leased land. Pre-transition era land tenure patterns still remain: 90% of farming units (small household plots and family farms) control less than 10% of the land, while the largest 10% (large collective and corporate farms) control about 90% of the land (FAO 2016). The relatively low rate of decollectivization in the Czech Republic has resulted in limited farm profitability, as most large-scale farms and cooperatives have not effectively restructured their assets and operations (SKLENIČKA 2006). What is the reason of this situation? Most of the people that gained back their land are not use to farm anymore and are not interested to do so. Moreover, their piece of land is usually quite small and in the middle of big agricultural block with no access to the plot. Which means that even if they are

interested in farming on their land, it would not be easily possible. The only way is to rent the land to large-scale farms, that are not offering reasonable rent (SKLENIČKA 2006). This is raising in several problems. First of them is overexploitation. The large industrial farms are not cultivating the land in reasonable and sustainable way, which is caused by attitude to the land rented for uncertain period (SKLENIČKA 2006). Secondly, large agricultural blocks typical for industrial farms are creating barriers in the nature, reducing biodiversity, decreasing landscape heterogeneity and destroying landscape mosaics typical for the Czech Republic that is a national heritage (SKLENIČKA 2002). The example of landscape mosaics changes near Horoměřice is obvious from pictures 2 and 3.



Picture 2: Landscape mosaics Horoměřice 2010 (kontaminace.cenia.cz)



Picture 3: Landscape mosaics Horoměřice 2010 (kontaminace.cenia.cz)

The damages caused by 40 years of suppression of land ownership are solved mainly by land consolidation process. Land consolidation is a tool used all over the world for improving the effectiveness of land cultivation and for supporting rural development (SKLENIČKA 2006). In the Czech Republic its main target is to put the relationships between owners and land into order and speed up the process of land privatization. The Czech law has two basic forms of land consolidation: simple land consolidation, dealing mostly with provisional land use, while comprehensive complex land consolidation deals with changes in land ownership, land conservation, flooding control, land reclamation, field road systems, etc. Once the initial demands of the farmers are satisfied, complex land consolidation becomes increasingly important. So far, complex land consolidation had been completed in more than half of the cadastral

units. The annual budget for land consolidation does not correspond with current demands, which slows down the whole process (ČÍHAL 2006).

5.1.2. Current farm structure in the Czech Republic

In 2013 there were almost 3.5 million hectares (CZSO 2013) of UAA in the Czech Republic, corresponding to 44 % (CZSO 2013) of the whole country. During the last 13 years the total UAA decreased by 3,3 % (CZSO 2013).

The farm structure in the Czech Republic is strongly affected by its historical development, explained in previous chapter. Accordingly, in 2010 a relatively small number of farms accounted for a huge majority of the Czech agricultural area: While only 19 % (EUROSTAT 2012) of the holdings had an UAA of 100 hectares or more, these holdings accounted for 89 % (EUROSTAT 2012) of the total Czech UAA. The relatively high number of big farms leads to a very high average area per holding in the Czech Republic. In 2010 it was 152 hectares (EUROSTAT 2012) per farm. The number of holdings did not change much over last ten years.

The major land tenure system in the Czech Republic is private rental. However, a significant change in ownership type was recorded recently. While in 2000 almost all utilised agricultural land was rented (92.4%) (CZSO 2016), in 2013 agricultural holdings owned 25.7% of the UAA. Holdings of natural persons owned one quarter of the UAA in 2000 and nearly one half in 2013; in holdings of legal persons the share of own land rose from 1.3% (CZSO 2016) in 2000 to 15.9% (CZSO 2016) in 2013.

Last important characteristic about farm structure in the Czech Republic is the number of persons working in agriculture. The agricultural labour force represents only 1.3 % (CZSO 2016) of the Czech population and a decrease of 19.5 % (CZSO 2016) was recorded compared to the year 2003. This value stands among the lowest within the EU-27 (CZSO). The low percentage of workers in agricultural sector might be caused by high mechanization of agriculture and lack of family farms. The first attempts to create an organization that would support young families to start farming and help them to access a suitable piece of land has arisen recently. There are two important initiatives: Foundation for soil (Nadace pro půdu), which is the first attempt to create

A2L organisation in the Czech Republic and CoolAND, which has the function of raising people's awareness about the topic of A2L.

5.1.3. Services providing information about agricultural land in the Czech Republic

There is already considerable amount of services and organisations providing different type of information that are necessary or useful for the farmers who want to start their agricultural business in the Czech Republic. They are represented in four categories: public services, private services, specific websites for land sale and organisations (Table 1).

Type	Service/Organisation	Function
Public services	LPIS http://eagri.cz/public/app/lpisext/lpis/verejny/	Information on agricultural production blocs
	State Administration of Land Surveying and Cadastre http://nahlizenidokn.cuzk.cz/VyberParcelu	Information on individual parcels
	RUIAN http://vdp.cuzk.cz/marushka/	Information on individual parcels
Private services	CleverMaps	Management of agricultural land (for farmers and owners of the land)
Websites for land sale	www.prodejpujdy.cz , www.farmy.cz , www.zemedelskepozemky.cz , www.louky-pole.cz , www.pozemkyafarmy.cz	Intermediary in land sale
Organisations	Foundation for soil www.nadacepropudu.cz	Land acquisition and project assistance

Table 1: Czech organisations and services

Public services

Public services are usually in the form of map portal publishing information about particular parcels or whole agricultural blocs. The three most important are LPIS, State Administration of Land Surveying and Cadastre and RUIAN.

LPIS (Land Parcel Identification System) is a geographical information system (GIS) containing information mostly about usage of agricultural land. This system enables

to check various information about every single agricultural block. The most important recorded data is grown crop and information about owner and user of the plot. LPIS is also connected to the land register. The main target of LPIS is verifying entries in the requests for subsidies provided in relation to agricultural land funded by national programs or financed by EU funds.

However, the utilization of LPIS is much broader (eAGRI 2016). LPIS exists in three different modules. First one is iLPIS, that is designated only to registered farmers and apart from on-line presentation of recorded data, the module contains tools for management of crop rotation. Second one is a public version of the register, that is open without any registration and is accessible on website: (<http://eagri.cz/public/app/lpisext/lpis/verejny/>). Last possibility is to access LPIS data through WMS/WFS service (eAGRI 2016).

State Administration of Land Surveying and Cadastre provides a website that enables to reach information regarding ownership of parcels, buildings, flats and all the legal relations bounded to the real estate that are recorded in the land register. The information about individual parcels are available on the website: <http://nahlizenidokn.cuzk.cz/VyberParcelu>.

RUIAN is a Register of territorial identification, addresses and real estate and is a part of the system based on four basic registers created by public administration of the Czech Republic. RUIAN contains data managed by the Czech office of land survey and cadastre. The advantage of RUIAN in comparison with the website of State Administration of Land Surveying and Cadastre is the possibility to display all the data in the web map application. RUIAN records descriptive data about territorial components, territorial registration units, addresses and their mutual relations.

RUIAN data are publicly accessible through the application of Public remote access. Web application is placed on the address <http://vdp.cuzk.cz/marushka/> and enable browsing and searching the actual and historical RUIAN data, as well as data about estate property provided by Information system of land register. Another possibility for users is to download the data from the application in format .vfr (výměnný formát

RUIAN). Data in .vfr format can be imported to GIS software as ArcMap or ArcGIS online (CUZK 2016).

The main problem of those publicly available services is their disunity and poor arrangement that is not easy to follow for the farmers.

Private services

The users have to pay to be allowed to use the application.

Clevermaps (<http://www.cleverassets.cz/>) is a profit company in the field of location intelligence. They are creating cloud solutions and web applications for property administration. One of their products is web application Clever Assets (Table 2), that serves to land owners and farmers to manage agricultural land. This application is running online and is connected to land register and LPIS (CLEVERMAPS 2016).

Clever assets functions:
Overview of contractual relations
Automatic generation of contracts
Looking after the payments
Looking after the changes in ownership
Easy exchanges of plots
Help with buying a new plot suitable for agriculture

Table 2: Clever assets functions

All information is on one place and very clearly arranged. The whole application is very simple and user friendly. This is important aspect for farmers that are usually not familiar with work on computer and checking Land Register (<http://nahliznidokn.cuzk.cz/>), LPIS (<http://eagri.cz/public/app/lpisext/lpis/verejny/>) or working with other GIS data is not possible for them. Clever assets offer them all the information related to the given plots on one map. Everything is actualised automatically. The company Clever Maps has LPIS data for free (they are public) and land register data packages have to be bought actualised every month.

This product is suitable mainly for large farms that are leasing huge amount of plots and they have to take control over big amount of contracts (usually more than a

hundred of contracts and more than 400 ha). Clever assets are not suitable for small farmers, although the part of the functions (help with purchase or exchange of the plot) offered by Clever assets could be helpful to small starting farmers. Unfortunately, the product is too expensive for small scale farmers.

Websites for land sale

There are many websites specialized on sale of the agricultural land in the Czech Republic. Individual persons or companies can advertise their land to sell or they can search for a piece of land to buy. No land sale website that include complex web map application containing all important information concerning the plot.

Some of the most popular websites are:

www.prodejpujdy.cz, www.farmy.cz, www.zemedelskepozemky.cz, www.louky-pole.cz, www.pozemkyafarmy.cz

5.1.4. Organization dealing with access to land issues in the Czech Republic

One of the two organisations dealing with access to land in the Czech Republic is AMPI (Asociace místních potravinových iniciativ), which interconnects and support the local producers of food. AMPI was founded in the year 2014 and its main activities are providing consultancy services for farmers and consumers, promotion of local and sustainable food systems, raising public awareness about sustainable agriculture and local food production (AMPI 2016). AMPI runs access to land activities through the E+ programme with the title: Learning towards Access to Land. The main objectives of this project is the connection and consolidation emerging organisations facilitating A2L in the Czech Republic, Scotland and Greece with established organisations in France and Germany, as well as other European A2L initiatives and the informal European network on access to land (EC 2016). Only the Czech part of the project is under patronage of AMPI.

Second important initiative, **Foundation for soil (Nadace Pro půdu)**, was founded very recently, in 2016, so the results of its activities are not visible yet. The purpose of the foundation is to protect soil as a heritage given to us and to the next generations, and to support a responsible, regardful and sustainable farming as well as those who

farm or are willing to farm the land this way. The main idea brought by this organisation is that the soil is a gift and not a commodity or a subject of ownership. According to this organization’s goals, soil is the same natural resource, such as water or air, so it should not be owned by private holders either (Table 3). The suggested way is to transfer the land from private ownership to property of foundations (NADACE PRO PŮDU 2016). Treating the land as a common good is similar to the approach used by the French TDL.

The tools to support access to land and sustainable way of farming used by Foundation for soil (NADACE PRO PŮDU 2016)
buying land or receiving it as a gift
renting the land for a period of lifetime to the organic/biodynamic farmers
raising awareness about sustainable farming and community supported agriculture
linking land owners with responsible organic/biodynamic farmers without available farmland

Table 3: Tools of Nadace pro půdu

Foundation for soil is very first attempt to create access to land organisation in the Czech Republic.

The organisation that could effectively help new entrants to access the agricultural land is still missing in the Czech Republic. There are two possibilities, either to modify and develop Foundation for soil or create a new organisation dealing with the issues about access to land.

5.2. Access to land in France

5.2.1. Development of land tenure in France

The current agricultural situation in France is highly affected by its historical development. After the Second World War French agriculture was threatened by structural weaknesses and low productivity. The main problems were the deficit of French foreigner trade with food products and proportion of labour force in agriculture. Those problems emerged as a consequence of transformation of feudal property to

private property. The result was a scattered land that became an obstacle for modernisation and development of productive agriculture (BONION 2003).

There was a political intention to modernise family farming and raise its effectivity from the year 1960 when the SAFERs (Sociétés d'Aménagement Foncier et d'Etablissement Rural, <http://www.safer.fr/>) were found. The SAFERs are Land Development and Rural Settlements Associations that were designed to manage agricultural land in order to equip young farmers with a piece of land, to reorganise land parcels and to enlarge farms that were below the threshold of profitability (MERLET 2007). Apart from raising productivity, that can be counted as a benefit, this model brought several unfavourable consequences. Firstly, the total area of agricultural land in France has declined significantly, which was caused mainly by land abandonment and conversion of farmland to non-agricultural use. Secondly, the decrease of number farms was recorder, because the agricultural model was set to support large productive farms (RIOUFOL 2011). Moreover, the agricultural policy and activity of SAFERs resulted in overproduction of certain agricultural products and in negative externalities. Above all mentioned, there is the issue of the equity of such policy which prioritize the farmers having the best incomes (BONION 2003).

Nowadays SAFERs are French system for regulating the land market that relies on the collaboration of the State and farmers' organisations. SAFERs are entitled to purchase, yield and exchange land. However, they are not allowed to hold the land assets longer than 5 years (BONION 2003).

All the SAFERs land operations are implemented in order to achieve following goals:

SAFER's GOALS
Settling new young farmers or resettling the existing farmers
Enlargement of existing farms ¹
Helping farms in case of expropriation of their land for a public works project
Preserving the family farms
Fighting against real estate speculation

Table 4: SAFER's goals

(MERLET M. 2007) and (SAFER 2016)

Since the foundation of SAFERs, their role has adapted to the present land issues. Compared to the past when they were designed to raise effectivity and modernise the farming structures, nowadays they present their efforts as an instrument of territorial development. Since they are allowed to expropriate the land, it permits the local authorities to manage public development operations (MERLET M. 2007). *„They can redirect land, buildings or farms toward non-agricultural uses, in view of favouring rural development; they can contribute to the protection of nature and the environment. Today, SAFERs have a public service mission”* (MERLET M. 2007).

However, during the last years SAFER's have been criticised, mainly for giving advantage to the large-scale and industrial farms rather than helping the small family farmers (RIOUFOL 2011). The opinions differ. One side encourages, for environmental reasons, the less intensive agriculture. So as it pushes the farmers to increase their surfaces compared to amount of production. The other side, would wish, for reasons of regional planning to support the productive installations. (BONION 2003).

¹ A fundamental principle of SAFERs given the context of their creation when the majority of French farms were too small.

To promote less intensive agriculture and to help overcome the obstacle that the organic farmers face, the civil society Terre de Liens (TDL) was created in the year 2003 (RIOUFOL 2011). TDL supports access to land for aspirant or established organic and peasant farmers and other sustainable projects in rural areas. The principal values of TDL movement are driven by humanism and solidarity. Everybody should have the same opportunity to access the land alongside water and air as a common good. In general, respect to the environment and society is promoted. TDL act in a spirit of trust, respect and focusing on citizen mobilisation around sustainable agriculture. The main aim of the movement is to find and implement innovative solutions to alternative and sustainable land management, while respecting its main values: Ecological Agriculture, Ethical finance, Education (TDL, 2016).

The TDL's goals:

The TDL's goals
Supporting access to land for aspirant or established organic and peasant farmers and other sustainable projects in rural areas
Promoting solidarities and citizen dynamics in rural areas, to foster collaboration around land use and land access
Fostering public debate on land ownership, management and use

Table 5: TDL's goals

(RIOUFUL, 2012)

Even though the partial goals of SAFERs and Terre de Liens are different, the main goal of environmental protection is maintained the same. The activities of both organisations are interconnected, regarding the fact that SAFERs have to be notified of any rural land transaction and they can pre-empt the purchase of any piece of land and decide to whom it is sold (RIOUFOL 2011).

5.2.2. Current farm structure in France

Due to the French agricultural policy, including the activity of SAFERs, the number of farms decreased by one quarter compared to the year 2000. Nevertheless, France was the state with the highest number of holdings in the year 2010 among the EU -27 (EUROSTAT 2012). Despite the fact that UAA has decreased by 3 % from the year 2010, the agricultural land still represents 43 % of whole French national territory (EUROSTAT 2012). There were about 27.0 million hectares of UAA in 2010, compared with 27.9 million ha in 2000 (EUROSTAT, 2012).

As the decrease of agricultural land was less pronounced than the drop of the holdings, the average size of farms has increased strongly, from 42 ha per farm in 2000 to 55 ha in 2010 (EUROSTAT, 2012). This is absolutely confirming the French trend of large holdings, replacing the small ones.

Moreover, this tendency is accompanied by drop of the number of persons working in the agriculture, the decrease of 26.7 % (EUROSTAT, 2012) was recorder over the last 10 years. Nowadays the agricultural labour force represented only 3.6 % (EUROSTAT, 2012) of the French population.

Current trend is also affecting land tenure type. In 1945 the land was from $\frac{3}{4}$ farmed by their farmers (BONION, 2003), while in the year 2007 only 25% (EUROSTAT, 2007) of the agricultural area was farmed by its owners. The major land tenure system is private rental.

The farm structure in France makes the access to land very difficult, mainly for new family farmers, that would like to operate sustainable agriculture. Considering the fact, that only 1.6 % (EUROSTAT, 2007) of the UAA in France was used for organic farming in the year 2007, this type of farming needs support. The main service in this field is provided by Terre de Liens organisation.

5.2.3. Organisations and services providing information and helping in access to agricultural land the France

There is already considerable amount of services and organisations providing different types of information that are necessary or useful for the farmers who want to start their agricultural business in France. There are represented only three categories: public services, specific websites for land sale and organisations (Table 6). Compared to the Czech Republic the private sector does not play an important role, regarding the very good state of publicly accessible services.

Type	Service/Organisation	Function
Public services	LPIS http://eagri.cz/public/app/lpisext/lpis/verejny/	Information on agricultural production blocs
	Geoportail http://geoportail.gouv.fr	Information on individual parcels
	Vignifoncier (SAFER) http://www.vigifoncier.fr/	Information on parcels in sale
Websites for land sale	www.agriaffaires.com	Intermediary in land sale
Organisations	Terre de Liens www.terredeliens.org ,	Agricultural projects assistance
	SAFER http://www.safer.fr/	Agricultural and management

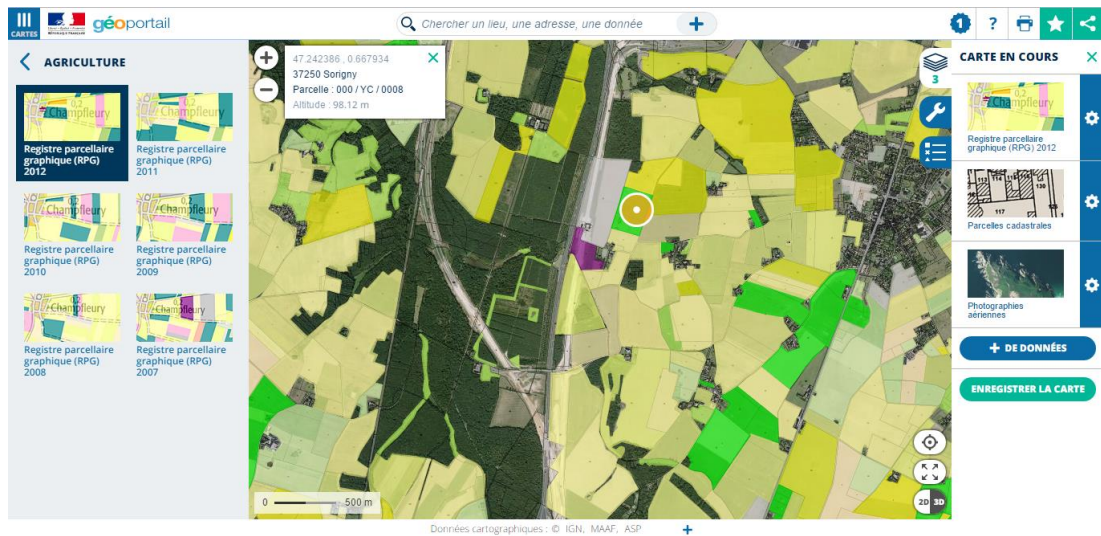
Table 6: French services and organisations

Public services

There is high level of publicly accessible services services as a source of information, when searching for suitable land. The combination of Vignifoncier and Geoportail is a very good example public service, where all the new entrants to agricultural business can benefit.

Géoportail is a comprehensive web mapping service of the French government that publishes maps and geophysical aerial photographs from more than 90 sources for France and its territories. Geoportail makes also many cartographic sources available, such as historic maps, road maps, administrative maps, topographic maps, cadastral and building surveys, public service utility maps, transportation maps, hydrographic

maps, atmospheric and weather maps, geological maps, land use maps, maps of cultural sites, etc. All maps and aerial photographs at Geoportail may be combined and viewed in transparent layers controlled by the user. Moreover, the user is allowed to upload his own layers to the map. The design is simple and the navigation is user-friendly (Picture 4).



Picture 4: Geoportail screenshot

Vignifoncier is an online information service offered by the Safer, which records all the sales of the land. It allows the users to be promptly aware of all land operations in their territory. It offers indicators for monitoring and analysis of local land dynamics.

A2L Organisations

The two major organisation acting in access to land in France: SAFER and Terre de Liens.

SAFER provide service of searching the suitable land for the farmers (if the farmer, wish to buy a piece of land).

Terre de Liens is a civic organisation which promotes land preservation and facilitates access to farmland for organic and peasant farmers in France. Terre de Liens is creating a land fund by acquiring the land and renting it to the farmers under certain conditions which follow the principles of sustainable agriculture. TDL does not organise land sale

to the farmers, since the belief of the organisation is that the land as a common good is the right way how to protect land. This organisation is deeply analysed next chapter.

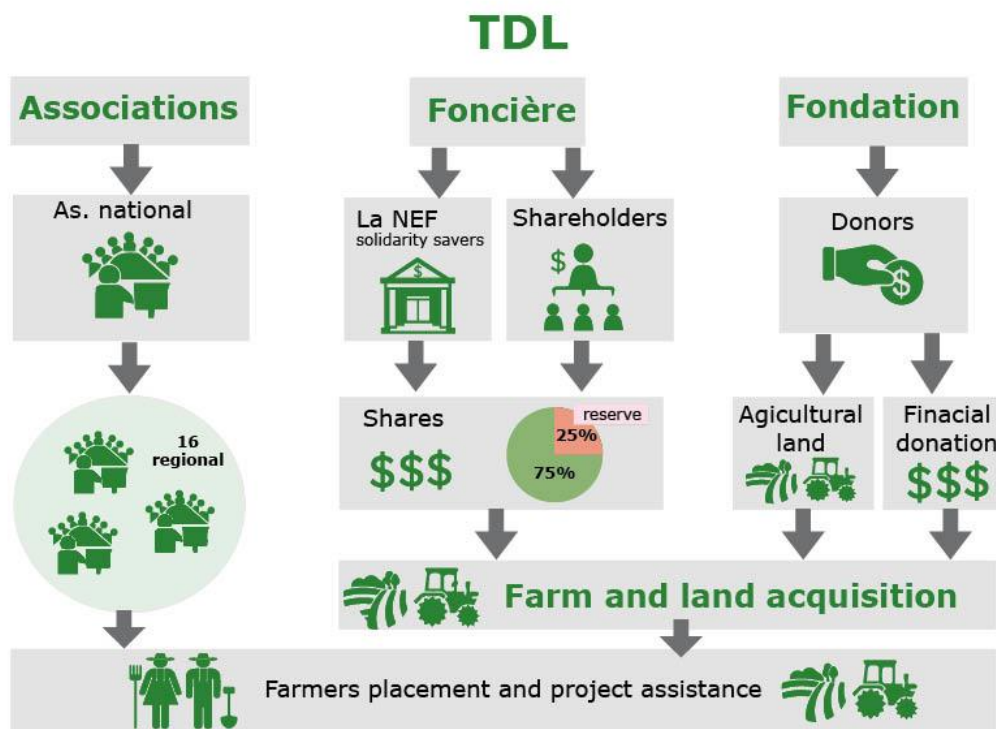
5.3. Case study: Terre de Liens organisation

Terre de Liens is a civil society organisation created in 2003 in order to help organic and peasant farmers. Initially, TDL's main activity is to advise and support farmers wishing to set up collective land ownership structures (RIOUFOL 2011). Since 2007, TDL has also started to acquire farmland, which the organisation holds in perpetuity in order to ensure its sustainable use and preserve it for current and future generations. (LANDCO 2010). The acquired land is rented to peasant farmers who are respecting the environment and farm organically under certain conditions.

The long- term objective is to decommodify the land in perpetuity, in order to protect agricultural land as a common good, to avoid land speculations and to hold it in trust for next generations.

The principal values of the TDL movement are driven by humanism and solidarity. Everybody should have the same opportunity to access the land alongside water and air as a common good. In general, respect to the environment and society is promoted. TDL acts in a spirit of trust, respect and focusing on citizen mobilisation around sustainable agriculture. The main aim of the movement is to find and implement innovative solutions to alternative and sustainable land management, while respecting its main values: Ecological Agriculture, Ethical finance, Education (TDL, 2016).

Terre de Liens organisation is composed by three legally separated units that stand next to each other (Picture 5). First unit is created by a network of associations while the other two units represent financial tools to get hold of the land. First financial source is a solidarity investment company called La Foncière and second one is the Land Fund, which is an Endowment Trust destined to collect investments or donations (LANDCO, 2010).



Picture 5: TDL organisational structure (author: Klára Janoušková)

5.3.1. The network of associations

The key part of TDL is a network of 19 regional associations and one national association, that are placed all over the France. Compared to La Foncière and The Fund, that are working on the national level, individual associations are working independently in their regions, as well as cooperating and following the same goals.

The missions of the national organisation are focused firstly on raising awareness about the subject of access to land among population and in political discussion. Secondly on managing financial structures (Table 7). Moreover, it ensures compliance with TDL's ethics.

Missions of the national association
Organize the debates and accept feedback concerning the whole TDL movement
Lead a political discussion about TDL on the national and international level
Co-managing financial structures – La Foncière and Land Trust
Ensure compliance with the Ethics of TDL specified in the charter

Table 7: Missions of the national association

(TDL, 2016)

The missions of the national organisation differ from the missions of the regional associations (Table 8). However, they are all following the same goal, set by TDL’s charter. The missions of the regional associations are much more specific. Their activity turns around helping the new-entrants to agricultural business, organising discussions and seminars in their territory and negotiating with local authorities. The functioning of the associations is financed mainly by the individual regions.

The missions of the 19 regional associations are:
Support of land acquisition projects: helping future farmers, pre-validation of acquisition documents, motivate local authorities to support TDL’s farms
Engaging civil society in land management related issues by the organisation of panel discussions, presentations, screenings and trainings
Raise awareness and assist local authorities to promote responsible land management: training of elected officials, organization of community meetings, creating guidelines on the management of agricultural land within the territory
To promote the ideas of TDL by implementing them to the regional policies

Table 8: Missions of the regional associations

(TDL, 2016)

The main target of the regional associations is placing the farmers on the farms that are in TDL's property, as a result of acquisition projects. There are two possible ways of farmer's agricultural project assistance. The first option is that the future farmer comes to TDL with the plan for his new business and also with the suitable piece of land or whole farm. In this case TDL buys the farm, and then rent it to the farmer.

The second possibility is that the future farmer comes with the idea, but without the land and he is placed on one of the farms that are already in TDL's property (which was acquired by donation or the former farmer finished his activity). In both cases agricultural project assistance does not solve only the financial problems, that the farmers are the very beginning.

The placement on the farm in TDL's property happens thanks to strong support of the association of given region, mainly thanks to its volunteers. TDL employees and volunteers are helping with administration, comprehension of legal conditions, information on farming practices etc. The TDL volunteers have usually very close and friendly contact with the farmers, which creates agreeable atmosphere and ensures personal approach. This type of cooperation creates an environment, where any control systems to check the farmers' activities are not necessary, since they are highly motivated to do a good job (TDL interviews, 2016)

5.3.2. La Foncière

The company La Foncière was established in 2007 as a limited partnership business entity and was entitled to undertake public share issues in order to raise capital. The structure of the limited partnership company is set by two types of participants, the shareholders who provide the capital and the managing partners who run the company and are responsible for its functioning (RIOUFOL & WARTENA, 2011). This legal structure guarantees the separation between the power of fund providers (the shareholders) and management authority (TDL, 2016 a).

The shareholders are investors represented by individuals, non-profit organisations, institutions or companies. They are represented by a Supervisory Board whose mission is to ensure proper management of the company (TDL, 2016 a). Each shareholder is

entitled to attend general meetings, is informed about the situation of the company and participates in voting and approve allocation of earnings. Apart from Supervisory Board La Foncière has the Investment Committee, which is a committee of experts appointed by the Supervisory Board, Investment Committee studies every land acquisition and gives an advisory recommendation (LANEF, 2016).

La Foncière was created with an initial capital of €57 200, contributed by 47 shareholders. From October 2008 to March 2009, a first public issue of shares raised €4 million from 2200 shareholders in only 5 months, which was above all expectations (LANDCO, 2010). The clients subscribe for shares worth of 100 euros. 75 euros from one share are directly used for the purchase of lands and farms, where are young ecological producers immediately installed. The remaining 25 euros are set as reserve to allow rotation of the shareholders (TDL, 2008). Shareholders are not remunerated for their investment however they receive an interest equivalent to the inflation. The main financial motivation for shareholders is that they have the right to a tax rebate amounting to 25% of their investment in the Foncière. At most, a shareholder can own 5% of the Foncière capital (LANDCO 2010).

In 2016, La Foncière has a capital of € 48 million, owned by 11 460 shareholders. The average subscription was € 4200 in the year 2015. Half of the capital is owned by a third of shareholders who own between €1,000 and €10,000. This shows that the capital has been raised from a large number of medium-size shareholders who choose to use part of their savings to support the TDL's goals (RIOUFOL 2015). Moreover, € 9,5 million of social savings was collected in the year 2015 (TDL, 2015).

The raised capital is used to finance agricultural land for new entrants who are facing the problem with access to land. The capital might be also used to buy buildings or to help to develop the farmer's activity. All the farms that are supported by TDL are organic or biodynamic or are in conversion. The diversity of the farms is very high, in the matter of size (from few hectares to 100ha and more) as well as concerning the type of production (LANDCO, 2010). From 2007, when La Foncière was founded, 90 farms were acquired.

All the projects that requests TDL’s support undergoes multiple examination. Firstly, affirm the conformity with the goals of TDL and secondly to confirm fulfilment of all conditions required by La Foncière (Table 9).

Conditions
they match the principles and goals set out in Tdl’s Charter
the farmers are ready to be tenants and do not wish to own the land
the farms are economically viable (proved by financial plan)
the farms utilize land sustainably and they respect the environment
the farmers are supported locally by the municipality or consumers

Table 9: Conditions for project assistance

(LANDCO, 2010).

Once the land belongs to TDL, La Foncière rents it to the farmers or specified period. At the beginning it offered a 9-year lease which is the classic agricultural lease in France. The contract is then automatically renewed in order to provide more security of tenure for farmers and to establish long-term relationships with them. The maintenance of the contact with the farmers is a key point in observing the progress in development of their activities and getting feedback from them. Since one of the targets is to avoid speculations with land, the TDL’s rents are equivalent to the local land market prices (RIOUFOL & WARTENA, 2011).

5.3.3. Land Endowment Fund

Land Endowment Fund represents second tool fo acquire the land in TDL. The necessity of separation La Foncière and the Fund is set by the different legal measures. The legal framework differs for business entity entitled to issue shares (La Foncière) and the Fund collecting donations (Land Endowment Fund). However, the amount of land gained by the Fund is much smaller than the land acquired through La Foncière. The fund was created in the year 2009 with the aim of collecting donations (from both individuals and companies) and transforming them to non-profit statue. The fund was transformed in a fully-fledged Land Trust in the year 2013 (RIOUFOL 2015),

recognised as a charity. Through the fund, the organisation receives financial donations, which are used to buy land or a piece of land is donated directly. (RIOUFOL & WARTENA, 2011).

As of 31st December 2015 it has an endowment of 1 887 990 €, brought by 4 826 donors. It has acquired 12 farms of which 8 were received as donation (TDL, 2016). Individuals and companies who make donations to the Fund benefit from a tax rebate (RIOUFOL & WARTENA, 2011). Tax deduction is the main financial motivation for the donors. Moreover, the donating companies can gain greater public visibility and trust. For the donors from the group of local authorities the main satisfaction is the support of public-citizen partnerships and conservation of agricultural land in their territory (RIOUFOL 2015).

5.3.4. The total results of TDL's activity

Terre de Liens are considered as very successful in their activity. With 102 farms, covering over 2300 hectares of French territory the organisation is definitely fulfilling its main goal of keeping land in sustainable agricultural use. However, the amount of land held by TDL is still minority part of whole French UAA. The amount of land under TDL's control is not the only success. Much more important is raising number of citizens supporting the development of local sustainable agriculture, who are more and more interested in having their word in land planning and management. The population willing to lead debate about the need to support organic farmers and to develop short-supply chains and create green belts protecting biodiversity, is one of the main TDL'S tools for opening discussion with local authorities. Nowadays TDL is well recognised by municipalities that started to follow the same target. The role of municipalities is important since they can manage and support projects ensuring local sustainable development and partial food sovereignty. It is supported by creating short supply chains involving local family farms, local markets and motivating residents to prioritize the local products (RIOUFOL & WARTENA, 2011).

The results of activity of TDL in general is a great success, nevertheless several problems have arisen. What are the difficulties, that TDL has to face? A major challenge now is to manage the capital effectively and to manage the properties

efficiently (RIOUFOL & WARTENA, 2011). From each acquisition, La Foncière reserve 25% to ensure the possibility of exit of shareholder. Moreover 8% of the acquisition capital is spent on administration. This is already 33% from each acquisition that cannot be used to buy the land.

6. RESULTS

In this chapter the problems of the Czech Republic and France regarding access to land are compared. Subsequently the proposition of the Czech A2L organisation for the Czech Republic is introduced.

6.1. The comparison of the problems in the Czech Republic and in France in access to land

The proposal of the A2L organisation for the Czech Republic is based on the French practice of TDL, which is transformed into a form that is suitable for the Czech environment. The vision of the organisation and its organisational structure is adapted to the needs of the Czech Republic and the obstacles which farmers are facing when entering the agricultural business. There are several differences, when comparing land access in both countries (Table 10). Firstly, in the Czech Republic, the proportion of rented land, as well as land ownership fragmentation is much higher, than in France. Secondly, in the Czech Republic, there are much fewer farms of optimal size than in France. The main target of the Czech Republic is oriented towards the creation of viable farm units of optimal size (25-100 ha) (TDL's farmer in verb 2016). Fulfilment of this target requires fastening of the land consolidation process and the creation of a publicly accessible GIS web map application with user a friendly interface, which would provide relevant information in order to access land.

France	Czech Republic
High/medium proportion of rented land	Very high proportion of rented land
Lower land ownership fragmentation	Higher land ownership fragmentation
Land consolidation is not a major issue	Slow land consolidation proces block the development of sustainable agriculture
Higher number of farms of optimal size (25 – 100 ha) (The average size of the farm is 55 ha)	Lower number of farms of optimal size (25 – 100 ha) (The average size of the farm is 150 ha)
Very good publicly accessible GIS web applications (user friendly)	Missing publicly accessible GIS web applications (user friendly)

Table 10: Comparison of issues related to A2L

6.2. The goals of the A2L organisation in the Czech Republic

According to the author’s suggestion and following an analysis of France the simple idea of A2L organisation should be conservation of agricultural land, environment and dealing with access to land issues. The target is to promote the importance of local sustainable farming and contribute to local food supply chains. The whole movement offers social events, supports people to be part of local food chains and gathers the volunteers interested in the issue of access to land.

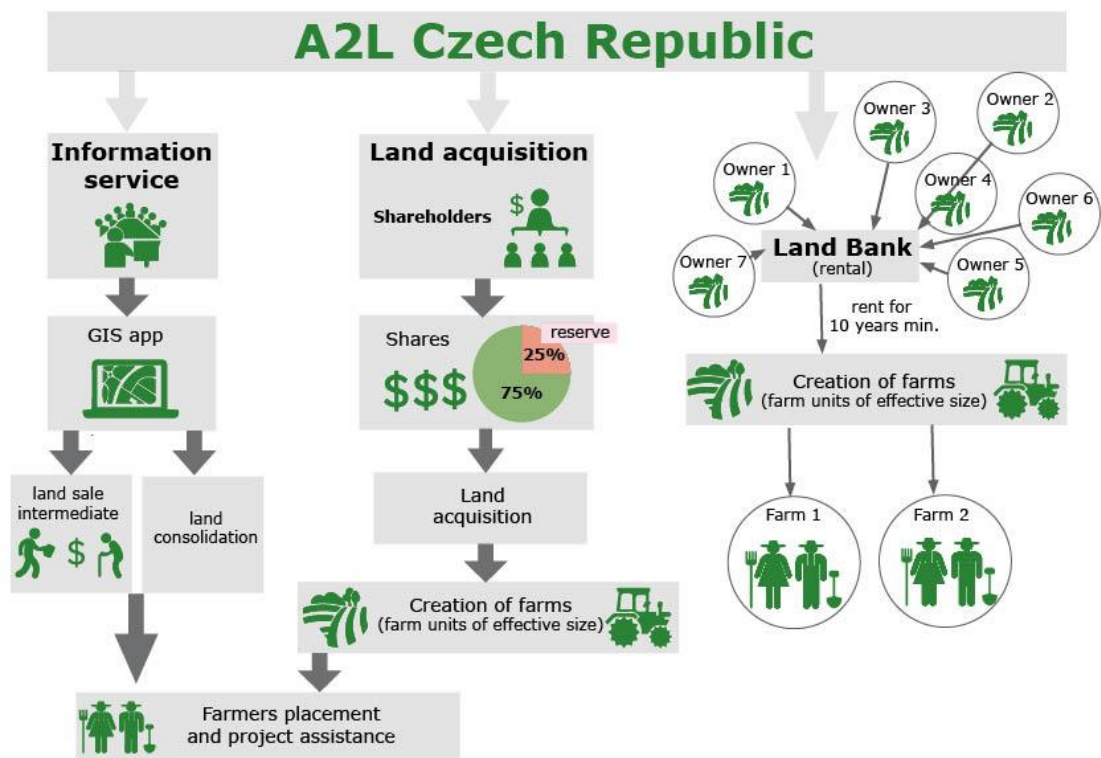
The vision of the organisation is the Creation of viable and sustainable farm units and its three main goals are support of new entrants to agricultural business, providing detailed information about agricultural land and raising awareness about sustainable land management (Table 11).

The goals of the Czech A2L organisation
Supporting access to land for new entrants/small scale farmers and helping them to establish new farms/enlarge farms
Provide detailed information about the protection of agricultural land
Fostering public debate on land tenure security and land management
Promoting and supporting local supply chains in connection with access to land

Table 11: Goals of the proposed A2L organisation

6.3. The organisational structure

To fulfil the vision and achieve these goals, three different tools are introduced: **Information service and project assistance**, **Land acquisition and farm units creation** and **Land bank** (Picture 6). These three units created propose A2L action in the Czech Republic. First one offers services directly to the farmers, land owners, local food markets owners and consumers. The other two are tools for A2L organisation to get hold of farmland.



Picture 6: Czech A2L organisational structure (author: Klára Janoušková)

6.3.1. Information service and project assistance

The information service and project assistance are non-profit organizations and have several missions (Table 12). Firstly, it serves as a contact point for new entrants or established farmers who are interested in project assistance. Project assistance means helping the farmer to overcome all obstacles he is facing when setting up, extending or transforming his business.

The project assistance can be provided in two ways. The first option is that the farmer wants to buy his own land. In this method Information service provides recommendations, helps to organize the acquisitions or the exchanges of plots, helps to negotiate with local authorities or developers etc. Searching for suitable plot requires extensive knowledge and skills. To simplify the work of the employees and volunteers of the Information service the special GIS application is developed. The application even enables the farmers to easily search for the suitable plot on their own (description of the application below).

The second possibility is when the farmer does not have enough money to buy his own farmland, and so he is offered farmland or a whole farm that is held by the A2L organisation. The farmland is rented at actual market price in order to avoid land speculations. Once the farmer gains farmland, in both cases of project assistance, the farmer is guided to start his own agricultural business. In this part, the activity of A2L volunteers is essential. Since the volunteers are passionate about their activity, they are the right people to be an intermediary between the farmer and the organisation. A very personal approach is required in project assistance, which has high requirements on the number of volunteers and their skills.

The key part of the Information service and Project assistance are employees and volunteers. The employees of the organisation are remunerated from the donations, subsidies, grants and also from rents, that farmers pay when farming on A2L organisation property. The volunteers are recruited during A2L events organised by the Information service. Another source of volunteers might be offering internships to agricultural schools and universities or creating a club for pensioner-volunteers. The last option would be organized work for the A2L project, that serve as an activity for retired people with the benefit of doing something charitable.

Missions of the Information service and Project assistance
Contact point for the new entrants or established farmers interested in the agricultural project assistance
Provider of the information about land parcels in sale or parcels available for exchange – GIS web application
Negotiator with the land owners and local authorities in order to access the land or speed up the land consolidation process
Organiser of events, presentations and debates in order to raise awareness about the importance of access to land and sustainable farming
Promotion of local supply chains and interconnecting farmers, local markets and consumers.

Table 12: Missions of the Info service and Project assistance

GIS web map application – “A2L Czech Republic”

Providing relevant information requires creation of special GIS web map application, that gathers geo located information about agricultural land. At the moment this kind of application is missing within the publicly available web services in the Czech Republic.

The example of the application was created for the purpose of this thesis. The web map application was called “A2L Czech Republic” and was created using ArcGis online and WebApp Builder. The individual layers that might be displayed were prepared in desktop version ArcMap. All of those are commonly used ESRI software.

The purpose of the application is to visualise information from LPIS, land register and special layer created by the Information service, all in one place and clearly arranged. The information service layers display the plots that are in sale, available for exchange or that are in A2L organisation’s property.

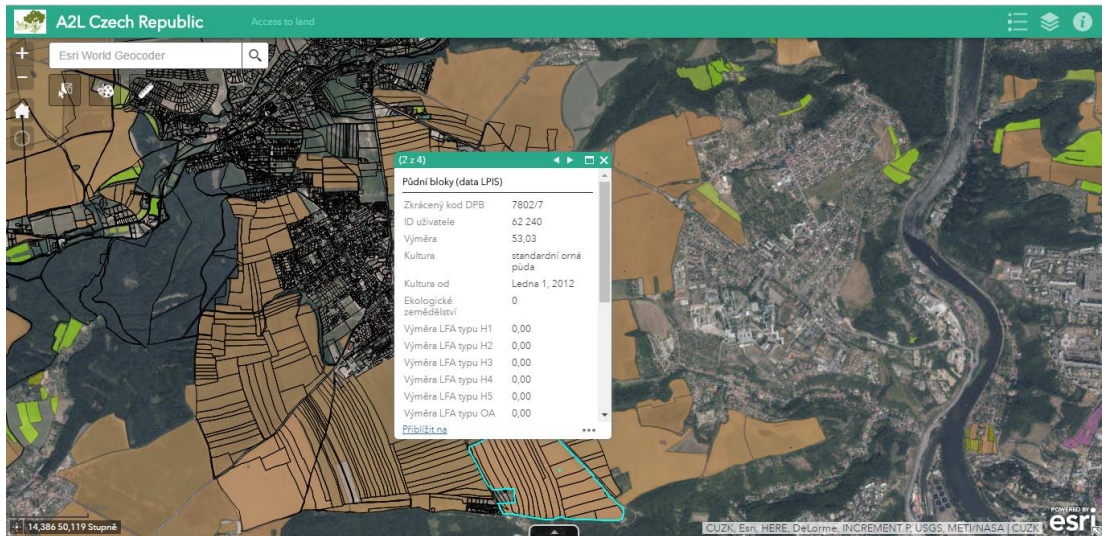
The key benefit of this application is the possibility to compare information contained in all layers. In the LPIS layer, by clicking on the individual production blocs, the pop-up window shows info about: the user, cultivated crop, whether it is cultivated ecologically or not, area, sloping nature, cadastral territory, what kind of subsidies are related to this block, occurrence of protected areas etc. The production blocs are very often composed from several plots with different owners. Information about the individual plots are visible in the land register cadastre layer. By clicking on the plot that we are interested in we can display: owner of the plot, area and BPEJ code. How all of this can be useful? For example, the user of the application is able to see whether the bloc he is interested in compose from several plots, whether the owner differs from the user or if the given plots are for sale.

The main goal of the GIS A2L application is to offer complete information, that are necessary when searching for the plot. Acquiring LPIS and Land Register data for the whole area of the Czech Republic is difficult and long term process, including negotiation with the state authorities. However, it is not impossible when considering the fact that Czech companies as CleverMaps and Cleerio (web map application developers) acquired those data. The layer created by the Information service requires skilled manpower to search and vectorise the plots that are actually in sale and record plots that are in A2L organisation's property.

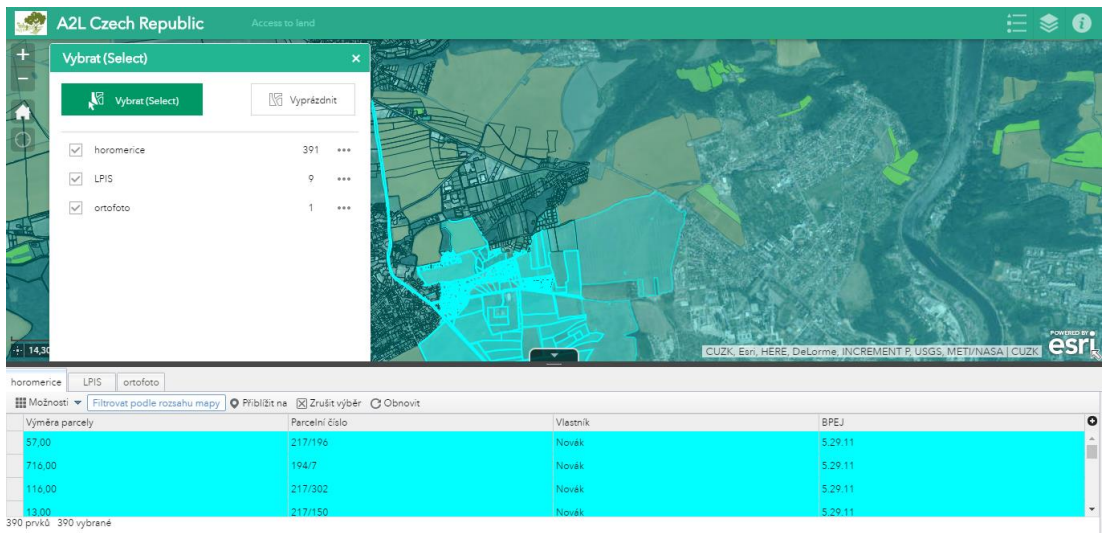
The Web Application created for the purpose of this thesis serves as an example. The data LPIS data displays for the whole area of the Czech Republic. However, the land register cadastral data displays only for several municipalities (Horoměřice, Statenice, Tuchoměřice), with fictive ownership data. The application interface and some the functions of the application are visible from the Pictures 7, 8 and 9.

To look into the application, use following link:

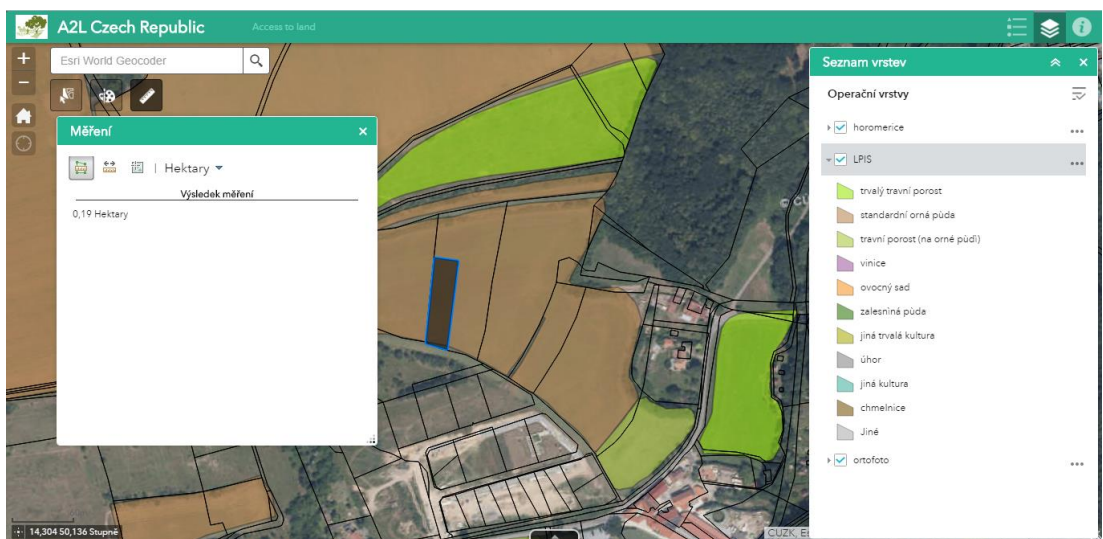
<http://czuprava.maps.arcgis.com/apps/webappviewer/index.html?id=cb3957bb7c684ebdb7dac592e46688f4>



Picture 7: Pop-up window production blocks



Picture 8: Selection



Picture 9: Layers list and measurement

6.3.2. Department of land acquisition

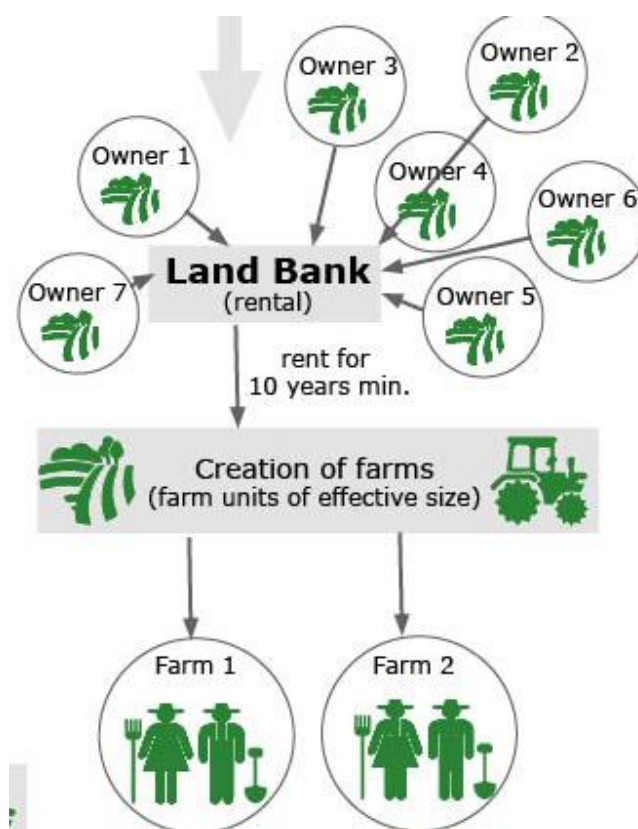
Land acquisition and farm setting is a limited partnership business entity. As this type of business entity cannot be part of a non-profit organisation from a legal point of view, it remains in the Czech A2L movement as a separate company. The company is allowed to issue shares which serve as a financial tool to acquire the land. One share has a value of 1000 Kč, which was derived from the value of one share in France (100 EUR) and the average salary in the Czech Republic in comparison with France (3 times lower). In practice the creditor puts the money in the company, without any entitlement to gain profit. Their only financial benefit might be a tax reduction. For example, in the case the creditor buys 3 shares, it costs him 3000 Kč. The financial security of the company is ensured by maintaining a reserve of 25% of each share, to allow rotation of shareholders and to avoid insolvency (in case the shareholder claims his financial deposit back). The remaining 75 % of the share are supposed to be used for land acquisition. This share structure was adopted from TDL, since it works well in La Fonciere (viz. chapter 5.3.2).

Once the organisation has financial resources raised by selling shares, the Information service starts the land acquisition process. There are several possible methods for land acquisition, either the land for acquisition is proposed by the new farmer who does not have financial resources to buy the land on his own, or the Information service knows a farmer who wants to finish his activity and sell the farm, or the Information service search for plots that would be suitable for the creation of a new farm unit. In some cases, it can be a combination of the listed methods. This is the point at which the GIS map application is used to gain all the information that is important when buying agricultural land in order to create a functioning farm.

Subsequently the farm unit is created from the acquired plots, technically equipped and is ready for farmer placement. Project assistance requires advanced technical skills, knowledge of the legal system etc. Information service arranges seminars for starting farmers and its specialists are available for discussion of the problems when setting up the farm. Once the farmer is placed on the farm, he pays the rent which is used for renovation of the farms and contributes in part towards financing the functioning of the organisation (mainly the salaries of the employees).

6.3.3. Land Bank

Land Bank is the second tool to get hold of land. The author designed the land bank as a separate unit, which is the easiest way from a legal point of view. The Land Bank serves as an intermediary between the owners and the farmers. This tool is suitable for the Czech environment, due to the fact that the land ownership fragmentation is very high in the Czech Republic and small parcels are not suitable for creating economically viable farms.



The role of the land bank is to lease the land from the owners of the parcels. Afterwards the farm unit optimal for the interested farmer is created and the farmer rents it from the organisation. The creation of viable units increases the value of the land. Both, the rent that is paid to the owner and the rent the farmer is supposed to pay to the Land Bank is driven by rental prices on agricultural land market. The difference between both rental prices is the profit margin for raising the value of the land. The gained profit is used to finance the functioning of the Land bank.

The Land Bank offers solution for all small land owners, who do not wish to sell their plot and the only possibility they have is to rent the land to large agricultural holdings for very low rent. The additional value for the owners is the moral aspect, that their land is used in a sustainable way and supports small agricultural businesses in a given region.

Once the land is rented to the farmer, the project assistance is offered by the Information service as it was described above (in 6.2.1. a 6.2.2.).

The system of the land bank is in a modified version successfully used in Spain (TDL Rioufol in verb, 2016).

6.4. The suggested steps to development A2L organisation in the Czech Republic

Phases of development of A2L organisation
1. Information service and creating A2L community
2. Department of land acquisition
3. Land Bank

Table 13: Phase of the development of A2L organisation

The development of the organisation structure as it is proposed in previous chapters is recommended in three phases (Table 13). Phase one is setting up a non-profit organisation based on the Information service. During the first phase, the most important targets are creating the A2L community, recruiting the volunteers and raising awareness of the population about the A2L movement. The second phase is to establish the Land acquisition business entity as a separate company. In order to get hold of land this tool is well examined by Terre de liens and so represents a good option for the beginning. The third phase is the creation of a Land Bank, which also arises as a separate legal entity.

In the future as a fourth phase of the development of the company, the land foundation might be introduced. The land foundation would play a role of a charity organisation receiving donations in the form of land. It would represent the third tool for land acquisition. This system was already implemented by the newly founded Foundation for soil (Nadace pro půdu) (described in the chapter 5.1.4.). Nevertheless, according to the authors, the other three phases should precede this phase in order to build A2L community and positive awareness of the society.

7. DISCUSSION

The conditions for existence of an access to land organisation in the Czech Republic and in France are similar in some aspects, however they strongly differ in other aspects. Considering this fact, the organisational structure of TDL cannot be easily used in the Czech Republic as whole, but some of its parts can be implemented or can serve as an inspiration. The biggest question that I raised when searching for the optimal organisational structure for the Czech A2L organisation relates to land tenure security. Is treating the land as a common good which is the main vision of TDL organisation and Nadace pro pŕdu suitable for the Czech environment?

The main difference between the two countries relates to their cultural and socioeconomic values regarding the transfer of land as a common good. Since the Czech Republic experienced the period of communism, the idea of transferring the privately owned land to a common property is not regarded as acceptable. It might be seen by the majority of the population as a step back. This system of land tenure requires strong institutional support as well as the support of the population. At the moment the conditions in the Czech Republic do not seem to be suitable for creating an organisation with the main vision of transferring the land as common good. This is the reason, why creating of a land fund within the proposition of A2L organization in the Czech Republic was mentioned as a possible fourth phase. However, the land fund already exists within Nadace pro pŕdu and according to my opinion it is not convenient to consider it as an introduction to A2L movement in the Czech Republic. The A2L movement has to start as a separate project. Nadace pro pŕdu might be integrated in the future as a part of the fourth phase of the movement. At this moment, the very strong vision of Nadace pro pŕdu “*soil as a common commodity*” might be regarded negatively by part of the population. While discussing with several people, they associated this vision with communism. Initially raising awareness about access to land and building the A2L community in the Czech Republic is essential. The activity of the organisation must be demonstrated and proved, to gain people’ trust. Therefore, all three proposed phases have to precede the promotion of the land fund, no matter whether it would be Nadace pro pŕdu or a newly established land fund.

Not only Nadace pro půdu is acting in promotion of access to agricultural land in the Czech Republic, but also AMPI (Asociace místních potravinových iniciativ) plays important role in raising awareness. In December 2016 AMPI starts organising workshops on the topic of access to land. It would be convenient to integrate AMPI's activities as part of the whole A2L movement, which might serve as great tool to expanding the A2L community.

The issue of land ownership is becoming a big threat nowadays. This topic would deserve much more attention. Unfortunately, important analyses on land ownership are missing. Who is the biggest landowner in the Czech Republic? How does the landowners structure change nowadays? Who makes the biggest demand for land in the Czech Republic? Despite the fact that all land ownership data are publicly available in Land Register CUZK (www.nahlizenidokn.cuzk.cz), to find answers for those questions is almost impossible. According to webportal Dotyk, the biggest land owner in the Czech Republic is state which owns 16 % of its UAA. The biggest private landowner is then Agrofert Holding which occupies over 100 000 ha (2,8 %) of agricultural land. However, we are not able to say which part is directly in property of this company and which part is rented (DOTYK, 2014).

Since the land is very cheap in the Czech Republic, the big holdings, both Czech and foreign, are more and more interested in its purchase. The big holdings started to address the owners of small parcel with the offer on buying off their land. The letters they are sending to elderly landowners are often non-ethical and persuasive, share his experience of the small Czech landowners Zdeněk Čáp for Český Rozhlas. On the one hand most of the landowners have insufficient awareness about the actual prices on the land market and they are susceptible to accept unfair offers (ČESKÝ ROZHLAS, 2016). On the other hand, some of the landowners, as the case of Zdeněk Čáp, are afraid of this unfairness and therefore they are not willing to sell their property, in any conditions. Due to this fact, the development of the Czech land market is blocked.

The situation on the land market strongly differs region from region. The highest prices of the land are offered to the land owners in the regions with high concentration of biofuel stations. In this case the prices of the land increase due to high demand. The example is west of the Czech Republic, where huge amount of land is bought by

German biofuels stations. Seemingly winning situation for the land owners has also its darker side. Corn growing which is essential crop for biofuel production causes land degradation and soil erosion. This example was part of the article “Who is buying agricultural land in the Czech Republic?” that appeared on web portal www.dotyk.cz (DOTYK, 2014).

Another topic that would be worth of deeper analysis is system of subsidies that is currently available in the Czech farmers. It is not directly visible, but subsidies increasingly affect land ownership situation. The biggest motivation for the big holding to buy more land are classical permanent subsidies obtained per hectare of cultivated land that are available for all farmers from European Union. However, small farmers’ awareness of the subsidies they are entitled to obtain is very low. For this reason, the subsidies are allocated very poorly and the big holdings are privileged. For example, one quarter of the subsidies from the Program for rural development for the years 2014-2020 were allocated in the holdings of Agrofert (a conglomerate company with more than 250 enterprises). Only during the year 2014 Agrofert allocated 995 million Kč. According to magazine Respekt, the amount of subsidies allocated in the holdings of Agrofert has risen by 50 %, since Andrej Babiš became finance minister. It means, that the subsidies are not allocated to support small scale farmers, but rather large industrial holdings (RESPEKT, 2016).

Political situation, accessibility of subsidies for different types of holdings and the power of big holdings are the factors that affect the development of farm structure and land ownership situation in the Czech Republic. We have to consider those factors when designing solution to enhance access to land for small scale farmers.

8. CONCLUSION

In this thesis I have studied the access to land situation in the Czech Republic and in France. Based on the analysis of the consequences of historical development and an analyse of the current state of access to land in France and in the Czech Republic, the problems of both countries have been compared. The comparative analysis in combination with the case study of French A2L organization Terre de Liens, served as a guideline for the proposition of the A2L organisation in the Czech Republic. As a result of this thesis the proposition for a new A2L organisation was introduced. The goals of this thesis were thus completed.

Among the results of the thesis, the most important part was designing the organisational structure and determination of the financial tool for the new organisation. The whole process of the services and help offered to the farmers is described in this study. Another partial result of this study in creation of the interactive GIS web map application providing relevant geo located information about agricultural plots. The application helps farmers and employees of the new organisation to find suitable piece of agricultural land.

The issue of access to land is a very wide topic and offers many areas for investigation and subsequent searching for a solution. This thesis should serve as an inspiration for more analyses, mainly on the land market situation, land ownership and subsidies for the farmers in the Czech Republic. Those analyses would help to concretize the structure and provide guidelines for the functioning of the new organisation.

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