

**FAO Comparative Study on Land Fragmentation in Four CEECs:
Bulgaria, Czech Republic, Hungary and Romania**

ASPECTS OF LAND

CONSOLIDATION IN BULGARIA

EXECUTIVE SUMMARY

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1. Introduction

The transition from a centrally planned economy to a free market economy in the Republic of Bulgaria called for changes in the agricultural sector. The agricultural reform started with the land restitution and was performed in a framework, which led to land fragmentation where agricultural production was not effective.

The issue of land consolidation is especially important for developing and post-communist countries, where land consolidation presupposes implementation of a radical land reform, involving various forms of land redistribution and land restitution. Land consolidation is aimed at optimizing agricultural land use and is usually pointed out as an important step in enhancing the agricultural and environment-friendly development of a country. Among the major benefits of optimal land consolidation, one can point out the following:

Greater efficiency and productivity: The allocation of a farm in fewer, larger parcels of better shape, close to the farm-building, gives it considerable economic advantage. In addition, it reduces the amount of unused land in-between the parcels.

Positive environmental effect: Larger parcels as a rule enable the farmer to use less intensive methods, which, in its turn, decreases the adverse environmental impact in the form of nitrite and phosphate production. It also improves water resource planning.

Empowerment and community responsibility: Decentralized land-ownership produces more equitable economic opportunities for people in rural areas, providing a greater sense of personal responsibility and feeling of control over one's life. Landowners who rely on local businesses and services for their needs are more likely to have a stake in the well-being of the community and its citizens. The process must also generate resources for the overall improvement of rural life, including better housing, education, health services, transportation, and more recreational and cultural opportunities.

Land consolidation in the framework of a successful land reform **is also part of a more effective social policy attracting people to rural areas** and providing them with new opportunities rather than driving the poor out of these areas into cities.

Land fragmentation (“defined as multiplicity of non-contiguous plots within single ownership”) has been traditional in Bulgaria. It produced the customary small holder, labour intensive structure of pre-war Bulgarian farming, with just a few exceptions in specific geographical regions. This raised problems with efficiency of farming and land use.

Accumulated land tenure issues throughout the nearly five decades of communist rule were addressed by the 1991 radical land reform. Its underpinning philosophy was predominantly farmland restitution, defined as reinstatement in the land ownership of the pre-collectivization era. Thus, the inevitable fragmentation was partly limited by adjudication of ownership to the original pre-collectivization owners rather than to present-day heirs. Upon recognition of the ownership claims, two technical approaches to satisfy rightful claimants were applied: restitution within existing or restorable real physical boundaries, or under newly designed land reallocation plans. The reallocation design, being the prevailing restitution approach, by law had to apply some land consolidation principles (“lands equal in quality and extent; grouping of lands within distinct

localities; transport access; shape fit for cultivation; smaller plots closer to settlement; preservation of existing public works, erosion control, land amelioration, and other environmental control measures; retention of special land uses: irrigation schemes, rice-fields, perennial plantations”). Implementation of these principles and especially grouping encountered serious resistance from original owners or heirs.

Where land reform ended earlier, a further reduction in average holding size by a factor of 1.6-1.7 was observed within the first three years after restitution.¹ It was due to the ongoing subdivision of restituted land among present heirs of original title-holders. Subdivisions are currently the most frequent transactions with farmlands.

In parallel, processes of natural consolidation through the land market are yet insignificant, as it is in its embryonic stage. Quick radical changes in this market seem unlikely, having in mind the Bulgarian mentality. Otherwise, the lease market may achieve some consolidation more easily but is also underdeveloped and hardly provides sufficient security of tenure for the farm enterprises to invest in land improvements.

Generally, there is a recognised underdevelopment of the government institutions of land management. Also, functions are traditionally fragmented by land domains: urban land management is vested within local authorities, while rural land management is at the central / regional government level, within MAF. Again, this is an indication that legal and institutional framework for development, planning and zoning regulations is in transition, and there is grounds and scope for serious changes in the immediate future.

Farmland fragmentation is a phenomenon of manifold aspects. Fragmentation of legal ownership refers to the number of holders of a single title, sharing equal real rights (multiplicity of undivided shares). This type of fragmentation hampers efficient and flexible property management because of frequent complications with decision-making and where actions requiring consensus of the owners should be taken. As a rule, this type of fragmentation is one of the land reform results throughout the country.

Fragmentation within farming units is the multiplicity of non-contiguous plots (regardless of whether owned or leased) within a single farm enterprise. The latter two types of fragmentation most directly affect farm efficiency and are rather common in Bulgaria. Social and demographic processes throughout rural Bulgaria in the past five decades, and the land reform during the last decade generated a vast group of absentee owners who hardly bear any other relation with farming or rural economy. The consequence is that most farms have to assemble the land they manage from a number of owners. Thus, there is a very considerable difference between the land ownership pattern and the farm holding pattern and between land fragmentation in these two instances. The latter is much less fragmented than the former. Achieving this relative “farm holding” consolidation, however, often involves several superimposed layers of underpinning tenancy (*e.g.* ownership, leasehold, parcel and land use block exchange agreements between farm enterprises). The general belief that these types of fragmentation bring only diseconomies should be partially adjusted to accommodate some relative advantages in certain farm fragmentation. These aspects are commonly addressed by land consolidation schemes.

2. Main Objective and Scope of Analysis

The main objective of the study is to analyse and assess the impacts of land fragmentation in predominantly based societies in Bulgaria, to design and to develop strategies and policies for land consolidation. This objective is subordinated to the major goal of the project to offer concrete legal, conceptual, methodological and managerial proposals, for both the governments concerned

¹ Source: Ownership and Land Market in the Dobrich Region, *Batanov, USLMB Symposium, Sofia, Nov. '98*

and civil society, to improve rural livelihood and achieve increased efficiency and competitiveness for sustainable and rural development.

The main questions to which the study endeavours to provide answers are:

- Which are the real dimensions of present land fragmentation in all the aspects described above? What are the trends?
- What should be the target features of the land tenure patterns pursued?
- Which aspects of fragmentation are to be addressed as priority by land consolidation? Which are the perceptible pros and cons of fragmentation from different perspectives?
- What are the feasible land consolidation objectives other than reducing land fragmentation? What are their priorities?
- Who should be vested in the land consolidation initiative? Should it be a participatory process initiated by government authorities, or an initiative (or vote) of land owners and / or tenants?
- How should decisions be made, having in mind that consensus is practically ruled out?
- How should a balance of interests be sought - private vs. public, owners' vs. tenants'? Who are the direct stakeholders?
- What will be the degree of disturbing land ownership and / or tenure? Would there be any compulsory purchase or appropriation involved in a land consolidation scheme?
- What will be the funding sources and cost sharing among stakeholders?
- What type of body should organise and manage the process? How should various appeals be dealt with?
- What will be the land valuation basis?
- Will there be opportunities for phasing out preparation and implementation works?
- How is co-ordination and integration with higher level planning to be secured?
- What would be the expected utility of land consolidation? Would it be worthwhile?

3. Justification

Historical experience proves the fact that the logical outcome from each land reform is land fragmentation. The reinstatement of property rights over small plots of land dispersed within the whole territory belonging to the settlement hampers the establishment of viable and profitable farms and become a bottleneck for effective agriculture. Liberal inheritance law and traditions in land tenure stimulate further land fragmentation. Thus the negative effect become stronger. **Small plots are an obstacle for implementation of new technologies, machinery utilization and new production patterns. Dispersed parcels obstruct spatial planning in terms of land administration, land use planning and land management.** Although the land reform in Bulgaria has been almost completed (98 per cent of land claimed was restituted by the end of July 2000), its outcome – *land fragmentation*, has caused negative impact on the sustainable development of rural areas as far as agriculture is a main and single source of income and employment there. The improvement of livelihood in rural areas is connected with possibility for effective resource allocation. In the narrow sense of the term, this means *land consolidation* and spatial planning.

The analysis of the existing legislation on land consolidation leads to the following conclusion: **the existing legislation does not propose any land consolidation method** (apart from the possibility to exchange own land for state-owned or municipal land).

At present, the State does not have a clear-cut agricultural policy, or a mechanism to encourage land consolidation. Since the problem in question is of major importance for the revival of the agriculture and land market, the State must without delay define its strategy for the encouragement of the consolidation.

Is it necessary to have a separate Land Consolidation Act or to introduce separate mechanisms into the basic land laws? This question does not seem to have a single unambiguous answer. Since land

consolidation is part and parcel of land management and land administration, it is the State that in the long run will have to define the policy in this sphere on the basis of the desired objectives. The land consolidation problem has received different solutions in different countries depending largely on their geographical position and socio-cultural traditions.

The land consolidation process is expensive and lengthy; however, it can be significantly facilitated through the implementation of modern information technologies.

Land consolidation typically follows four steps:

- inventory of rights on the land and valuation of the land
- drafting and confirmation of the reallocation plan indicating new parcels and owners
- implementation of the reallocation plan
- financial arrangements

The above shows that any decision to undertake land consolidation should be preceded by detailed financial calculations in order to assess the expected effect. Bulgaria is now in the process of establishing a new system of cadastre and land registration. From this point of view this is a suitable moment to initiate land consolidation.

We must distinguish two scenarios: voluntary consolidation where the initiative is undertaken by the owners and they have the necessary desire to consolidate their lands; and second case when the State starts the procedure and plays the main role in land consolidation process (it is the initiator).

In case of voluntary consolidation based on the mutual agreement, the following procedure should be followed:

- clarification of property rights;
- registration of the desired valuation on behalf of owners;
- initial assessment by an expert;
- negotiations with owners to reach an agreement. In case no agreement is reached, arbitration will be necessary, for which a fast and transparent procedure is required.

A systematic land consolidation should be based on:

- voluntary settlement of relations (through negotiations)
- an efficient system to appeal valuations
- an organ/expert to certify valuations

The valuation is a very important feature because no planning can be initiated without it.

Without the two above-mentioned components we will inevitably have an entirely administrative consolidation. **Land consolidation is a social measure affecting property rights.** This is in contradiction with the Constitution of the Republic of Bulgaria. In such an extreme version land consolidation will be a non-market mechanism for the settlement of land relations. Furthermore, all respondents have stressed their negative attitude towards an administrative land consolidation

On the other hand, it is important to have in mind the history and the socio-cultural traditions of Bulgaria. The restitution lasted for over 10 years and since no land consolidation was implemented simultaneously with it, now it would be appropriate to follow a less rigid model. In other words, it is necessary to create legal preconditions for voluntary consolidation where strict compliance with the legal provisions would provide maximum protection for the farmers. In practice, land consolidation is possible even now, provided 100 % of the owners in a given county agree to it. However, it is essential for them to reach consensus on all issues which is rather difficult in reality. From this point of view, the State should intervene, introducing clear consolidation procedures and defining the degree of public administration of the process.

Land consolidation is a very important issue since the state intervention should be minimized and maximum freedom should be given to the free initiative of the owners. That's why changes are needed to the *Property and Use of Agricultural Lands Act* aimed at introducing transparent and

easy-to-follow procedures in accordance with the above-mentioned scheme which, in its turn, would enable the owners to initiate the consolidation process.

Two approaches are possible from the legal point of view:

- adopting a comprehensive Land Consolidation Act (in case prior financial calculations support such a project). In this case, we are talking about administrative land consolidation, or
- amending the relevant land laws and regulations to provide legal basis for land consolidation and to encourage voluntary consolidation.

All respondents point out that they would not want to see a tough administrative land consolidation. It is a well-known fact that land consolidation is a protracted and expensive process, so it is absolutely necessary to assess both positive and negative effects of its implementation. It is also necessary to have in mind the social effect of land consolidation. In other words, *the current situation in Bulgaria calls for a more flexible approach that should make use of all possibilities for a natural land consolidation* supported by the necessary changes in the legislation, as well as by the extension services in respective regions.

To begin with, **the following changes can be recommended:**

- LOUAL - Provisions should be made, allowing all owners on a given county (or 50+1 of the owners) to carry out land consolidation in case they reach a unanimous agreement of the issue. A precise and just valuation of land in such cases will be necessary. As far as valuation expenses are concerned, one suggestion is that these could be covered by the State.
- providing incentive to buy neighbouring parcels through reducing or even eliminating legal and administrative fees.
- valuation of land for the purpose of exchange for land from the state/municipal fund should be carried out on the basis of current market prices (entailing changes to the *Ordinance on Current Market Prices*). To stimulate consolidation of lands from the state and municipal fund, we need possibilities of free exchange of lands of similar categories.
- another possibility for consolidation is the land consolidation in terms of its use, not in terms of property rights. Under the new Lease Act, only lessees have the right to transfer their rights under the lease agreement. This could be applied to lessors as well.
- According to the *Support of Agricultural Producers Act* (The State Gazette, No. 58 of 22 May 1998) a special Fund, namely State Fund Agriculture, has been created. The Fund supports the agricultural producers in the investments they make in the agriculture, in the creation of farms, or provision of information and consulting services. To execute these tasks, the Fund grants subsidies and credits, covers fully or in part the expenses on interest on bank credits; provides guarantees before financial institutions; allocates resources for joint financing of projects under programs of the European Union, namely SAPARD. The Fund accepts land as a collateral of loans. **The idea is to turn this into the first attempt at creating a Land Bank.** In case of default of the borrower, the Fund takes possession of the collateral. The Fund has to sell the land but after it has been consolidated within the prescribed term. This procedure again will depend very much on the methods of land evaluation.
- The idea **to set up a Land Bank** has been under discussion in a number of countries. To this end, legal provisions are made enabling the State or the municipalities to set aside land from the state or the municipal land to establish a Land Bank. Such an initiative may also have a mixed public/private character, whereas a private person provides financial resources. An executive organ (agency) is set up to manage the land and financial resources. Whenever the State has prepared an infrastructure project (e.g. to build roads), the land from the Land Bank can be used for exchanges with landowners. Thus the land

received in exchange of the land from the Land Bank can be later sold to the respective investor. Since the value of such land will be greater than that of agricultural land, the State/municipality will make a profit. The State and the municipalities are always involved in the process of buying and selling land. Once there is enough land in the Land Bank, a land consolidation project may be initiated.

Despite the fact that this idea is not entirely based on market principles, it may be applied as a means to broaden the scope of options offered by the *Property Act* and *Environmental Protection Act* for the purpose of land expropriation.

- A more moderate way of implementing land consolidation is to carry out a pilot project in order to assess the results of the implemented land consolidation and its significance for future activities.
- Last but not least, it is worth considering the introduction of tax relief incentives.
- Taking advantage of opportunities to buy land with indemnification notes.
- Talking of land consolidation, one cannot neglect the issue of consolidation through expropriation. In Bulgaria people are sensitive to the issue of expropriation, but this option is also envisaged in LOUAL, Article 4, para 3: "Expropriation of agricultural land for important state and municipal needs shall be performed in accordance with the Property Act and Agricultural Land Protection Act, following a decision of the Minister of MAF". Under the Property Act, expropriation is possible only for especially important state and municipal needs, which cannot be met otherwise and expropriation is to be performed in accordance with the provisions of the law following complete reimbursement of the owner. The valuation shall be performed on the basis of current market prices.

4. Economic Aspects of Land Consolidation

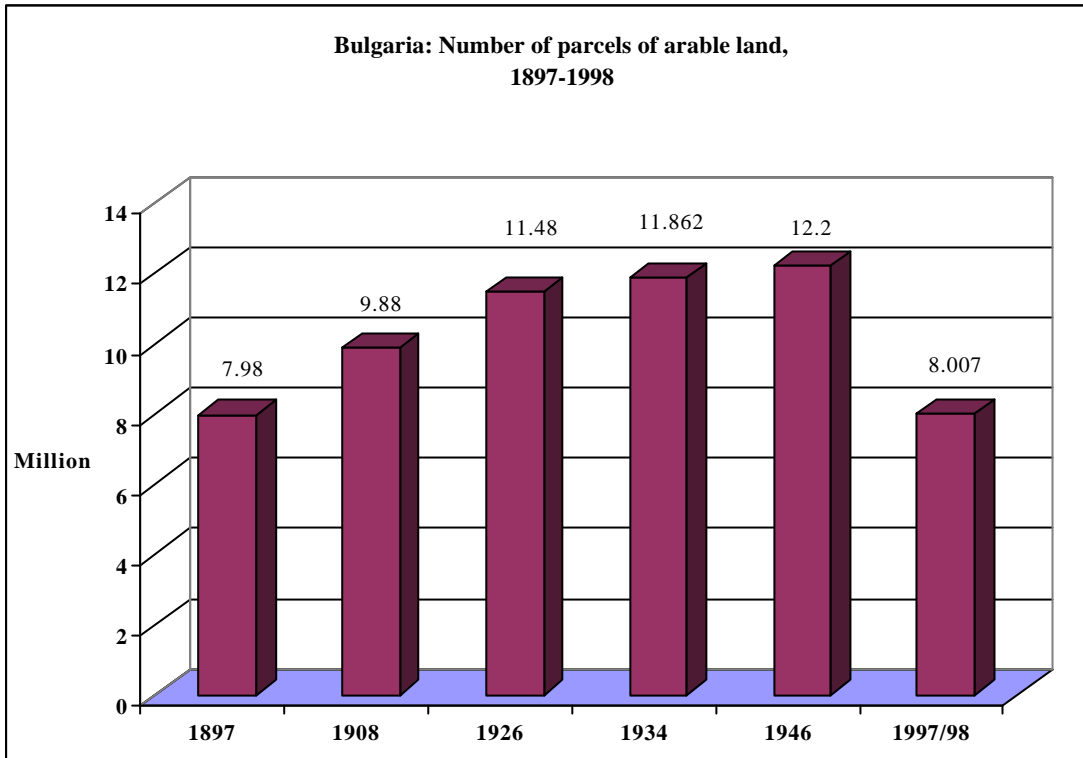
The transformation of Bulgarian agriculture from its centrally planned structure of large-scale agri-industrial complexes into organizations competitive in a market economy will crucially depend on the adjustment of land tenure system. For almost fifty years the allocation of agricultural land and its cultivation has been determined by administrative decrees rather than by the free interplay of factors which determine the demand for its services by independent farmers and the willingness of landowners to supply them at mutually agreed prices. Now that a market economy is being restored, it is expected that land will be redistributed and farmed under radically different systems of tenure.

The ongoing land and structural reform has brought the Bulgarian agriculture to a situation similar to the existing pre-communist one, especially in the sense of land fragmentation. Land fragmentation, which was overcome in the beginning of the 60^{ties} re-emerged many years ago rather than after the start of the new land reform.

The average size of the farm was 3.92 ha in 1998. That was the smallest average size for a period of 100 years and the share of the fallow and unused land of it was very high – 29.85%. One of the reasons for this is land fragmentation. Analysing the data, we can reach to the conclusion that the situation in agriculture in terms of the average farm size is the worst in comparison with the past. This is also a factor that shows the results from the land reform and its sign is negative.

The number of parcels in Bulgaria, according to our estimations was 8.007 million in 1997/98. So the number was near to the number in 1897 – 7.98 million. Since 1999 the process of subdivision of land between heirs has accompanied the restitution process and now the number of parcels is greater. If the agricultural policy continues to be indifferent to this problem, the number of parcels will increase very much and surely will exceed the level of 12.2 million reached in 1946.

Figure 1.



Source: NSI and own calculations

The average number of parcels possessed by a farm in 1997/98, according to the data presented in the PHARE ACE project P96-6090-R, was 2 for small farms, 3.08 for medium-sized farms and 2.62 for large farms. The data present the situation in the country before the process of subdivision of the restituted land between the heirs, which is still in action (Table 1). The expectations are connected with increase in the average number of parcels possessed by a farm.

Table 1. Average number of parcels possessed by a farm

Year	Small farms (up to 1 ha)	Medium- sized farms (1-5 ha)	Large farms (over 5 ha)	Average for the country
1897	1.92	8.84	19.59	9.98
1908	1.88	8.51	21.63	10.58
1926	2.77	11.61	22.60	15.29
1934	3.00	11.03	20.43	13.41
1997/1998	2.00	3.08	3.68	2.62

Source; NSI and PHARE ACE project P96-6090-R

The size of parcel has increased and in 1998 it was 0.6 ha. The expected tendency is for decrease in size because of the ongoing process of subdivision of the land; this decrease can be stopped if a land consolidation program starts.

4.1 Survey

The objectives of the economic survey are as follows:

- Provide an analysis of the needs for consolidation in the country from the economic point of view based on the conditions related to land tenure and the policies applied since the transition started.

- Provide an analysis of the existing land consolidation processes / programmes and in-depth analysis of the success / failure of the relevant programmes.
- Assessment of the actual / potential impacts of land consolidation on the efficiency of agriculture production and rural development
- Cost-benefit analysis of the land consolidation program.
- Review of the main economic constraints to land consolidation.

Description of the survey area

Survey has been conducted in Dobrich region. The region is situated in the northeast part of Bulgaria. Eastern border of the region is Black Sea, northern border – Danube River, in the south the region borders Stara Planina mountain. The region includes 8 municipalities: Baltchik, General Toshevo, Dobrich town, Dobrich rural, Kavarna, Krushari, Tervel, Shabla. Agriculture is the main source of income. The region is of great importance for the wheat balance of the country and for food security, respectively.

Listing and description of survey criteria

- The survey was conducted in Dobrich region in April 2000. The region was chosen for a survey region on the basis of the following criteria:
- Historical experience in Land Consolidation before the collectivization;
- The restitution process was completed basically in 1994;
- Plain area;
- Cereals producing region;
- Existence of functioning land market;
- Existence of fragmented land ownership;
- Carried out different pilot projects, including a cadastre project - registered attempts for combining the land cadastre with the urban cadastre and forest cadastre;
- Region of a special importance for Bulgaria and its government;
- Concentration of the biggest agricultural producers in Bulgaria and presentation of all other types of agricultural producing structures;
- Well-developed information data basis;
- Presence of State and Municipality Land;
- Presence of fragmented and dispersed parcels of land, property of the State Land Fund (SLF) and the Municipality Land Fund (MLF);
- Existence of indigent and landless population, especially in the rural areas;
- Existence of ethnic population.

Survey's coverage. Targets

The survey was carried out in the municipalities of Dobrich city, Dobrich - rural, Krushari, Kavarna, Baltchik, General Toshevo. An in-depth interview was implemented. Respondents were divided into 5 groups established in advance:

- Lessees;
- Other agricultural producers;
- Municipal Land Commissions;
- Local authorities;
- Real estate agencies.

This division was prompted by our wish for all participants in the process of land restitution to be covered, i.e. to interview different types of agricultural producers, all parties that are influenced by the land fragmentation and are related to the ongoing processes in the Bulgarian agriculture. On the other hand, by interviewing these 5 groups, we succeeded in obtaining specific information that could not be obtained by interviewing only one certain group with a standard questionnaire.

For each group a certain type of questionnaire was developed. The duration of the interviews was between one and three hours. This shows the interest of the people, in spite of the fact that the survey coincided with the spring sowing campaign.

The main goal of the survey was to establish the extent of land fragmentation, whether it is a problem and if yes, how do farmers overcome it. Further, the survey studied the attitudes of the players to the process of land consolidation and their vision for future development.

As a result, information was collected to underpin the proper analysis of the existing situation, the main goal and all additional conditions favouring or stopping land fragmentation (such as: characteristics of the survey's TBSs, methods for land consolidation applied, land market, optimum parameters of the production, product mix, different problems and obstacles faced by the farmers, attitudes of the parties involved in agriculture, etc.).

Methodology applied

The main objective of the sample design was to draw a sample of farm households (farms) and enterprises in Dobrich region. The methodology for drawing a sample was based on a random selection probability. The list of registered farmers in the region was sorted in 3 strata, and this was an initial basis for the sample. As a first step of selection, farm households and enterprises were chosen by systematic selection with random start. The selection was done with probability proportional to the size of arable area by systematic selection with random start. Farms were sorted in small, medium-sized and large ones. A farm household sample with total population of 100 and an enterprise / cooperative sample with total population of 20 were interviewed. Additionally, we interviewed representatives of local administrative authorities responsible for agriculture and rural development, local real estate agencies, mayors and local governors.

The only adequate and reliable source of information for the household sampling was the register of Individual Private Farms developed by NSI. It was partially updated as of July 1996. The total number of entries was 1,8 million farmers for the country. The number of farmers in Dobrich region was 750. As a source for the sample of cooperatives and farming companies the National Business Units Register (BULSTAT) was used. The latest update of this register was of July 1999. It contains more than 400 thousand companies with indication about their field of activity, which allows to extract those of them with agricultural activity. 8,012 companies entered into the register indicate agriculture as an activity, but a few were 'real'². From the total number of companies 201 - were public (state-owned and/or municipal), and 2 were Joint Stock Foreign Companies.

Assessment of the economic impact of land fragmentation on the financial results of the farm activity

The main question to which we tried to give an answer was: ***How does land fragmentation influence the economic performance of the farm? Is it an important issue or not? What are the links between the parcel's size and the gross margin? What kind of losses has a farm cultivating fragmented land and how this could be estimated?***

All the results, calculations and subsections are based on the information received from the survey made in Dobrich region in April 2000 which is representative for the region and expert assessments. The data was obtained from interviews carried out in a farms specialised in grain production. The main crops planted there are wheat, barley, maize and bean.

²Usually when one company prepares documents for registration in the court it is a routine practice to list all activities that are allowed by the law. To extract the 'real' - companies active in agriculture they were ranged by level of turnover for the last year. Prevailing part of them were not active (they exist only on paper).

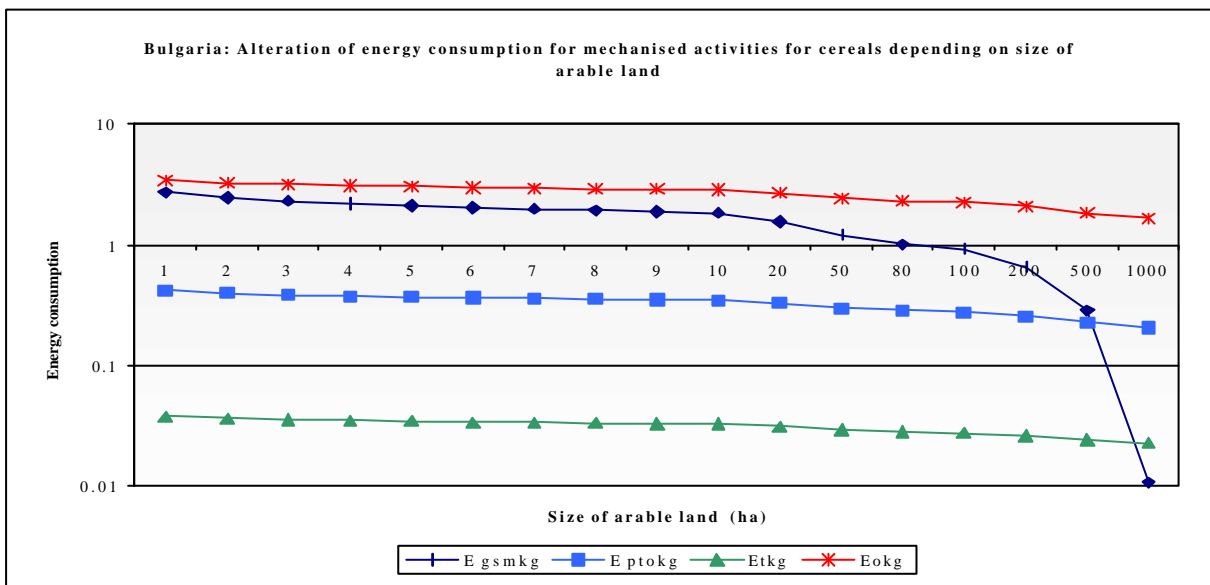
As the survey has shown, land fragmentation is a problem and all farmers apply different methods for land consolidation. The main reason for this is the economic survival of their farms. By farming consolidated land they protect themselves from bankruptcies and failures.

If the farmed land is fragmented, the following negative processes are presented:

- Increased costs for fuel and lubricants;
- Losses in time for land farming;
- Increased labour costs;
- Production fall off;
- Land cultivation of poor quality - the fragmented land does not give an opportunity for quality cultivation and reflects in a yield's fall-off.

The analysis identifies high correlation between energy consumption of fuel and lubricants for mechanised activities (E_{gsmk}) for cereals and size of arable land. Energy consumption declines rapidly when the farm size is bigger than 100 ha. Energy consumption is 0.01 kg at 1000 ha (Figure 2). Stable is the alteration of energy consumption for maintenance and technical services (including depreciation) (E_{ptok}), the energy consumption for labour (E_{tkg}) and the total energy consumption (E_{okg}).

Figure 2



Correlation coefficients are respectively: 0.8964; 0.8707; 0.9999 and 0.7396.

The effect of the aforementioned processes upon the gross margin can be estimated.

The parcels chosen as a basis for the calculations are with size of 2 ha, 5 ha and 80 ha. We accept that parcels with size of 2 ha show the existence of land fragmentation, because according to the survey the average land ownership at this very moment is approximately 2 ha. All farmers admitted that the cultivation of a parcel with a smaller size using high-efficient machines was not possible. On the other hand, the prevailing size of restituted parcels in Dobrich region (before the subdivision between the heirs) was 25 ha. However, all the farmers in the region cultivate consolidated land in spite of the fact that they have leased or posses dispersed parcels of land in the TBS. The prevailing size of consolidated land farmed by cooperatives or big private farmers is 80 ha.

So we have three cases:

A parcel with size of 2 ha - existence of land fragmentation;

A parcel with size of 5 ha - existence of land fragmentation;

A parcel with size of 80 ha - existence of consolidated land.

The economic indicators from the cultivation of the 80 ha parcel (accepted as consolidated land) are taken as the standard and in that case the economic losses for the farm caused by the fragmentation are zero.

The economic results from the cultivation of the other parcels are compared to the standard and the farmer's losses per 0.1 ha are determined.

The labour cost losses (per 0.1 ha) for cultivation of smaller parcels under maize, wheat and barley were determined. The results showed that the labour cost losses per 0.1 ha for the cultivation of 2 ha parcel were 80% from the usual labour costs per 0.1 ha from a consolidated land. And if the parcel was with size of 5 ha, the labour cost losses were 42.1% from the usual labour costs per 0.1 ha of consolidated land.

The yield's losses (turned into BGN/0.1 ha) were established for each crop and for each size of parcel.

The basis is the average yield for a certain crop (maize, wheat and barley) for Dobrich region received from consolidated land. The decrease in the yield from a parcel of 2 ha is 5% and from a parcel with size of 5 ha is 3%. The land cultivation of poor quality because of the fragmented land and small size of parcel cause the decrease in the yield.

The analyzed economic indicators for each grain crop are:

Gross margin (GM);

Gross margin - Yield's losses (YL) = (GM - YL);

Gross margin - Labour cost losses (LL) = (GM - YL - LL)

Gross margin - Yield's losses - Labour cost losses = (GM - YL - LL)

Dobrich region is specialised in grain production. The interviewed farmers orient their production to maize instead of wheat. That is why we estimated the alteration of the examined economic indicators for a farm specialised in grain production with the following product-mix: 70% maize, 25% wheat and 5% barley.

Table 2. Alteration of the economic indicators per 1 SAU in a farm specialised in grain production depending on the size of the parcel
(percents)

Economic indicators	Size of the parcel		
	80 ha	5 ha	2 ha
Standard GM	100.00	100.00	100.00
GM per 1 SAU	100.00	98.82	97.65
GM - YL	100.00	92.42	86.95
GM-LL	100.00	93.35	87.20
GM-YL-LL	100.00	86.93	76.50

NOTE: One Structural Area Unit (SAU) is equal to 0.1 ha and consists 0.7 dca of maize, 0.25 dca of wheat and 0.05 dca of barley.

As we can see from the table, land fragmentation influences the economic results of the farm and the impact is stronger than the effect of land fragmentation upon a farm specialised in the growing of one certain grain crop. The gross margin per 1 SAU is with 2.35% lower when the size of the parcel is 2 ha than the standard gross margin. The change in the gross margin is caused by the fuel consumption per 1 SAU. The labour cost losses cause a significant decrease in the number of the gross margin - 12.80% per 1 SAU lower for a parcel of 2 ha than the maximum and 6.65% decrease per 1 SAU for parcel with size of 5 ha. If we have in mind the increased fuel consumption, the labour cost losses and the yield's losses we will see that for a parcel of 2 ha, the decrease in the gross margin per 1 SAU is 23.50% and for a parcel of 5 ha - with a 13.07%.

The depreciation of the machines is excluded from all calculations because an average scale of the possessed machines for a farm is impossible to be established. It is quite clear that they will decrease the gross margin, but their influence will differ in accordance with the machines in possession of the farm.

The conclusions from the calculations are as follows:

- Land fragmentation influences the economic performance of the farm specialised in grain production;
- The influence is stronger when the product mix consists of several grain crops rather than one;
- The fuel consumption causes small, but constant decrease in the gross margin, depending on the size of parcel;
- The labour cost losses cause bigger decrease in the gross margin than the fuel consumption, depending on the size of parcel;
- The yield's losses caused by the land fragmentation differ and may cause bigger decrease in the gross margin than labour cost losses;
- The bigger the parcel, the smaller the fuel consumption, labour cost losses and yield's losses.

Cost estimation of simple land consolidation process in the survey area

NPV

The effect of land consolidation has various ways of manifesting. One of the positive impacts of land consolidation is the effect on the economic performance of the farms, which creates favourable conditions for investments.

Farmers have different opportunities for investments - improving of soil fertility, machinery, store-houses, all kinds of farm buildings, tractor-driving inventory, etc.

Here we have estimated and show the positive influence of the consolidated land by using the NPV method for assessment of investment projects.

Scenario

Farmer invests in agricultural machines and purchases a Massey Ferguson 8160 tractor at the price of DEM 156,820 or BGN 156,820. The farmer is specialised in the grain production and especially in maize production. Will be the investment efficient if:

the total arable land of the farm is 80 ha and the land is scattered into 40 parcels of 2 ha;
 the total arable land in the farm is 80 ha and the land is dispersed in the TBS on 16 parcels each of 5 ha;
 the total arable land of the farm is 80 ha and the land is situated at one place, i.e. the land is consolidated.

The economic results from farming parcels with different size are known. The time horizon is determined to be 20 years and the discount percent is 8%.

We assume that the fertility of land in the three cases is equal, so differences in the yield caused by the different quality of the land are not possible. We assume also that all the land is in a region where the weather conditions are the same.

Which of the aforementioned cases is the most favourable for the farmer? The answer is in the assessment of the investment decision.

As a final result, we have obtained three different values of NPV for different cases of fragmentation of the arable land of the farm. Comparing the NPV values we shall see that the highest NPV is that in the third case. So we can say that the third case is the best and the highest result will be achieved if land is consolidated. The value of the NPV increases with the increase of the size of parcels.

In these calculations we have taken into account the fuel consumption and its change, depending on the size of the parcel, the losses of yield caused by the fragmentation and the labour cost losses. The fuel consumption of the machine for reaching every single parcel in the first and second case has not been taken into account, because this distance varies for all farms and every estimation in this direction will be subjective and incorrect. It is enough to say that if we had included such costs they would have led to increase in the total costs and decrease in the Net Cash Flow, which would result in lower values of NPV. And because these costs will exist only in the first case and in the second one, it is quite evident that the NPV value of the third case would be again the highest.

Running different scenarios is also useless, because according to our estimations, the lowest change in the value of the gross margin per 0.1 ha, depending on the size of parcel, is the lowest for maize production. That is why, if we assume that we have a farm specialised in wheat production or barley production or has a product mix including these three crops we will obtain data more clearly underlining the advantages of consolidated land in the investment decision making process.

Definitely **land consolidation has positive influence on the farmers' profit**, respectively on the farmers' income. Comparing the NCF after land consolidation with NCF before it the difference can be identified. Again GM is taken as an economic basis. We assume that farm consists of 40 parcels each of 2 ha.

Thus

$$NPV = -I + NCF_n \cdot DF_n$$

$$NCF = GM - GM_1 + YL + LL$$

NCF is constant over years and positive. On the basis of existed fees and valid for time being taxes investment (land consolidation) equals to 93.5 BGN per real estate.

$$NPV = -93.5 \cdot 40 + 217 \cdot 9.818 \cdot 40 = 81480.24$$

Data shows that land consolidation will increase farmers' profitability.

5. Sociological survey

The sociological component of the research aims to highlight attitudes and practices related to land consolidation. Nevertheless, our data and comments often go beyond the sociological genre, crossing the boundaries of the economic, cultural, psychological and administrative aspects of agricultural business. **On the basis of analysis of land tenure, the sociological survey is going to assess the potential of and constraints to consolidation from the perspective of the households concerned.** The survey evaluates the perception and willingness of households vis-a-vis consolidation, main constraints and possibilities to overcome them, and potential strategies available to carry out the consolidation process.

In about 1/3 of the Bulgarian villages, there exists some kind of chance for work in industrial companies (workshops, branches). In 28% of the villages, there are jobs in forestry, basically in mountainous villages. In 10% of the villages, there is an opportunity for a job in the tourist sector - villages with natural springs, mountainous villages or settlements near water sources. Only in 4% of the villages, there are other opportunities: dairy farming, construction stone cutting. The villages without any chance for non-agrarian activity are 40%. These are small villages, 4/5 of them are with a population with less than 500 people at an average age over 50 years.

The reduction of labour force in villages is significantly more than the reduction of labour force in the towns. The share of unemployed in the towns was 14,6% in 1998, while in the villages it was 20,1%. More distressing is the fact that only 30,8% were unemployed for less than a year, while 33,1% were unemployed for more than three years.

On the basis of a nationally representative survey of the rural and urban population (Gallie D. et al., 1996)³, there were determined the specific relations and perceptions of the population in the rural areas in relation with the employment.

The collected data show that 67,2% of the unemployed in the villages want to start some work. The strong motivation for work is supported by the fact that 89,7% of the unemployed in villages are really looking for a job. One third from the dwellers are landless, but this is not the only reason for searching a job. People have the realistic concept of the impracticality to have efficient production on the small pieces of land they own. Nevertheless, all unemployed rely on their land. To the question on what they rely most of all in a situation of long unemployment and after spending of all accumulated resources, 67,2% of them answer that this is farming of their land, i.e. there comes the conclusion that villagers prefer to be employed in non-agricultural activities, while land cultivation stays as a source of additional income.

The strong work habit can be seen also from the data that for 93,1% of the interviewed the unemployment is the worst thing in their life, and for other 86,2% the life is senseless without work. It is obvious that for the rural areas in Bulgaria work engagement is of great importance. Nevertheless, 84,5% do not think about a self-employment, which is prompted by the unfavourable conditions in agriculture. It is necessary to mention that a significant share of the unemployed in villages (77,6%) are ready to run a job with lower requirements than their professional qualifications. On the other hand, 72,4% agree to have a job with different requirements than the qualification they own; 69,0% are willing to work in worse labour conditions, and 67,2% are ready to receive lower wages. If we add the fact that some 5,2% of the unemployed consider that they have big choice while looking for a job we will have a picture that shows the big compromise the unemployed population is ready to make just to become employed. The data shows quite clear the lack of alternatives for rural development and employment.

³ Employment Conditions, Labour Market Insecurity and Work Motivation: A Comparison of the Czech Republic, Slovakia, Bulgaria and Great Britain. Oxford. Nuffield College

The data also reveals the existence of a strong tendency for association between different groups of unemployed, which leads to **social isolation** of these groups, and after that to economic deprivation. As a result, unemployment is connected with high levels of psychological distress. As a final solution, there comes the statement that the high level of unemployment and the weak provision for welfare lead to high social and psychological costs paid by the unemployed.

The factors that are in the basis of the social differentiation between the households in the rural areas are:

- The difficult economic situation in the country and the legal framework. These are the main factors that generate social differentiation;
- The lack of effectively working rural institutions;
- The limited job opportunities;
- Unpreparedness or unwillingness of new landowners to understand and to adapt to the market situation;
- Weak labour-market, lack of land market, undeveloped product market, etc.;
- Inefficient state protection of the local production;
- Macro-economic instability during the transition period;
- Increased crime rate (including damage to agricultural produce).

As a result of the combined influence of these factors we can point out four types of households in rural areas:

- Successful households- 6%
- Stabilized households- 26%
- Subsisting households- 47%
- Impoverished households- 21%⁴

More impressive is that **farmers provide for the social policy in the rural areas** in Dobrich region. They have taken up the place of the State after its “withdrawal” (caused by incorrect policy or lack of policy in the rural areas as well as the bad economic conditions and constraints of different types). Farmers are the only ones that local population relies on.

Farmers create jobs; train their workers; give land to peasants from their own; repair the infrastructure - roads, channels, community centres, etc.; dispose of the garbage from the villages at the nearest landfill, (the collection and the transportation of the garbage from one single place costs BGN 1,000); clean the roads, etc.

In the TBSs where they operate, some of the farmers do not buy land at prices lower than a certain value. They are interested in who the seller is and what the seller will do with the money. They refuse to buy the land if the seller wants to spend the money without a clear and straightforward idea.

Farmers produce bread in their own bakeries and sell it at prices under its production costs and also distribute it in the village.

The taxes paid by the farmers are the main financial revenue to the municipal budget. Agricultural producers finance municipalities that have insufficient budget resources, i.e. those in Dobrich region. They support kindergartens and schools. Many farmers share the opinion that if there is no school there is no village. They make donations to community centres.

In reality, almost every village in Dobrich region relies on one person! Should it be the same in the future? How this burden can be reduced? How can state institutions responsible for the social

⁴ Family-Run Farms: The Potential to Help the Survival of the Rural Household Under the Conditions of Transition, 1997-1999

policy in the rural areas be engaged in the ongoing processes? How can they be forced to carry out their own duties?

The lack of state policy concerning rural areas leads to the next specific element in the farmers' development - their influence on the local authorities and participation in the executive bodies. Because of this, three basic conclusions come up:

- There is lack of democratic market conditions;
- There is lack of a favourable legal framework;
- There is lack of clear "rules of the game" and that is how they try to create them;

What is characteristic of the rural areas in Dobrich region?

- Existence of ageing population;
- High unemployment rates- approximately 30% in agriculture and impossibility for job creation;
- Lack of material security of the main functioning institutions - health organizations, kindergartens, schools, police, fire-station, post office, municipalities;
- Significant reduction of the budget funds given by the State to municipalities;
- Badly maintained road system. There are places in the region where the maximum speed can not exceed 10 km/h;
- No realisation of the young and educated people;
- Non-functioning industrial complexes or industrial factories with highly restricted activities;
- Lack of qualified persons to work in the municipal administration;
- Lack of own revenues;
- Lagging behind of infrastructure repairs by state-owned companies;
- Lack of feeling of ownership in the new landowners;
- Lack of newcomers in agriculture. Hence people are forced to implore farmers to lease their land or to buy it;
- Increased number of the Roma population. It is dispersed and has no incentives or willingness for work;
- Existence of larceny of agricultural production;
- Impossibility for renting all the land from the MLF, because of the lack of willingness among people;
- Lack of people with initiative and entrepreneurs in the rural areas;
- Low purchase prices of animal production - there is lack of real local markets;
- Low level of salaries;
- Functioning companies are in the sphere of services and are small ones;
- The statement that agriculture is non-profitable and non-prestigious is wide spread;
- Existence of a hidden jealousy among the population to the successful farmers;
- People have low morals and principles, low culture, low environmental awareness;
- Unfortunately, all interviewed consider that the public opinion is determined by the media: newspapers and TV;

On the basis of these statements, conclusions and facts, we can say that there is no state policy for rural development. There is lack of really applicable and feasible strategy for every rural area.

Fragmentation of land ownership

76.92% of agricultural producers define their farms as fragmented while 15,38% do not have these problems. According to 36,36% from the medium-sized and large farmers or 30,77% from all respondents, the prevalent size of a parcel is 1,5-2 ha. The farmers, whose dominant size of parcel is 3-5 ha, 5-7 ha, 50-60 ha are respectively 7,7% each; 23,07% have not answered the question and

for 15,38% the prevalent parcel is 25-30 ha. The big numbers come from the fact that some farmers lease land from big families or consolidated land from the SLF. The most clear expression of the fragmentation are the number of contracts signed by the large lessees - 33,33% have made contracts with more than 1,000 owners, but all of them - with more than 100 owners. The number of parcels owned or leased by them differs - from 100-150 up to 3,000 or more for large farmers and from 10 to 50 for medium-sized and small farmers.

There is still an opinion that the danger of losing output as a result of unfavourable weather conditions (hail storm) can be overcome if the property is fragmented and scattered. This way of thinking existed also in the past, but after the land consolidation, it became clear that was unsubstantiated. Now, the situation is much better: there are well-developed insurance companies, which supply good insurance services, something that solves the problem. On the background of permanently changing weather conditions in adverse direction, crop-insurance turns out to be indispensable. Another question is that producers do not want to insure their production because of production cost savings.

Land reallocation has been done in a way that the machines can come out of the field only from one side.

Optimum production

23,07% of the interviewed farmers determine the radius of up to 15 km as an optimal for farm location, 23,07% leased in a radius of 20 km, 15,38% - in a radius of 8 km, and 15,38% consider the radius of 10 km as the optimal one; 7,7% lease in a radius of 20-25 km, 7,7% in a radius of 25-30 km. and 7,7% in radius of more than 30 km. The data shows that 53,83% of the farmers consider the distance of 15 km around the farmstead as the optimal one and strictly observe it. And 76,9% in total lease in a radius of 20 km. The fact that more than 2/3 cultivate land in a radius of 20 km clearly shows the attitude and the adjustments of the farmers towards land consolidation.

A major aspect of the successful management of farms and land investment protection is the ratio own/leased land. In searching the optimal ratio, 18,18% think that the proportion 1:1 (own: leased land) is the best, 9,09% support the ratio of 1:2 and 9,09% prefer 1:3 or 1:4. Over a half of the farmers (63,64%) are not able to determine the optimal ratio or do not support such a statement. This is valid mostly for small and medium-sized farmers. The explanation is the scale of their production - an increase of their own land is equal to increase in production costs, big investments that will block in their working capital and decrease their market flexibility.

At the moment, the ratio of own / leased land ranges between 2:3 through 1:6, 1:10, 1:15 and even 1:30. Of course, there are farms set up on the basis of leased land or own land. This shows that in the near future the land market will stay active.

It is the common opinion that efficient agriculture cannot be carried out on parcels less than 2 ha. It is accepted that one person can effectively control a territory of maximum 1,300 ha. A household needs at least 10-15 ha per year for living (includes production for animal feed and own consumption). In pursuing the optimal criteria and efficiency of production, it is necessary to mention that one worker can be used effectively for cultivation of parcel of 100 ha.

Scenarios for Farm Development

So on the basis of the collected data, three optimal scenarios for farm development could be established:

Scenario I:

Optimal size of the farm – 1,000 ha;

Minimal size of parcel - 10 ha;

Optimal size of parcel - 70-80 ha;

Own/leased land ratio - 1:1;
Number of workers - 10;
Optimal radius for farm location - 10 km.

Scenario II:

Optimal size of the farm: 3,000-5,000 ha;
Minimal size of parcel - 10 ha;
Optimal size of parcel - 70-80 ha;
Own/leased land ratio - from 1:2 up to 1:4 depending on the size of the farm;
Number of workers - 30-50;
Optimal radius for farm location - 20 km.

Scenario III:

Size of the family farm - 10 - 15 ha;
Minimal size of parcel - 2 ha;
Optimal size of parcel – farm to be situated on one place;
Number of workers - the family members;
Own/leased land ratio - 1:0.

5.2 Applied Methods for Land Consolidation in Dobrich Region

Land consolidation is a complex process. It requires willingness and active participation of all actors – landowners, tenants, local administration, surveyors' offices. The existing land fragmentation causes economic losses to farmers. Land prices drop significantly because of too small parcels. Unlike small and medium-size farmers, large ones consider land fragmentation a serious problem. It incurs higher transport and management costs. Losses because of border effects could be enormous. On the other hand, some farmers find fragmented land to be an opportunity to decrease risk of big losses. The dominating current form of land consolidation is a negotiable exchange of leased or owned land among local agricultural stakeholders. Most often this is not included in contracts of land leasing. The land market does not provide serious opportunities for land consolidation: firstly because offered parcels are fragmented and secondly because of the low price incentives for the sellers. Nevertheless, when appearing, large sales raise the price of the land and boost the market.

The attitudes to administrative land consolidation strongly depend on the farm's size. Big farmers support it. The administrative resources for implementing such legislation are assessed as limited.

The implementation of land tax is identified as an instrument for stimulating land consolidation. Land tax could be paid only if it is very low and therefore would not affect land ownership. Introduction of new taxes would be an administrative burden for both citizens and local administrators.

Having in mind that land fragmentation exists and that a landowner with more than 5-6 ha is hard to see, and the determined average size of land property for Dobrich region 1,5-2 ha, a question comes up: How do farmers overcome this problem?

- **Land lease.** This is the most widespread way of land consolidation in the region. Some farmers consider the rent payment as an investment in land consolidation. But this statement can not be considered for a region where the leased parcels are of small size and are not contiguous. Often the parcels situated in the middle of the field cannot be leased or are leased by another farmer.

Farmers overcome this by:

a) Division of the field between the farmers working in it

92,31% of the respondents take part in such divisions. This is the only way by which the farmers can provide themselves with consolidated lands. Only in this way can they have a good crop,

enough to cover the rent payment and part of the profit to stay on the farm. Usually, the net profit is in the boundaries of 50-100 BGN/ha. Cases of cultivating foreign-owned land still exist. Division creates uncertainty in relation of future development of the farmers and hampers investments in agriculture.

b) Exchanges of scattered private land with consolidated land from the SLF. These exchanges are possible in TBSs where the SLF is presented and the state land is with good fertility. In most municipalities, the process is depleted because of the:

- Leased state land for a period of 10 years;
- Running out of state land appropriate for cultivation;
- Expected tenders for state land using nominal compensation bonds.
- As a result of these exchanges, in the municipality of Krushari the SLF is 3200 ha, scattered over many parcels and located near to the border with Romania (while immediately after the restitution SLF was presented in small scale in the municipality). The land in the SLF is increasing as a result of the exchanges and is moving in regions where:
 - there are no agricultural producers;
 - rent for the leased land is not paid;
 - the price of the land is lower in comparison with rest part of the region.

A process of shifting the lands in the SLF from East to Northwest is observed.

c) Purchase of agricultural land. Small farmers do not buy land. They cultivate their own (inherited) land and/or leased land. All of the medium-sized and large farmers have bought land. It is typical that people sell their land only as a last resort:

- in urgent necessity of financial resources;
- in entering another business;
- in swapping one property for another.

The income from the sale is treated as an alternative source for financing. The number of private farmers in the region is small. That is why the large supply meets limited demand. Farmers are forced to buy the land in order to help sellers or because the property is situated in the fields they cultivate.

6. Analysis of Land Administration and Land Use Planning

6.1 State of Land Administration / Land Use Planning with an Emphasis on Rural Areas

The cadastre / land registration function is in radical transition. The old land administration structure does not fulfil its task efficiently, but no new institutional structures have been established yet. The new Cadastre and Property Register Law (CPRL), passed on 12 April 2000 and promulgated in The State Gazette, No. 34 / 2000, will be in effect as of 1 January 2001. The changes include integration of the now fragmented cadastral survey / mapping records and transformation of real right records into only two institutions: the Cadastre Agency and the Registration Offices (RO) at the District Courts, combined with transition to a negative parcel-based deed system.

Maintenance of cadastral survey / real right records is now insecure, because the registration system is not mandatory for transactions between public bodies, it is triggered only on a sporadic basis, and the feedback of title changes / mutations from the ROs to the LCs / TSs is not guaranteed in practical terms. The situation with feedback of changes and mutations of ownership to the cadastral records is not as dramatic for rural properties as it is for urban properties, because the number of transfers of farmland property is small. However, the insecure feedback reduces data quality and the value of cadastral records in rural areas, as well. Hence the cadastral / land registration records are neither comprehensive or complete, nor integrated and should be checked, refined, verified and updated before any land consolidation initiative.

In terms of planning, there are critical deficiencies in the relevant policies and practices. The most important issues for regional development, including rural development ones, are⁵: lack of comprehensive, conceptually sound and long term policy; weakness and lack of experience in the institutions (especially at the sub-national level); unsatisfactory sectoral co-ordination at all levels; insufficient local and regional initiatives and activity; and shortage of up-to-date and reliable regionally and/or locally specific information. This is an environment that is not favourable for land consolidation initiatives. Symptomatic is the drop out of a land consolidation law in the revised legislative program of the Government.

The fact that the newly established ownership pattern is totally inadequate for viable modern farming (due to uneconomic land fragmentation), combined with the absence of land use planning institutions and practices, explains why the physical land use patterns follow in general the designations of the old plans and usually disregard property boundaries, dirt road networks, etc. Thus, on top of the ownership and leasehold layer (*i.e.* land tenure pattern) often there is a different – traditionally established – land use pattern superimposed, which in its turn underpins an informal land exchange layer. This redistribution of leasehold rights creates land tenure practices, which hardly have any legal regulatory framework, and – strictly speaking – are legally irrelevant and not enforceable. On the other hand, it is a pragmatic and voluntary solution by agreement of the economic agents, driven by sound economic logic. On many occasions this is a how large commercial lessee-farmers, farmers' associations and farm co-operatives achieve sufficient consolidation of their farmland holdings and realise significant economies of scale.

6.2 Characteristics of the Land Market in Bulgaria

Returning the agricultural land to its previous owners was expected to lead to the creation, stirring and revival of the market for agricultural lands and its development was expected to proceed at sufficiently high speed.

Nine years after the launch of the restitution process in agriculture, the country offers a rather motley view in terms of supply and demand of agricultural lands and the location and size of land that are offered and looked for. Generally speaking, the initial expectations of the new owners and the governing bodies did not provide the right answer. Currently there is an existing market for land only in certain regions - Dobrich, Plovdiv, Silistra. In other regions the first signs of a real market are present - Veliko Tarnovo, Varna, Rousse, Lovetch. In the rest of the regions - Sofia, Bourgas, Sliven, Shoumen, Razgrad, Blagoevgrad, Vidin, Vratza, Stara Zagora, Targovishte, Gabrovo, Pleven, Montana, Pazardzik, Smolyan, Haskovo, Kardzali, Iambol, Kiustendil - individual sales of agricultural lands have been accomplished, which cannot be deemed representative and are not ample evidence in favor of the statement that there is a land market there.

The currently existing market for agricultural land in Bulgaria can be divided according to the following criteria:

- territorial
- product mix
- type, way and amount of the lease paid

When considering the land market in terms of its territorial layout, we must point out that this criterion is closely connected to the product mix and the type of culture raised. The weather conditions are another factor indirectly influencing the territorial division of the land market.

In view of the above we can divide the land market into several parts:

- *Northeast;*

⁵ cf. «National Plan for Regional Development 2000 – 2006», *GoB, 1999*

- *Central-North and Northwest;*
- *Southern plains and Southeast;*
- *Southern mountainous and Southwestern mountainous.*

In terms of the type and way of payment of the rent for the land rented or leased, the land market can be divided into four parts:

- Regions where rent is paid in cash;
- Regions where the rent is paid in kind;
- Regions where the rent paid is mixed: in cash and in kind;
- Regions where rent is not paid.

During the year 1999, the rent in kind was still prevalent, and on a national scale it was 80-85%³. The remaining 15-20% were rent in cash and mixed rent.

The rent in kind is being paid in regions where mainly cooperative farms are functioning. Part of the village residents still prefer to receive their rent in kind - they are looking after animals in their yards (One or two cows and/or 1-2 pigs and/or hens, sometimes about 3 or 4 goats or sheep) and are using the products given to them for forage. On the other hand, part of the land owners (especially among the elderly people) think and believe that by receiving certain products they are able to provide for their daily needs. Unlike them, city-dwelling landowners would rather get their rent in cash so they could satisfy other needs and requirements. This is especially true for absentee landowners. This is also the type of rent they could receive without problem, no matter how far away they are from the land they own. (for example through bank transfers, Western Union and others).

Here are some basic features of the rent in kind:

- the rent could depend on the average yield;
- it could not be affected at all by the average yield, but could be determined beforehand;
- in many cases it is so small that the expenses to collect it amount to more than it is worth.

There are also private farmers/lease holders who also are paying in kind, but in their case this method has been considerably reduced and replaced by the mixed or cash payments.

Approaches to rent determination:

- as an exact quantity amount of a certain product per unit of land, disregarding the average yield;
- as a predetermined percentage of the average crop yield;
- as a predetermined quantity of the produce up to a degree of the average yield, and when the yield is higher than average - % of the above average yield plus the prearranged amount.

The types of produce, which are given out as rent most often is wheat, corn (the seeds), barley, sunflower oil, potatoes, flour.

Where the rent is paid as a percentage of the average yield, the variation in terms of the percentage values is huge and chiefly depends on the types of cultures grown.

The types of products paid out as rent can be distinguished in the following way:

- just one kind of product of the cereal type - wheat, barley, corn. The nation's average ranges between 250kg/hectare and 500kg/hectare. The lowest recorded level of rent paying in this model is 100kg/hectare and the highest is 1,000kg/hectares;
- just cereals (combined: wheat-corn, wheat-barley, corn-barley, wheat-corn-barley) - ranges between 100-150kg/hectare to 800kg/hectare;
- just other types of products, excluding the cereals - vegetable oil, potatoes, hay. It is practiced at places where growing cereals is unfeasible and is not done;

- a combinations between cereals and other products.

The common combination is a certain amount of cereals and sunflower oil. The average size of this type of payment is 300-500kg/hectare cereals and 20-50 liters oil per hectare.

The evaluation of the rent relations by paying rent in kind on the one hand hampers the development of the land market, but on the other it contributes to it. It is an impediment because the valuation in kind is not a criterion on the basis of which the price of a unit of agricultural land can be determined - that is, the possibility to determine the price of the land on the basis of its profitability fall away. In this case the prices demanded greatly differ form the prices offered and the market is distorted. But it also assists the land market because its long-term pay-off (for years) and its small amount, especially for the landowners requesting their rent in cash, leads to lack of desire on the part of the landowners and beneficiaries of rent in kind to own and be in charge of their possession and this leads them to enter the land market as sellers.

The rent in kind is to a certain degree unfair to its beneficiaries. This comes from the changes in prices of the individual products given out as rent. This way, if the rent in kind is turned into a cash amount based on the market prices of the products, it will turn out that the income received by the renter fluctuates and differs to a great extent during the years (especially with long-term contracts and a fixed quantity of produce) and this instability does not benefit the receiver of the rent in kind.

In conclusion, we can say that in the regions where the rent in kind is present there is no market for the land. Therefore its limitation and converting it to rent in cash can lead to determining the real value of the land and can wake up the land market. The same conclusion could be drawn also for the regions where the mixed rent is used. It is not so popular.

In the regions where the rent is paid in cash, there is a land market. The price of the land is determined by the sum of several annual rent payments (most commonly for a 7-10 year period). The amount of the sum of in-cash payments is much bigger than the value of the in-kind rent given.

The cash rent payments are paid out cash in hand, in the producer's yard. There is no definite period within which the money owed is paid by the lessees, which means that every lessee decides on when to give it out. This is not the case with the rent paid in kind - it is paid out after the end of the crop year and after the crops have been gathered in. Some farms (still just a few) have adopted the bank transfer system of payment. The rent could be paid as a lump sum (after the harvest) or periodically (usually 30-50% of it in the middle of the crop year and the rest after the harvest).

In the regions where land is farmed, but no rent is being paid, the land market is either non-existent, or the prices of the lands are too low. Non-payment of the rent and the unwillingness of the owners to farm their lands leads to its supply on the market and its "devaluation" (loss of the notion of its real value as a resource), which presupposes its sale at any price.

Throughout all regions of Bulgaria there is supply of land. Missing is the solvent demand. To an extent the mental idea of the sellers about a "low" and a "high" price of the land impedes the growth of the market. Still a large number of landowners wishing to sell it have no market orientation, their notion about a market and market relations is confused, the prices offered are not easily accepted, there is no interest in the future of this kind of ownership, at times the sense of ownership is missing. The mindset on quick monetary gains from the sale of agricultural land recovered by restitution will be hard to overcome.

Nationwide in 1999 the supply and demand of land grew, but not to a satisfactory degree. The main reasons for this are as follows:

- the restituted ownership of the land and the opportunity to realize any kind of deals with it;

- the demand for consolidated land in certain regions suitable for a particular kind of production by large-scale producers with developed markets and channels for the distribution of their products;
- the economic needs of some households.

The real land deals are geared towards:

- Purchase of land from physical persons for agricultural needs. The price varies between 500 and 2,000 BGN/hectare, in certain regions up to 4,000-5,000 BGN/hectares;
- Purchase of land from physical persons in order to be included in regulation plans of settlements near by or in the vicinity of important infrastructure developments- highways, main roads, harbours, resorts, international bridges and others. The price is determined on the basis of m², not on the basis of hectares;
- Purchase of land from the municipalities subject to Article 4 of the LOUFL;
- Transfer of ownership by the owner to other people, most often relatives, at token prices;
- Purchase of land to be exchanged in the future for state consolidated;
- Sales from the State Land Fund.

Characteristics of the agricultural land market in the region of Dobrich

In the region of Dobrich the land market has started developing since 1994. Currently, this is the region with the largest number of deals contracted, of ownership transferred, and best developed market relations in the agricultural sector. For just one week -from 8 May 2000 to 15 May 2000 - deals concerning a 50 hectare area were signed. This early activity in the land market is due to the fast completion of the land ownership restitution process.

The land market in the region territorially can be divided into two parts:

- *Western*
- *Eastern*

The Western part includes the counties of Tervel, Krushari, and the Northwest area of municipalities General Toshevo and Dobrich-rural. This is an area scarce in resources (financial, labor), a region with a strong minorities presence (Turks, Gypsies), an area with less fertile soils. The land market is less developed and the land prices are from 30 to 50% lower as compared to the land prices in the Eastern part. The Western part can include also the municipalities Silistra, Dulovo, Alfatar. The settlements in the area are underdeveloped in terms of infrastructure and are far away from important transport junctions. The city of Silistra makes an exception: it is a city on the Danube river and has a harbour. There is not even a well-networked railway system in the region. The roads are badly maintained. Hence the weak demand for agricultural land in the region. The price of land in the region is from 500 BGL/hectare up to 800/900 BGL/hectare.

The Eastern part includes the municipalities General Toshevo (without the northwest part), Dobrich, Dobrich - rural, Kavarna, Baltchik, Shabla. This is an area with extremely fertile land. The labour resources are more in number and of better quality in terms of education, as well as in terms of age. Two harbors are also present - Baltchik (with a 200,000 tons capacity) and Varna harbour close by; the airport in Varna, ensuring quick access and the opportunity to export the produce at low transportation prices to any destination in the world, mostly to Turkey, the Ukraine, Russia, the Middle East.

This region is better off financially as well compared to the Western parts. In the Eastern part the tourist industry is flourishing, a source of alternative employment ensuring high levels of income (especially in the summer months), therefore a considerable amount of the labour force is assimilated.

The region is also a big consumer of agricultural goods. The price of land varies from between 600/700 BGN/hectare up to 1,800-2,000 BGN/hectare, while the average price is 1,300-1,500/1,600 BGN/hectare.

The price of land in the area is determined by the following factors:

- the rent paid in the most recent years;
- number and size of the parcels offered; number of owners/co-owners;
- limiting infrastructure developments, situated over, under or along the parcels;
- crops grown on the lands - profitability per unit of land;
- the presence of competition between the producers/lessees in the region;
- supply/demand ratio;
- loopholes in the legislation, to the extent to which the lessees do not assume responsibility for unpaid rent for the land.

The land market is very active and the supply still exceeds the demand.

The main buyers of land are the large-scale lessees. It is typical for them that they start buying the land only several years after starting their business (from 2 to 6 years), and their first purchases are very small compared to the ones in the consecutive years.

7. Land consolidation element and aspects

Liberal inheritance laws and tradition, providing for equal shares of all heirs in the estate, account for the major driving force of fragmentation. Having in mind the considerable soil diversity (on the average, 3-4 very different soil categories) within territories belonging to one settlement (TBS), subdivision of the estate tends to produce physical split of each individual plot into a number of plots corresponding to the number of heirs, rather than distribution of plots without physical subdivision. In this way each heir is getting an equal share by both size and soil quality. Additional factor of similar influence for the deeper fragmentation is the established land use pattern within the TBS: *e.g.* irrigated land, orchards, vineyards, and fields. Usually heirs would seek to get an equal share of all available land uses within the farmland estate.

Most generally, land consolidation is described as pooling together of fragmented rural land resources within a certain territory and their reallocation in an aggregated pattern for improved land utilisation. Technically, there are some practical skills and knowledge available in Bulgaria, which were gained during the land reallocation campaign.

7.1 Determination of the existing informal transactions

As a result of the ongoing reform in the agricultural sector, the fragmentation of agricultural lands in Bulgaria, typical for the period between 1878 and 1947 found its counterpart in the years after 1991. The huge blocks of arable land, created during communist times, were broken into small plots after the passing of LOUAL from 1991 and the Regulation of the Implementation of the LOUAL. The process of restitution of land ownership, which lasted long enough and was completed in the beginning of the year 2000 with the final submitting of the ownership documents and the accompanying sketch maps, faced agricultural production with a big problem not only technically and technologically, but also economically.

This unpleasant situation is becoming worse even at this very moment, due to the additional fragmenting of the land ownership (subject to the requirements of LOUAL and the Inheritance Law) caused by the divisions between the heirs of the deceased owners of agricultural lands under whose name the land was reinstated after 1991. The process of restitution of land ownership in Dobrich region ended in 1994. Individual cases went on to be solved in 1999 as well, but they did not affect the overall picture of the region. This gave the chance as early as 1993 for the process of land leasing to be started, which after 1994 gained considerable momentum and marked the beginning of the big private farming in the area. Despite the above, the main problem that the local producers encountered was the fragmentation of the land property and the impossibility or the great difficulty in the formation of huge plots of arable land, necessary for efficient cultivation and the achievement of economic profit. This forced all producers to start looking for ways to consolidate the land, despite the lack of normative regulation regarding this issue. The search of ways for economic and legal land consolidation meets the strong resistance from the processes going in the

opposite direction – the division of farm lands between heirs of dead owners from the static register; the purchase/sale of plots or parts of them; the impending land tenders for land from the State Land Fund (SLF) with compensatory bonds.

At first we are going to look at the processes altering or encumbering the land consolidation, then we shall pay attention to the methods applied to land consolidation.

7.2. Processes against land consolidation

1. Division of agricultural lands

Division of agricultural property takes place in the cases when the person who is the owner of the property has died or gives up his inheritance in favor of third parties (most often his relatives or children). It can be voluntary or obligatory (non-voluntary). Here a contract divides the farmlands to be inherited between the parties having right to an allotment. According to Article 10 of the Regulations for the Implementation of LOUFL the property owned, is not allowed to be less than 0.3 hectares for field; orchard or a vineyard - 0.1 hectares; pastures - 0.1 hectares. Land division is the main requirement when purchasing a property. In Dobrich region land is not purchased in a co-ownership, unless it is impossible to be divided. There are documented cases of selling parcels with sizes ranging from 0.3 hectares up to 2 hectares with more than 20 co-owners. These cases are extremely hard to solve and perform due to the difficulties in gathering all the co-owners at one place, obtaining their consent for the sale of their land and its price. The process of land division takes place in the whole country. According to us, it will continue for another 1-1.5 years. Only after it is completed it can be claimed that one of the prerequisites for the development of the land market is present and has been fulfilled.

2. Purchase of agricultural land from the State Land Fund using nominal compensatory bonds (NCB)

Purchasing agricultural land using compensatory bonds from the State Land Fund (SLF) is a process that can be looked at in two ways - as an impediment to land consolidation or as its aid. This is a process, which started several months ago with the handing of certificates for possession of nominal compensatory bonds (CPNCB) by the Land Commissions. These certificates are given to people whose requests for restitution of farmlands have not been granted. Upon receiving the bonds, the person can take part in:

- agricultural land tenders organized by the SLF;
- obtaining the right of ownership to the lands subject to Article 27, paragraph 6 of the LOUFL;
- transfer of the NCB;
- the privatization process in the country.

Currently there is a process of buying off the NCB by interested parties, the prices offered by buyers started at 0.25 BGN per 1 BGN of the face value of a compensatory bond. In the month of May, the price fell to 0.12 BGL per 1 BGL of the face value of a compensatory bond. These tenders will create opportunity not only to parties uncompensated by the restitution process to get ownership rights, but also to certain individuals who already have some land plots in the areas where state-owned lands will be offered in the tender. And this is the positive effect that should be expected from the tenders. If the state land is won by a person who already farms in the TBS where the state land is located and has own or/and leased land (especially if certain plots of it are neighbouring to the tender ones) we can say that a land consolidation process is going on or that conditions for a land consolidation are created. Unfortunately the effect of seceding agricultural lands from the State Land Fund to new owners through the tenders will lead to some very negative results:

- The already consolidated lands will be fragmented. Land ownership will be considerably fragmented, and the number of new owners is hard to predict. This itself will reflect negatively on the agricultural land market - the already big enough number of owners will increase, which will increase the availability of agricultural lands for sale and will push market prices down. On the other hand, the emergence on the market of plots of sizes over

2 hectares will inevitably affect the prices of the smaller plots and will make them harder to sell.

- The reduction of lands in the SLF (the reduction is expected to be between 30 to 50%) will impede the future process of legal consolidation - the possibility to create a Land Bank as an institution assisting and carrying out the land consolidation of the land will be greatly limited. The resources it can operate with are reduced, which will hinder its fast assimilation and implantation at both national and regional levels.
- This reduction will stop or will strongly limit the ongoing process of juridical land consolidation - the exchange of dispersed private parcels of land for a consolidated state ones.
- The effect will be negative on the development of the rural areas, as well. The giving up of ownership by the State can be perceived as withdrawal from the rural areas and narrowing of its social policy in them. The question might arise - isn't it that the state wants to get rid of its lands because it can't manage them well and because it has no strategy for the development of the rural areas? This is a reasonable question, considering that a great part of the first compensatory bond owners and expected owners have already sold them and won't be actually taking part in the tenders. The reduction of land in SLF will lead to the reduction of the extent of the lands which could be offered to peasants with little or no land, as well as to the ethnic and Roma populations, and this way the incentives to stay and live in the villages and the means for earning their living are reduced.

3. The purchase/sale of agricultural lands or parts of them

This is the third process obstructing the land consolidation. But it could be viewed the other way round as well. It can additionally fragment the land property - it leads to the inclusion of new owners on the land territory; it results in the fragmentation of already consolidated lands and to all the remaining negative consequences. The owner/producer cannot:

- organize his farm appropriately and expediently;
- adjust his farm/product mix to the market according to its requirements;
- realize the necessary and most appropriate crop-rotation;
- effectively use the production factors;
- cut down the production costs;
- be independent economically;
- increase the income per unit of land;
- make improvements on his land.

7.3 Methods and ways of land consolidation applied in Bulgaria

The methods and ways of land consolidation used and applied in the area could be divided into two types: economic land consolidation and juridical land consolidation. They are:

- Leasing of land from the SLF for a period of 10 years
- Purchase of agricultural land from the SLF using compensatory bonds
- The exchange of scattered plots of private agricultural land for consolidated state land from SLF
- Division of the land territory in the TBS among the producers working in it
- Interchange of private land plots between the individual producers, owners of the land
- Agricultural land leasing:
 - ❖ Leasing of agricultural land, property of "large" families
 - ❖ Renting from different owners in certain land territories, disregarding the size of the plots owned by them
- Purchase/Sale of agricultural land

Leasing agricultural land from SLF for a period of 10 years.

This is one of the first methods utilized in this area, though not to such a great extent. This is rather an indirect method and could be determined as an economic land consolidation process. More often than not it is combined with land renting. So far, in Dobrich region, about 5,500-7,000 hectares

have been rented, which is 24,44%-31,82% of the SLF land in the region. The land let out this way has the following features:

- ❖ This land will not be involved in the upcoming tenders for state land using compensatory bonds;
- ❖ After the term of the lease expires, the lessee has the right to buy it.

The producers in the area expect this method to be discontinued or limit its usage after the state land tenders using compensatory bonds takes place due to state land availability exhaustion. It became a popular opinion that the long-term leasing of land from the SLF creates conditions for corruption.

Exchange of the scattered plots of private land for consolidated land from the SLF

This is a widely practiced juridical land consolidation method in the area. It is also the reason for the increased activity in the agricultural land market since 1994. It was especially strongly felt in the last two years. It mainly consists of exchanging scattered plots of private land varying in size and quality (category), owned by one person, with consolidated land from the SLF. The blocks of land from the SLF are large enough in size to ensure efficient agricultural production. The exchange itself is performed on the basis of evaluations in accordance with the Regulations for the Determination of Base Prices for the Agricultural Lands. Out of a total of 22,000-22,500 hectares of land in the SLF for Dobrich region, about 6,500 hectares are included in such types of exchanges. This is a very cumbersome process lasting months. It is complicated by the three document checks carried out: first at the Land Commission, then in the "Land Ownership" Regional Office and, finally, at the MAF. The base evaluations of the lands and the sketches provided by the Land Commission at the beginning of the process are valid within 6 months. After that period, if the exchange was still to be performed (which has often been the case), it is necessary to repeat the evaluation of the lands and the authentication of the drafts, which further lengthens the process and makes it more expensive. In term of quantity, the exchange is always in favour of the state, since the private land exchanged is either the same size or larger than the state land. It is due to the evening off of the different lands with the help of base prices. Thus we come with a fair exchange in terms of quality, but not quantity.

This form of exchange is used by both the lessees in Dobrich region and the people who have relocated from the city of Silistra to the villages of Trigortzi and Gurkovo. They have exchanged their lands in the area of Silistra with state land near their new homes. These exchanges are expected to cease within 1 year, caused only by the tendering of state lands to the owners of nominal compensatory bonds (NCB).

This type of exchange benefits to a great extent the eventual role of a land bank. Why so? After the exchange, the state becomes owner of numerous plots with different sizes (minimum 0.3 hectares for fields) in different land territories, that is, the state property is breaking up and it is no longer strictly limited geographically. Therefore the state is able to operate in more regions, can sell/rent land to a larger number of interested owners (especially if they are neighbours of the new state lands) and help the small and medium sized landowners with land consolidation.

Division of the land territory in the TBS among the producers working in it

This is the most prevalent informal process of consolidation in the area. All producers no matter their organisational form - small, medium sized, or large lessees, co-operative farms, individual producers realize it. The agricultural farmers are completely unanimous about the need for land consolidation and cultivating large blocks of agricultural land with the purpose of utilizing the equipment efficiently and correctly performing the technological procedures.

The division takes place at the beginning of the crop year and lasts one year. All interested parties have a meeting. There it is determined who will cultivate which part of the land territory, observing the principle: the quantity of consolidated land received from a producer after the division to be equal to the land (owned or rented) owned by him before the division. Such division stems from renting and cultivation of numerous plots by each producer, scattered around the land territory. This fragmentation does not allow crop rotation, or the cultures to be properly treated with

fertilisers and preparations, or the highly efficient technology to be used effectively. Signing a contract between the sides certifies the division itself of the land territory. The notary does not certify this contract. There is no normative document regulating this process, which makes it very risky. The risk also arises from the fact that a given owner might ask for their land back and destroy the signed lease or rental contract, to distract the harvest from the land that he owns if his land is not being cultivated by the producer he has signed a contract with. This practice will be kept in the future, and it is quite possible that other regions of the country might take it up as well, with new producers entering the market.

The exchange of parcels of agricultural land between the separate individual producers /owners/

The individual farmers of small and medium type that are owners of the exchanged parcels usually do this exchange. This is done by mutual exchange of a certain parcel of land for farming by one producer to another instead of another parcel of land. The exchange is usually for a period of one crop-year. A word agreement is made or a contract is signed. Usually a payment for the usage of the exchanged plots is not required and necessary. Only land, which is owned, is exchanged. This way the fragmentation of the land ownership is overcome (from economic point of view) and prerequisites for a more effective production are created, but this process in no way stimulates investment in the land /composts, fertilizers / because it is not known who will work the exchanged land next year. After the exchange the ownership, both judicially and according to the documents still stays fragmented. Only the way it is used is changed.

Leasing of agricultural land

The leasing of agricultural lands is a classical way for land consolidation according to the way it is used. This is also the most common way for land consolidation in Bulgaria and in particular for Dobrudja. The biggest problem confronting the tenant farmers is the requirement for a legalization by a notary of the contracts for rent, and this process has a number of failings:

- a big waste of time;
- impossibility or enormous hardships in the signing of the contracts with the absentee land owners;
- impossibility and inefficiency of the process of driving the elderly owners to the place where they must sign the contracts.

Due to this the requirement for a legalization by a public notary is ignored and this does not reflect on the relations tenant/lessee/ - owner. A small part of the contracts for leasing are not given in writing, especially when there are absentee land owners who do not have representatives in the region where their property is situated.

Purchase/sale of agricultural land

This is a two-sided process – it can lead to an increase in the size of the parcel but it can also lead to fragmentation of the property (a case which we have already examined). At the moment the buying and sale of agricultural land is partially leading us to land consolidation. In the cases when a contiguous parcel is bought there is legal land consolidation. The buying of a parcel(s) by a person already owning land in the territory belonging to the settlement but not bordering the property which is the object of the deal reflects indirectly on land consolidation in as much as it creates a mood and a desire for land consolidation and increases the opportunity for it. Buyers tend to avoid buying land with more than one owner.

8. Conclusive summary

Following is an attempt to summarise the various aspects of possible land consolidation schemes in the proposed area. In order to gauge comprehensively the specific Bulgarian conditions, several key factors have been addressed.

Legitimacy.

It is indisputable that the strategic objective of establishing effective and competitive rural economy in Bulgaria requires the consolidation of land use/ownership rights in rural territories into viable farm units. Clearly, within the present legislative framework there is a gap in this field. Politically and conceptually, there is no consensus or clear government strategy on the method of achieving such consolidation – should it be left to by purely market mechanisms, or there should be government intervention and special legislative limitation of individual land use / ownership rights. On this background, land consolidation schemes – defined as systematic spatial grouping and rearrangement of land use / ownership rights within certain territories – are a sensitive issue, bearing in mind that a major, costly land reallocation programme (with certain opportunities for consolidation) has just been completed. Survey results indicate that any proposed government intervention in the enjoyment of individual farmland interests may face opposition from a considerable proportion of the population. Apart from that, without a sound regulatory framework, any land consolidation scheme may simply fail to raise the necessary funds for its implementation. The conclusion is that extensive policy making, and legislative work is a prerequisite for any land consolidation initiative.

Organisational Model

A possible land consolidation scheme can be accommodated within the regional/rural development framework. Thus, it certainly has to involve central, regional and local authorities. The responsibilities in such a joint effort have been only outlined in the relevant legislation, but there is a shortage of detailed rules and procedures, as well as positive experience with efforts in this planning field. Just the consultative/approval functions of the authorities are clearly defined. The executive body that should take the lead in organising the scheme is yet to be determined – presumably at the local level, in co-ordination with the regional level. The co-ordination mechanism via the regional development council has hardly been practised. Existing land administration institutions are charged with different challenging tasks, and so have little capacity to take over land consolidation, as well. They are unstable due to the radical transition they undergo in relation with cadastre/land registration. Further, the owners/tenants seem to distrust any existing administrative institutions – so a new type of public-private partnership body should be set up. In order to start project preparations, the core of a land consolidation body should be identified, at least. The present lack of earmarked budget for such organisation work is a real obstacle for any progress in setting up the requisite organisation. Bearing in mind the present financial status of the Bulgarian municipalities, providing of municipal funding for a new executive body is highly unlikely. The landowners and tenants as stakeholders can not afford such funding. It seems that at present only MAF may afford to support such an organisation, but it has no explicit policy to do so. The conclusion is that extensive preliminary budgeting and organisational work should be carried out in case of any land consolidation initiative.

Technical Aspects.

Technical issues seem to be least problematic. Provided that the organisational model exists, the requisite LIS/GIS can easily gather a geo-referenced database from the relevant central / regional / local sources. Digitalisation of existing map sources and revision of the soil maps, especially, will presumably require more preliminary work, but the professional land surveyors in Bulgaria already have such experience, and have easy access to modern IT and commercial LIS/CIS software systems. The present stage of land restitution and cadastre / land registration reform – in Dobrudja particularly – favours the availability of up-to-date large-scale mapping and land records. With minimum effort spent on verification and updating of land records (this is to be funded under the cadastre / land registration programme), a possible land consolidation initiative may rely on relatively good quality data. Actual land use pattern may need some field checks and surveys, but these will not be extensive. The human resources are quite experienced in land reallocation design, and will require less orientation and training. More training should be focused to the land valuation.

Approaches to Land Consolidation

Land consolidation is inseparable from the structure of farming enterprises. Achievement of balanced farm sizes, which is a central issue for the Bulgarian rural development, requires some stability of the structure of farming enterprises, which is not the case with the majority of them (both by number, and by farmed area). As mentioned before, the co-operatives who are farming most of the land, undergo a of transformation / registration process which is likely to cause the collapse of a significant part of them. New farm operators are anticipated to come forth and replace them. On the other hand, small subsistence farms are also very unstable. The time horizon for planning the development of these categories of farms is very short – it is a matter of economic survival. An indirect indicator to that is the relatively short term of farmland leases that are concluded on the lease market with private lessors – usually not longer than 4 years. The only stable structures presently are the lessee-farmers, but they are a minority. On this background, it is clear that classical land consolidation schemes – with a democratic decision making procedure – are not a viable option, and in the short run are virtually impossible. Also, the public attitude to the idea of rearrangement of ownership rights seems to be very negative. Under these circumstances, it will be practical to apply two approaches to achieving viable farm units through consolidation – short term and long term.

Short Term Consolidation Practices

The observed consolidation of the land use rights through a voluntary exchange of leases is a practical short-term solution born at the grass-root level. This – to a great extent – is the land tenure foundation underlying the presently stable and apparently successful commercial farms in Dobrudja, as well as in other parts of the country.

There are several possible ways in which land consolidation initiatives in the short run may facilitate this practice, without cumbersome legislative amendments. These suggestions should be seen as short-cut opportunities for speeding up the market-driven consolidation process:

- Within such initiative, a standard lease agreement may be drafted. This may contribute to the legitimacy of the leasehold consolidation process. It should comprise clauses establishing and granting to the lessee-farmer the right to exchange the leasehold with another farm operator – for the purpose of consolidation. The agreement may attempt to improve the situation with the security of tenancy, as well – offering optional clauses for one, or even two, years of notice before termination of the contract by any of the parties. Such a standard lease agreement and its advantages for both parties may be promoted among the local community in the proposed area by a campaign in the mass media and in local community meetings.
- In parallel, such initiative may set up a cheap and simple (say, paper-based) registration system for lease exchanges in each village, that will certainly improve the security of tenure . The village mayor / secretary may get involved with running the system, thus granting some legitimacy to it. It may use a copy of the cadastral map for geo-referencing and simple land use inventory purposes, and keep transcripts of the «consolidation» exchange agreements – thus publicizing them among the village community. The system will not need updating more than once a year. That will generate original annual land use data series, too.

As a third potential component of such initiative, an impartial agent (*e.g.* contractor) may facilitate the process of signing leases and consolidation of fields. The agent may investigate who are the prospective lessors in the TBS – by survey and/or organising a «post box» for interested landowners. Various people may be the principals of such agency: local public / private partnerships, local economic development agencies, foreign aid agencies, non-profit institutions, etc. The agent may then assemble consolidated fields from the available plots – by provisional negotiations with the owners – and offer the assembled fields, together with packages of draft lease agreements and easy contacts with the owners, to potential lessees.

Long Term Land Consolidation Outlook

In a longer term perspective, any systematic land consolidation, particularly of land ownership rights, will be unthinkable without pertinent legislation. Specific issues to be addressed by the politicians / legislators, are:

- *Special Land Consolidation Legislation.* The significance of the interests affected in any systematic consolidation requires that a law should be passed. It should regulate the limitations imposed on individual property rights, and the procedures of land consolidation. Bearing in mind that the general perception of the public at present is against any interference in the individual ownership, it seems that classical consolidation schemes have no ground in Bulgaria. So this legislation may only regulate procedures for facilitating voluntary land exchanges, for reduction of the subdivision instances upon inheritance, or compulsory land consolidation in areas with environmental problems.

- *Land Fund Policy and Arrangements.* Presently, the state and the municipalities hold farmlands, but their land management practices are not subordinate to any explicit land consolidation or rural development policy. These lands already have served land consolidation purposes, but the government has not established a sustainable mechanism or institution to manage the process – like a Land Bank, for example. Thus, legal arrangements may be introduced for the set up of executive agencies or inter-governmental companies managing the public land fund in line with straightforward land policies. Such a body may buy out fragmented lands, or foreclosed farm holdings from default mortgagors, and – upon consolidation – sell or exchange them with prospective farmers. By consolidating the lands, and then selling, this body will realise the increased value as a result of consolidation. Such a land fund may well be used in case of compensation through exchanges for compulsory alienated lands under infrastructure schemes. In general, such an institution may be a flexible government tool in land use planning and regional development.

All of these above mentioned forms of land consolidation in practice in Dobrich region confirms our thesis that although there is fragmentation of the land property, from an economic point of view and from the point of view of the usage of the land, in certain areas, this fragmentation has been overcome. The forms described only confirm the statement that measures and official documents must be accepted, helping the process of land consolidation and legalizing the voluntary forms used in the region. There are prerequisites at the present moment, which complicate the situation:

- Lack of strategy for land consolidation;
- Lack of a strategy for rural development;
- Deserted rural areas
- Alienation of the people from the land
- The bad macro-economic and micro-economic situation in the country
- Insolvent and aging population
- The lack of incentives for new producers in agriculture.

The legal and economic methods for land consolidation in the agricultural lands in Bulgaria as well as positive attitudes and expectations among the agricultural producers and the different institutions connected with agriculture (land commissions, municipal administrations, and real-estate agencies) clearly show the need for the start of the land consolidation process in the country.

The actual process of land consolidation, in the cases where the process is done under the guidance of the state and the exclusion of the land bank done in the following way:

- A vote in the territory belonging to the settlement for the start of the process of land consolidation.
- The construction of the new cadastre plan.
- The designing and marking out of the new road map.
- The showing of the cadastre plans before the participants.
- Constituting and constructing the land consolidation plan.

- The distribution of the new parcels of land amongst the owners and the participants in the project and marking out their property.

The effects that can be achieved by the land consolidation of land ownership are as follows:

- The groupings of the scattered parcels of land, the property of one person in one or two parcels of land with correct and suitable forms for agricultural work, specific borders and always free passage to the nearby road.
- Provision of opportunities for the use of highly productive technology and equipment.
- Guarantee for entrepreneurial freedom of the owner when introducing new crops.
- Freedom for decision-making and measures made on time against diseases and pests.
- An easy and complete protection of the land and the cultures from thieves.
- Easy processes of fertilisation, in respect to the existing permanent roads.
- Short distance from the farm to the allotments and a decrease of the expenses for non-productive labour when overcoming the distance between the separate allotments as a result of their grouping in one whole tract.
- Increase of arable land from land consolidation of former boundary strips, inter-land spaces, and boundaries of the numerous separate allotments, as well as tracks.
- Land development – directing rivers, bridge construction, drainage, wells, springs, pump stations, and reservoirs, strengthening riverbank facilities, improvement of land consolidation of the roads, land reclamation, and others.
- Increase of the crops per unit of land and a corresponding increase of revenues in the agricultural farm.
- Increased opportunities for the use of agricultural lands as procurements and collateral, as well as opportunities for their mortgaging (upon the provision of changes in the existing legislation).
- Increased opportunities for credit for different landowners and agricultural producers as a result of increased crops and revenues and the documented land ownership.
- Increased market value of the new land consolidated property.
- Indirect profits from the destruction of low-level vegetation (bushes, weeds, low trees and others) along the boundaries of the properties.
- Low production cost value and increased quality of the production.
- Development of the market of agricultural lands.
- Incentives for keeping the people in the villages.
- Job-creation.

Possible obstacles to land consolidation of land ownership can be grouped as follows:

- Lack of means for beginning and implementing the process;
- Lack of calculations for the value of the land consolidation per unit of land;
- Possible lack of enthusiasm and presence of scepticism on behalf of the land owners;
- Impossibility of land consolidation as a result of the rough mountainous relief and soil variety;
- Lack of political will, especially within pre-election periods;
- Presence of expected discrepancies between the different ministries, services and sub-contractors regarding the administration of the processes and conditions for the selection of sub-contractors.
- Usage of the following statement: “Why we have to start a land consolidation process after spending so much money for restituting the land ownership in real boundaries?”

To summarize, the restitution of land is just the beginning of the agrarian reform. The restructuring of the agricultural sector and improvement of land relations should accompany it. The state can successfully implement the agrarian reform using the following mechanisms: consistent legal regulations in compliance with the requirements of *acquis communautaire*, applied through suitable institutional structures with adequate financial, personnel and technical resources.

Land consolidation is just an element of a wider land policy. Forthcoming are steps to assess the possibility to implement land consolidation policy. Development of a free market of land would be a serious incentive for consolidation. The adoption of the Cadastre and Registration Act is just a legal basis, which will undoubtedly facilitate consolidation; however, it is necessary to prepare and adopt its by-laws. The cadastre can support land policies by providing a legal framework for administering land rights. A land rights framework supports structural change, environmental protection and sustainable management and control of natural resources and environment. It supports land markets, information for planning and monitoring of land use and also provides tools for the implementation of land policies, for instance land consolidation, resolving land disputes or compulsory acquisition of land. Accession of Bulgaria to the EU calls for harmonisation of Bulgarian legislation with that of the EU. The agricultural legislation is now in the process of harmonisation. It can be said that the main agricultural laws have already been adopted and now we are facing a longer process of their implementation.

From the legal point of view there exist two approaches to land consolidation:

- through the adoption of a law that will completely settle the issue;
- through amendments to existing legislation related to agricultural lands aimed at paving the way to a greater private initiative with respect to land consolidation.

Adoption of a comprehensive Land Consolidation Act would introduce an administrative method of consolidation with the state playing a leading role. Having in mind the socio-cultural and historical past of Bulgaria, it is recommendable that natural market mechanisms and consolidation methods be used. An administrative land consolidation would be a serious infringement on the rights of the owners. On the other hand, all other consolidation methods may be applied especially those based on the initiative of the owners. In such a case the role of the State would be to establish clear and just procedures for the settlement of specific land relations, including just and reliable land valuation methods. A successful land consolidation would be impossible without people specially trained to implement this task.

The present stage of Bulgarian transition in agriculture and forestry is not yet favourable for systematic land consolidation despite the sheer problems posed by fragmentation. Public attitude, land policies, legislative framework, land administration reform, lack of planning practice and unstable structure of farming enterprises are not supportive for classical consolidation schemes, involving rearrangement of ownership rights. On the other hand, some practical solutions for the fragmentation issues have emerged that may well function within the present framework, relying more on the lease market and driven by purely economic motivation. These need special attention and timely support, in order to achieve better results and sustain the structural reform of farming enterprises.