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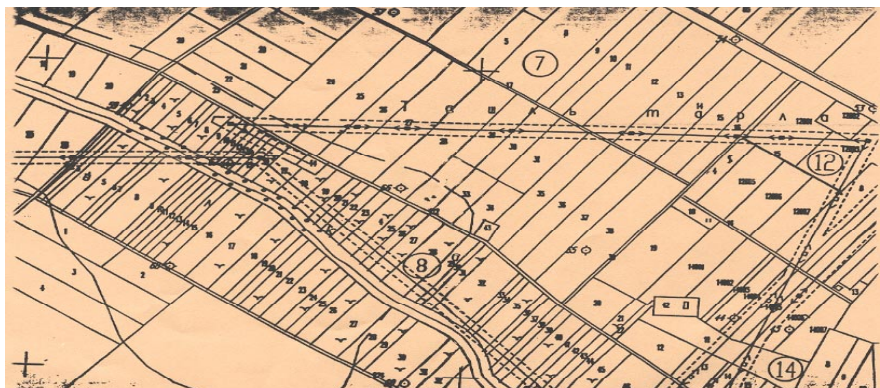
Documentation

of the
International Symposium by FAO, GTZ, FIG, ARGE Landentwicklung and TU Munich

Land Fragmentation and Land Consolidation in Central and Eastern European Countries

A gate towards sustainable rural development in the new millennium

held at TU Munich, February 25th – 28th 2002



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**Documentation of the International Symposium on
Land Fragmentation and Land Consolidation
in Central and Eastern European Countries,
held at TU Munich, February 25th – 28th, 2002**

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6. Western European Experience (long version)

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Verdict in a Danish Land Consolidation - documents and procedure

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Preface / Editorial

Univ.-Prof. Dr.-Ing. Holger Magel

TU Munich

Babette Wehrmann

TU Munich

Rural areas in most of Central and Eastern European Countries (CEEC) are still in a process of transformation that often is somehow blocked. They are marked by a stagnating agricultural production, too small and fragmented agricultural lands, a lack of medium size farms, deficits in mechanisation etc. This leads not only to increasing poverty, it also interferes with their competitiveness in regard to their accession to the European Union. Positive experiences in land consolidation and rural development or so-called lessons learnt from Western European countries might enable CEEC to implement more successful programmes which link local measures with regional planning and development, combine different assistance programmes etc. It was the conference's aim to provide an opportunity for experts to discuss about land fragmentation in CEEC and how to cope with it.

The conference which took place at TU Munich in the time from 25th to 28th of February 2002 was initiated, organised and supported by GTZ, FAO, ARGE Landentwicklung, FIG and TU Munich, Chair of Land Tenure and Land Development.

This documentation includes the papers presented during the four days conference at Munich as well as background papers such as the four extended case studies on land fragmentation and land consolidation in Czech Republic, Hungary, Romania and Bulgaria and the two strategy papers for land consolidation and improved land management in Armenia and Georgia recently prepared by FAO, partly in co-operation with GTZ. Included in the documentation is also the Munich Statement on land fragmentation and land consolidation in CEEC as part of the results. In addition, the outputs of the working groups have been documented.

The documentation consists of two parts: a printed one including abstracts and a CD ROM containing the original papers and country case studies.

Convinced that land consolidation – if executed in a comprehensive way – can contribute to improvements in the productivity, efficiency, and competitiveness of the agricultural sector thereby securing jobs and facilitating private and public investment in rural areas, while at the same time supporting environmental protection and natural resource management, we hope that the conference and this documentation will lead one step further to a sustainable rural development in CEEC.

Introduction – Background and Objective of the Conference

Notwithstanding the remarkable success of the land reform process in Central and Eastern European Countries (CEEC), land fragmentation exists as a side effect with detrimental implications for private and public investments, sustainable economic growth and social development, and natural resources. Less-favoured and least developed regions with economies still depending on agriculture have witnessed negative growth rates, soaring unemployment, increasing rural poverty and as a result, serious social and economic disintegration and wide-spread disappointment among local actors and stakeholders.

The agricultural sector is adversely affected by land fragmentation. Although the experiences of land tenure and its reforms varies widely across the region, most countries are characterised by similar features. The majority of farms are small (1-2,5 ha), and are frequently divided into many parcels which are often badly shaped for agricultural purposes. As a result, it is difficult for farmers to implement new production patterns, and to utilise machinery and appropriate technologies. Most private farmers are restricted to subsistence agriculture and cannot participate in commercial production, which leads to migration and the abandonment of farmland, especially in areas distant to markets.

The small and fragmented parcels, sometimes scattered over different political, juridical and administrative boundaries obstruct spatial/territorial planning especially in terms of land administration, land use planning, and land management. This hampers the implementation of rural regional development policies, strategies, programmes, and projects aimed to improve rural livelihoods.

Recently, FAO in co-operation with GTZ prepared case-studies on land consolidation in Czech Republic, Romania, Bulgaria and Hungary. In addition, strategies for land consolidation and improved land management have been prepared for Armenia and Georgia. These case-studies have been presented and discussed during the conference in Munich.

The conference aimed to attain three objectives:

1. Offering a platform for discussion and exchange of experiences to develop **guidelines for land consolidation practice**. The above mentioned case-studies will form a valuable basis for the development of these guidelines.
2. **Contributing to the World Bank's regional workshop** on Land Rights, Institutions, and Policies in Eastern Europe, focussing on lessons learnt and recommendations in relation to rural land reform and land consolidation.

3. Establishing a **network of competence for education and research** on land management with TUM as focal point.

During the four days conference, case studies from CEEC have been presented and discussed. Plenary sessions of the second day focussed on Western European experience. The afternoon had been reserved for focussed discussions during break-out sessions. On the third day a field trip led the participants to Lower Bavaria where they got informed on the results of land consolidation in several villages. The last day was dedicated to the formulation, discussion and approval of the Munich Statement on land fragmentation and land consolidation.

Throughout the conference, an **open space** has been provided where participants presented their innovative approaches, showed posters and videos and distributed information material.

Members of the steering committee were Paul Munro-Faure and Fritz Rembold (FAO), Willi Zimmermann and Christian Graefen (GTZ), Holger Magel and Babette Wehrmann (TUM). Major resource persons for the conference concept were Paul Munro-Faure and Fritz Rembold (FAO), Willi Zimmermann and Reinhold Bäuerle (GTZ), Michael Stumpf (ARGE Landentwicklung) and Babette Wehrmann (TUM). Holger Magel, Babette Wehrmann, Michael Klaus, Lika Tchanturia (all TUM) and Michael Stumpf (ARGE Landentwicklung) have been responsible for the organisation of the conference.

The conference took place from Monday, 25/02/2002 to Thursday, 28/02/2002 at Technische Universität München, Arcisstr. 21, 80290 München, Germany.

The Munich Statement on land consolidation as a tool for rural development in CEE/CIS countries

Who we are

We, representatives of civil society, governments, academic and research institutions from 23 countries as well as representatives from international organizations concerned with land fragmentation and its consequences for rural development in countries of Central and Eastern Europe (CEE) and of the Commonwealth of Independent States (CIS), have come together in Munich, Germany, from February 25-28th, 2002, to discuss these issues, to express our concerns and to develop solutions to it.

In doing so, we drew on the foundations laid by previous initiatives including the Vienna Conferences on the Development and Maintenance of Property Rights in CEE/CIS (1999, 2000), the Potsdam Rural 21 Conference (2001), and the Bonn Conference on Land Access (2001).

Expressing Our Basic Concerns

We have examined the different experiences and perspectives of land fragmentation in CEE and CIS countries. Notwithstanding the remarkable success of the land reform process, land fragmentation exists as a side effect with detrimental implications for private and public investments, sustainable economic growth and social development, and natural resources. Less-favoured and least developed regions with economies still depending on agriculture have witnessed negative growth rates, soaring unemployment, increasing rural poverty and as a result, serious social and economic disintegration and wide-spread disappointment among local actors and stakeholders.

The agricultural sector is adversely affected by land fragmentation. Although the experiences of land tenure and its reforms varied widely across the region, the countries of Albania, Armenia, Bulgaria, Czech Republic, Croatia, Georgia, Hungary, Latvia, Lithuania, Romania, Slovak Republic, Slovenia, and Yugoslavia share the concern that the majority of farms are small (1-2,5 ha), and are frequently divided into many parcels which are often badly shaped for agricultural purposes. As a result, it is difficult for farmers to implement new production patterns, and to utilise machinery and appropriate technologies. Most private farmers are restricted to subsistence agriculture and cannot participate in commercial production, which leads to migration and the abandonment of farmland, especially in areas distant to markets.

The small and fragmented parcels, sometimes scattered over different political, juridical and administrative boundaries obstruct spatial/territorial planning especially in terms of land administration, land use planning, and land management. This hampers the implementation of rural regional development policies, strategies, programmes, and projects aimed to improve rural livelihoods.

Land consolidation: a gate towards sustainable rural development

A main objective of land consolidation is to improve the land holdings of farmers by concentrating their farms in as few parcels as possible, and to support the farms with roads and infrastructure when needed. Protecting the environment and fostering better livelihoods in rural communities have become increasingly important elements in land consolidation. Land consolidation can be carried out in a variety of forms, ranging from the simple reorganization of farmlands to comprehensive rural development projects including community renewal. These interventions can enable rural areas to develop as multifaceted areas for living as well as for economic and cultural activities. As such, land consolidation can play a major role in guaranteeing food security, alleviating poverty and achieving a sustainable rural development.

Executed properly, land consolidation contributes to improvements in the productivity, efficiency, and competitiveness of the agricultural sector. It secures jobs in rural areas. It leads to better land use planning and land management. It facilitates private and public investment in rural space. It supports environmental protection and natural resource management if it is done in a comprehensive way. Otherwise, effects of land consolidation might be negative. Experiences from Western European countries show that land consolidation which solely focuses on increases in productivity without taking into consideration ecological or cultural aspects easily leads to a loss in biodiversity, erosion and/or the destruction of the landscape. Land consolidation should therefore be included within broader rural development programmes including regional planning, village renewal and provision of rural infrastructure.

Land consolidation is a proven instrument for agricultural and rural development in western European countries. The new European Union policy for rural development (Agenda 2000) recognizes prominently land consolidation (re-parcelling), with village renewal, as a key component of EU instruments such as SAPARD, LEADER+. All these countries have institutions, legislation in place.

Guiding Principles for Land Consolidation

Each country in transition must identify its own solution for land fragmentation, taking advantage of lessons learned in western European countries as well as other CEE countries. While each country must find its own way, there are some common guiding principles.

The application of land consolidation should be seen in the framework of an overall agricultural and rural development policy, and as an essential tool within a range of instruments to achieve sustainable rural development.

There needs to be good governance and the development of required institutions. Civil society needs scope for participation and assumption of responsibility. Policy formulation as well as

legislative and implementing procedures must ensure the effective and equitable participation of all stakeholders and beneficiaries. Government agencies should accept citizens as partners. Land consolidation has to be participatory, democratic and community driven, which requires the creation of an enabling environment to allow all stakeholders to participate actively, and to assume responsibility. The focus is on rural livelihood rather than on primary production of food staples. The community defines new usage of its resources and re-organises its parcels accordingly. Existing informal land consolidation practices should be integrated.

The level and standards of technologies and procedures should be adapted to the financial situation, institutional capacity etc. and allow a reasonable balance between costs and benefits. Methodologies should introduce savings in costs and time by using simple and advanced tools and methods (GIS, RS, Spatial Data Infrastructure, etc) as appropriate.

Land consolidation requires a comprehensive, multi-disciplinary, cross-sector approach, integrating elements of rural-regional development including rural-urban links. It has to consider geographical and cultural differences and tailor-made practices should be implemented. Local area development plans and land use plans should form a basis of land consolidation.

There should be development of required skills and expertise in countries.

Pre-conditions should be identified and satisfied. These include a functioning land registration system, the necessary legal basis, and operational land administration structures. It also should be taken into consideration that there is an interdependency of land consolidation and land markets.

Countries still in the process of land privatisation should ensure that future privatisation projects are designed so they do not cause problems of land fragmentation.

It is recommended that:

- CEE and CIS countries should include land consolidation as an essential instrument for rural development within rural and agricultural sector development programmes including the allocation of resources.
- CEE and CIS countries, with the assistance of the development community, should create an enabling environment to strengthen their capacity to design and implement land consolidation projects.
- Further research should be carried out in areas where the implications and repercussions of land fragmentation has not yet been assessed (e.g., in forest areas, water systems, bio-diversity) and should include a comprehensive analysis of costs and benefits (financial, social, technical).

3. Munich Statement

- The existing cooperation between CEE and CIS countries, national and international development agencies, professional associations, NGOs, private sector, and universities be broadened and strengthened.
- Relevant information on land consolidation from individual countries should be made more easily available to others.
- Land consolidation guidelines be prepared.
- CEE and CIS countries should implement pilot projects.
- Based on the experiences of pilot projects and other lessons learned, CEE and CIS countries should develop and implement appropriate legislation, institutions and technical procedures for undertaking land consolidation.
- Land consolidation should be an essential part of on-going programmes, including pre-accession programmes for EU candidate countries such as SAPARD.
- Bilateral and multilateral donor agencies should give due consideration to land consolidation in their financial and technical cooperation projects for CEE and CIS countries.

We, the participants of the Munich Symposium, call upon the European Union, FAO, GTZ, the World Bank, and other international organizations, as well as the countries in the CEE/CIS region, to take due notice of the above recommendations, and implement them accordingly in their programmes and activities.

Munich, February 28th 2002

Opening Speech

Univ.Prof. Dr.-Ing. Holger Magel
Chair of Land Tenure and Land Development, TU Munich,
FIG-Vice President

Ladies and gentlemen,

distinguished delegates from more than 20 countries,
honourable representatives of FAO, the European Parliament,
the Federal Ministry for Economic Co-operation and Development, the GTZ and TUM,

it's a great honour for me to welcome you to Munich, at our university to this important international Symposium on Land Fragmentation and Land Consolidation in CEEC: A Gate towards sustainable rural development in the new millennium.

First of all I would like to thank FAO and GTZ that they have asked my chair to organise this conference and that they — once again — have trusted in me and my team; many thanks to the German Bund-Länder-Arge Landentwicklung, especially to the Bavarian administration for rural development for its kind co-operation and helpful contribution and hospitality on Wednesday by organising the field trip to Lower Bavaria. I'm sure that Minister Huber will explain the importance of rural development in Bavaria and the special relationship and fields of co-operation with many CEEC. Many thanks to FIG as co-organiser – as some of you probably know FIG is very interested in supporting the communication between the member associations. The new head of FAO Land Tenure Service Paul Munro Faure has been the chair of FIG Comm. 7 'Cadastre and Land Management for the last four years. The incoming German FIG Council will continue this successful co-operation with UN- and national Institutions. This morning, I have got the draft for the Mutual understanding between FAO and FIG.

Ladies and gentlemen,

two years after the world congress rural 21 in Potsdam in June 2000, arranged by the German Federal Government and with the outstanding keynote speaker FAO Director General Jacques Diouf, once again there is an important international symposium in Germany on the future of rural areas. I would like to remind you of the Potsdam Declaration rural 21 of 7 June 2000, which strongly underlined the need of secure tenure, access to land and resources, functioning land markets, sustainable reforming and reorganisation of property relations and of comprehensive rural development strategies. It was emphasised: Modern Land Management requires legal and planning certainty concerning the property and use of land.

This will be the challenge to CEEC and CIS-Countries and to this conference: to do the right things right in the right sequence, but at any time embedded in an overall sustainable strategy. This needs the right paradigm and is not simple to do. As you know, there is partly a huge difference between the agrarian rates in West and East, and I can imagine that in some countries it isn't so clear to decide for integrated concepts instead of sectoral, purely agrarian solutions!

In Western Europe it took a long time and it was a hard way towards the current integrated strategies and programmes. Fortunately, the European Council Regulation No. 1257/1999 on support for rural development underlines the multidisciplinary approach to a complex rural development policy including for example measures like reparation, setting up of farming relief and farm management services, basic services for the rural economy and population, renovation and development of villages and protection and conservation of the rural heritage etc.

Ladies and Gentlemen, this development was indispensably supported by scientific education and by research work for example in the field of efficiency of Land Consolidation, impacts of rural development on rural communities, implementation of ecological and esthetical aspects in land development measures etc. We are happy to have an own chair for land readjustment and land development as one of the basic chairs of the so called "Munich Geodesy and Geo-information".

On behalf of FAO and GTZ we have invited experts from the whole continent to discuss and exchange theoretical and practical approaches and experiences and to work out new ideas on improvements of existing procedures etc. As experts we ourselves are responsible for the results. Many thanks to all speakers and moderators for their contributions. As mostly we are no native speakers, I would like to ask you all as I do it when being chairing within FIG: please speak clearly, slowly and loudly.

I am confident that the results of this symposium can be an important contribution to the intended new FAO-guidelines on Land Consolidation and even to the World Bank Conference on Land Issues in Budapest, April 2002.

Please feel well in the next days at our University and in Munich. I know it's a strong programme and there is only little time for social activities. But we trust in your interest and discipline to join the whole programme. If you have wishes or problems please don't hesitate to contact the manager general of this Symposium Mrs. Babette Wehrmann. She and her international team already did a great work. Many thanks in advance!

Now I would like to ask our TU Vice-president Dr. Hannemor Keidel to deliver her welcome address.

Welcome Address

Dr. Hannemor Keidel
Vice-President, TU Munich

Ladies and Gentlemen,

I am delighted to welcome you at our University. It is a pleasure for us to host this international conference on “Land fragmentation and land consolidation in Central and Eastern European Countries”, a conference that may become a gate towards sustainable rural development in the new millennium.

Much too fast, we have already forgotten the many difficulties we encountered in Eastern Germany after the reunification of the two German countries. As in other countries in transition, questions of land ownership had to be clarified, land had to be redistributed, plots registered, the agrarian structure had to be reorganised etc.

Some of these challenges have been met, others we still face. The Eastern German Federal States were in the preferable position to receive technical support and financial aid from the reunified Germany as well as from the EU. Universities, too, contributed to the rapid changes in the East, offering know-how and building co-operations and partnerships. Despite a lot of common efforts, the results are far from attaining the objectives our former chancellor Kohl put into the phrasing of the blooming landscapes in the new Federal States. Spring is in the air, but the blossoms can only be seen in some warmer regions – so to speak. Nevertheless, compared to other countries in transition, the achievements in Germany are above average. The situation in the former GDR cannot be compared in all parts with other Central European countries, as they differ from each other in many aspects.

But it will be definitely of some use to exchange experiences and to offer Central and Eastern European Countries similar support in knowledge transfer, but also material support as the new Federal States in Germany received and still receive.

I hope that this conference will contribute to the emergence of new partnerships allowing all parties to benefit from the experiences of the others.

I would like to thank GTZ and FAO that they have chosen us as a partner for the organisation of this conference, giving us the opportunity to support this vivid exchange between academics as well as practionners.

TUM already has a long tradition of international partnerships all over the world, covering among a great variety of areas also the field of land tenure.

Last year, with the introduction of the Master's Program on Land Management and Land Tenure, this internationality reached a new dimension. For the first time a Master's Program was started, addressing explicitly land issues in countries in transition as well as in developing countries. The participants of this program come from Eastern Europe, the Middle East, Asia and Africa. This is one more example of a successful co-operation between GTZ and TU München, the Chair of Land Tenure and Land Development being in charge of the program. As you can see: Our university develops an extensive interest in this subject.

I wish you a successful conference with good discussions and useful results and a pleasant stay at our University.

Welcome Address

Dr. Christoph Kohlmeyer
Federal Ministry for Economic Cooperation and Development

Mr. Chairman,
Ladies and Gentlemen,

On behalf of the Ministry for Economic Cooperation and Development (BMZ) I welcome you to this conference on Land Fragmentation and Land Consolidation in Central and Eastern European Countries.

At the same occasion, I would like to congratulate the organisers of this conference for their initiative and the efforts they have undertaken in order to create this forum. This platform will provide the opportunity to exchange experiences, joint learning, and the conception of new ideas. Your meeting shall also contribute to strengthen and expand existing networks among experts themselves and their clients, who are political decision makers and those women and men who are directly concerned by various aspects of land fragmentation and land consolidation.

Land issues are generally very complex. They carry a high degree of conflict potential. They are politically very sensitive. Who deals with land deals with probably the most important resource for rural livelihood. Processes of land consolidation do therefore play an important role in this context. Yet, they are certainly not the only remedy for all problems of social and economic development and environmental sustainability in rural areas. However, the implementation of land consolidation policies has the potential to stimulate and re-enforce other processes of change in the context of rural development. But, given the huge amount of financial and human resources required for a technically perfect implementation, one should always be aware of adequate alternatives and also consider cost-benefit relations with regard to overall development objectives.

Reading through the case studies which will be presented at this forum, this becomes obvious: Land consolidation policies which take into consideration the interests of all segments of a society – and beyond that, the interests of future generations – demand a tremendous amount of inputs, a large scope of skills, and a high degree of responsibility.

The degree to which our decisions of today may have an impact on development opportunities of future generations came to my mind, when I looked into the history of my own family and of the region, where this family comes from: The fact that I speak to you today on behalf of my ministry, can be directly linked to the land consolidation strategy of my forefathers. They had developed a custom, that only the oldest son could inherit the family farm. Instead of dividing the land among all heirs, the other sons – and sometimes daughters – received an education and some starting capital for their own business. In this way they established themselves as butchers, bakers, or teachers and so forth. Their children went also into new professional fields. In this way, our grandfathers had organised a significant transfer of human and capital resources into other sectors, which was at the basis of our economic development of today.

In summary: Any change, any intervention must be well considered and based on a large consensus in society. A maximum of people's participation, legal security, justice, and transparency are minimum requirements.

Ladies and Gentlemen,

we are all aware, that amongst the large scope of first degree priorities, especially in countries which undergo a complex process of transformation, countries from Central and Eastern Europe are presently faced with a serious problem of insufficient resources. That is the reason, why the donor community has committed itself not only to share experiences with these countries, but also to assist financially and with advisory services. This is at the same time a challenge to all donor organisations. We know that we also have to learn how to improve the co-ordination of our assistance, how to better understand the real needs of local people concerned, and how to adjust our contributions to their needs. This conference aims at contributing to this learning process. I therefore appreciate that the conclusions of your meeting are planned to flow into the Regional Workshop on Land Rights, Institutions, and Policies in Eastern Europe in Budapest in April of this year.

Ladies and Gentlemen,

I wish you success for this symposium, fruitful discussions, and many applicable results. I am convinced that by Wednesday evening, we have learned a little more about what Land Consolidation can do, what it cannot do, how we can do it, and under which conditions we can do it better.

Thank you

Welcome-Address

Erwin Huber

State Minister

Head of the Bavarian State Chancellery

I should like to extend a very warm welcome to all those present from Western and Eastern Europe at this international symposium of the "International Federation of Surveyors" (FIG Fédération Internationale des Géomètres). The Munich Technical University once again proves to be a university of international fame and a European and global platform for sharing ideas and scientific know-how.

May I take this opportunity to thank the Vice President of the FIG, Professor Dr. Magel, for organising this symposium. The purpose of this meeting is to develop basic concepts which, on the one hand, are to be presented to the FAO for drawing up "global guidelines for land consolidation practice" and, on the other hand, are to be passed on to the World Bank.

Bavaria and Munich are indeed the right place when it comes to **relations with our neighbouring countries in Eastern Europe**. Ever since major political changes took place in Europe in 1989/90 we have maintained intensive relations with just about all of these countries both at an economic and at a cultural level. For a whole decade now we have been making our knowledge and know-how available to our neighbouring countries. It is our wish to accompany and encourage them on their path to a market economy and into the European Union. I therefore wish to extend a particularly warm welcome to those participants from the **14 Central and Eastern European states**.

This symposium will be dealing with the **sustainable development of rural areas**. To provide the best possible conditions for such a development, the political authorities require extensive data to which they can refer. Today, official basic **geological data** are an economic asset and are essential for ensuring a sustainable future. It is therefore paramount for every modern state to have a **well-organised surveying department**.

And there is also a second aspect which is of utmost importance – the **legal certainty of property in land**. This is essential for long-term plans and investments.

After the time of fundamental political change and the transformation process, sustainable development has become a major issue in Eastern Europe. Bavaria, too, has actively and intensively pursued this issue over the past decade and continues to do so today. We have a long, yet successful path behind us. And in Bavaria today, our guiding motto is: **The rural area forms the shape of the future**.

Which decisive developments have led to this conclusion? First of all it was the definite decision that the rural area is an **active area in its own right** and with its own potential. It is not just an escape area, resting or recreation area for the urban population, not merely a rear or standby area. For us in Bavaria it was never solely an area for agricultural production. The rural area was and still is considered **part of our culture**, it was and still is a cultural landscape, it was and still is the **backbone of Bavaria, which is also the area where the majority of the Bavarian population live and work**.

It was not always easy enforcing this concept and the appreciation of the rural area as such. In the course of industrialisation and the economic miracle there was a massive move of the population into the big cities. The rural area was at risk of being left out and there was a threat that its population would age drastically.

The Bavarian State Government has always actively opposed this trend. We introduced programmes to counteract this negative trend and to actually turn it around. Let me briefly outline the course of development here in Bavaria.

A key factor in the sustainable development of the rural area was the **massive development and expansion of the education system**. We selectively located schools leading up to university entrance, universities and technical colleges in rural areas, to put a stop to young people moving away. Today, no young person living in peripheral areas has to move out of his or her home area to get an education. On the contrary: By expanding the higher education system, we have brought people from all over Germany to Bavaria, where they are thoroughly enjoying themselves.

More recently, we have **relocated government authorities** from Munich, Nuremberg or Augsburg to rural areas and this has generated jobs at highly qualified and senior levels. Our motto was to **relieve highly urbanised regions and strengthen rural areas**.

After the war, the iron curtain cut off many transport routes from Bavaria to Thuringia, Saxony and Bohemia. **Improvement in the transport infrastructure** was absolutely essential for the development of rural areas. Extensive upgrading work at all levels of the Bavarian road network, from motorways down to federal highways and local roads has been a tremendous boost to the once structurally weak rural areas which are now linked to the highly urbanised regions.

Bavaria is a state with a large rural population. To strengthen this area it is necessary to set up business clusters throughout the state, which are interlinked by efficient transport routes. It can be generally said that without the fast expansion of the transport infrastructure in the rural areas, Bavaria could not have developed so rapidly from an agricultural state to the High-Tech state it is today.

Since the fall of the iron curtain, Bavaria has become a **hub for trans-European transport flows**. With the eastward enlargement of the EU, these flows will increase even further. Improvements to the transport infrastructure therefore remain a high-priority task.

To achieve sustainability in rural areas we also launched a well-considered **regional support programme**. This support is strictly limited to structurally weak rural areas. Highly urbanised areas are exempt from this scheme. With this regional programme we can support investments for creating new jobs up to a maximum of 28 %.

In recent years, new **cross-border schemes** with Austria and the Czech Republic have been introduced. These activities are also supported by EU funds, from the Community initiative, **Leader plus**, for example, or the **Interreg** programme. In a Europe which is moving together, we attach particular importance to cross-border schemes with the Czech Republic, for instance. Especially because here, areas which were separated for over forty years must join up again, both economically and regarding transport.

Another major objective was to preserve our **farming landscape throughout the state of Bavaria**, also in areas which are disadvantaged by nature. This is because it is only possible to preserve a 'cultural' landscape in those areas where farmers work to cultivate the land.

Measures for reaching this goal included extensive **land consolidation**, to make our farmers more competitive. Further assistance came from the **Bavarian cultural landscape programme**. It has since become one of the biggest agricultural-environmental programmes in Europe. With this programme we reward supplementary ecological achievements in agriculture on 60 % of the agricultural land which makes up approximately two million hectares.

We have additionally launched a **village renewal programme**. This is an extremely successful project. Within the framework of this programme we have provided approximately 800 million Euro as financial support for improving the working and living conditions of citizens in rural areas during the past 20 years. These funds have triggered further investments amounting to over 2 billion Euro. And this again has generated work for many small and medium-sized crafts and trades in the rural areas. Already over 1 400 village renewal schemes have been completed. There are approximately 1 800 villages actively participating in the programme at present. 2 700 more villages are on the waiting list. Approximately 800 000 citizens in Bavaria have benefited from this village renewal scheme to date.

The village renewal scheme is an **independent and long-term task of structural policy** in rural areas. The village renewal scheme also generates **democratic processes** and encourages the **identification of the people with their domestic environment**, which is very important.

One of the success strategies of the Bavarian village renewal program is to be seen in the **involvement of the citizens** in what's going on. **Citizen participation** in the development of ideas and plans and also in the implementation process is a key aspect of village renewal schemes. We have always attached great importance to citizen participation.

A sustainable development in rural areas, however, does not only involve measures of structural policy, but also the **information and advice given to the citizens**. And we are continuing to boost rural areas through

- increased use of renewable energy and renewable raw materials;
- reactivation of regional product cycles which cover shorter distances and establish closer ties between farmers and customers;
- decentralised public utilities, energy-conserving building techniques and promotion schemes for solar energy. Some villages are to be highly praised in this respect. In Lower Bavaria, which is where I come from, the village of Windberg, for example, has the second highest rate of solar energy of all Bavarian municipalities.
- Another major objective is the **reduction of land use**. Currently, 26 hectares of agricultural land is being reallocated for non-agricultural purposes every day. A sustainable development must be aimed towards selective use of existing land and buildings. We cannot reproduce land, as we well know. Greater importance will therefore be attached to **land and facility management**, particularly in a state like Bavaria, where there is a high rate of influx every year.

All these activities led to a stop in the depopulation of rural areas during the eighties. In my homeland of Lower Bavaria, for example, figures on the past twenty years show that there has been an increase in migration.

Currently there are **two major developments** which constitute both a challenge and an opportunity for rural areas. On the one hand we have globalisation and internationalisation. These, however, actually promote **regionalism** as a counter-reaction. In comparison to twenty years ago, people today are more aware of the meaning of terms such as homeland, having roots and ties and being settled in a familiar environment. Regionalism is therefore an opportunity for the rural area to establish a counter-pole to globalisation. And this is where the **principle of subsidiarity** is best implemented. I am therefore not at all worried about the outlook for the rural areas of Bavaria.

Globalisation is moving us more quickly into a **service and knowledge society**. It lives from human resources, from the close network between research, development and business. High-Tech clusters are forming, which attract many young people. This form of society is unfolding especially in **urban areas**. People working here tend to be centered around a town. Service providers, information and communications enterprises, High-Tech companies from abroad which set up locations in Bavaria, all aim for the cities and the surrounding areas.

On the other hand, modern technologies make it possible for people to work from home. It is now possible again, at least in some cases, to combine one's place of residence with the place where one works. The key word in this respect is tele-jobs.

Bavaria also supports the rural area with its **High-Tech-Offensive**, a campaign to encourage the recruitment of High-Tech businesses and to provide highly qualified jobs also in these areas. We are confident that in the so-called third phase of industrialisation, we can maintain the **rural area** as an **active space** with all its **qualities**.

This was just a brief look at the Bavarian way for establishing sustainable development in rural areas. And it has proved to be successful. Each country must, of course, make its own decision on the best course of action to take under the prevailing conditions. However, countries can learn from each other. We live in a world where learning from each other is a prime necessity. This is also one of the purposes of this congress.

An American future research scientist once said at the beginning of the eighties that *"at the beginning of the third millennium, living in the country will be our future way of life"*.

Against the background of the rapid growth in the world's population, although this no longer applies to Europe, the United Nations Secretary General Kofi Annan said some time ago that *"the twenty first century will see us entering the millennium of the cities"*.

These two statements couldn't be more different. Here in Europe it is not the sharp contrast between urban and rural areas we must be concerned about, but the synergies that can develop between them. Each area, both urban and rural, has its own individual quality, its own value. There is a constant exchange going on between urban and rural areas. A continuous giving and taking, where one side always complements the other. It is important to develop a strategy from which both will benefit. There should be no losers.

Both - urban and rural - areas require a stimulus every now and again. A momentum from inside to help unfold their own potential, strength and capabilities, and also incentives from outside, from the government and from the science sector to boost their development.

An intensive dialogue between politics and science is essential. Symposiums of this kind are ideal venues for such a dialogue. At these events politics is looking for suggestions on how to reassess concepts or develop completely new ideas.

I am delighted therefore that the world congress of the FIG is also to be held in Munich in 2006, which will be in Germany for the first time. In 2006 the **modern** Bavaria will be celebrating its 200th anniversary. And it was a good 200 years ago that Bavaria also set up its first surveying department. Munich is definitely the right venue for your World Congress in 2006.

May I thank Professor Magel once again for all his efforts in connection with this congress. I hope you will all enjoy these few days in Munich and that you will be able to benefit from the give and take process which acts as fuel to the field of science. Please take some new ideas back home with you and pass them on to the political circles of your own countries.

Land Fragmentation in CEEC: An Overview

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Key words:

Land fragmentation, land consolidation, improved land management, rural- regional development, EU accession.

Abstract

After 50 years of collectivisation, countries in Central and Eastern Europe CEE have made significant progress in the devolution of state-owned real estate to private urban and rural owners. This restitution of private property is considered a cornerstone for a future democratic, market economy and integration. Thus, priority was given to speed up the re-privatisation process, secure land tenure and property rights and develop land markets.

Notwithstanding the remarkable success of the land reform process, land fragmentation emerged as a side effect with detrimental implications for private and public investments, sustainable economic growth and social development. Less-favoured and least-developed regions with economies still depending on agriculture have been witnessing negative growth rates, soaring unemployment, mounting rural poverty and as a result, serious social and economic disintegration and wide-spread disappointment among local actors and stakeholders.

Land fragmentation affects mostly the agriculture sector. As a result of the distribution of co-operative and state farm-land according to equity principles without considering farm management aspects, the parcels which farmers have received are either too small and/or badly shaped, for instance in their length to width ratio. In some countries farm size averages 1 .5 to 2,5 has which makes it difficult to implement new production patterns, to utilise machinery and appropriate technologies. Re-allotment and amalgamation of plots (and parcels) is an important element to increase productivity and hence efficiency in the agriculture sector. Most private farmers are restricted to subsistence agriculture and can not participate in commercial production, which leads to migration and the abandonment of farmland, especially in areas distant to markets.

Additionally, fragmented parcels and properties, scattered over different political, juridical and administrative boundaries obstruct spatial/territorial planning especially in terms of land administration, land use planning and land management. Decision-makers from both the public and private sector are faced with limited possibilities and alternatives to allocate resources. This hampers the implementation of rural regional development policies, strategies, programs and projects aimed to improve rural livelihoods.

Collectivisation and large-scale agro-industrial crop and animal production have led to extensive clearance of the natural landscape and the degradation of natural resources. Ecological damages can not be solved at the individual level but need concerted action and joint efforts among and between public and private actors. To make water and forest conservation effective, entire watersheds, river basins or protected areas have to be delineated and demarcated. This requires consolidation and re-allotment of plots and parcels together with clear and transparent ownership rights and, hence, clear and transparent duties and responsibilities and will eventually lead to increased food security and poverty alleviation. However, land consolidation goes way beyond agriculture and focuses primarily on territorial (re)-organization, area/scenario planning, rural- regional development, village melioration etc. In order to be as comprehensive as possible and thus secure active participation of a wide range of stakeholders.

The proposed approach is holistic, the focus is on space rather than sectors including the rural-urban nexus. Since these aspects are crucial to achieve both, sustainable rural livelihoods and social stability they are ranking among the highest priorities for the governments in the region.

The presentation shows results and findings of a FAO commissioned comparative study on the impact of land fragmentation on rural society in four EU candidate countries (Bulgaria, Czech Republic, Hungary and Romania) Likewise it highlights necessary conditions and requisites to address the issue and describes strategies, goals and objectives of proposed land consolidation processes.

The studies underpin that land consolidation is not a single standing issue, goes beyond land administration systems, is not purely agriculture related and could well be an entrance to achieve both, food security and sustainable rural livelihoods hence it integrates measures regarding territorial organization, land management, farming systems/management, regional development, village melioration etc. in order to be as comprehensive as possible and therefore secure active participation of a wide range of stakeholders, especially on the local/regional level.

Land reform and land fragmentation and consequence for rural development in the CEE/CIS countries

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After a decade of farm privatisation and restructuring, the organisation and structure of farming in most of Central and East European (CEE) and the Commonwealth of Independent States (CIS) has changed dramatically. Today a large portion of farming is carried out on private land in individual farms, with distinct differences between the two regions CEE and CIS. There was a wide discussion, even in the CIS countries, that land reform should include farm privatisation and an increase in the area in individual land tenure, however guided by safe-guarding an equal access to land and keeping in mind the long history of collectivisation in the CIS countries. Incentive problems of collective and state farms were obvious and had to be addressed. In practice, the allocation of land shares, rather than physical plots, in many CIS countries has not been successful in establishing robust and secure tenure rights, however, in avoiding pre-mature land fragmentation as in the CEE.

Many CEEC countries have often focussed on the restitution of all pre-communist era rights. Privatisation of land has resulted in the formation of very small land parcels and unfavourable shapes. These very small parcels are very inefficient for agriculture and cannot be sold easily. Moreover, it is very difficult to get mortgage on the parcels. And even worse, land owners will not undertake consolidation processes as in Western Europe due to the cost and lack of financial support.

The establishment of an **efficient land administration** in the CEEC countries is considered as the key for consolidating fragmented farming systems and to assist in the emerging of a medium sized commercial farming sector with economically viable individual and efficient corporate farms. Pre- and post-processing agricultural industries are dependent on increased agricultural production with certified qualities. In many marginalized regions, agro-industries and profit making farms are the backbone of a regional economic development due to lack of alternatives in other industry and service sectors.

Regardless of many other shortcomings in establishing more efficient land administration systems (available budgets, restructuring of institutions due to decentralisation and transformation, role of Land Funds respect. over-supply of arable lands on markets, incoherent legislation, missing service orientation by institutions etc.) the embedding into **comprehensive rural development strategies** is missing in particular.

There seems to be a severe lack of **capacity** to develop appropriate rural strategies, coordinate and supervise isolated pilot efforts, respond to EU rural support programs and develop as a

basis an appropriate, future-oriented land administration system. The very multidisciplinary nature of land management (surveying, mapping, law, valuation, planning, administration, environmental management, international institutions, public policy, land use planning, institutional development etc.) is not reflected in respective curricula at high schools and universities in the region. Few universities have just started to offer comprehensive and holistic master studies for land management, just to name one the TU Munich as co-organiser of this conference.

Conclusions

The unfinished, often stagnant privatisation process in **CIS countries** and the introduced share system enables these countries presently and unexpectedly, by designing intelligent and evolutionary land administration systems, to avoid widely land fragmentation and uneconomic agrarian structures, allowing and supporting a **wide range of privatised, corporate farm models, individualised private farms and homestead farming**.

EU accession and Caucasian countries are under severe time and political pressure, both internally and externally, to establish functioning land administrations and to reverse negative rural developments such as ageing of population, out-migration, decrease in agricultural production/purchasing power and increasing unemployment. Immediate and concerted action is vital. Countries are confronted with numerous guidelines and administrative options, pilot approaches in cadastres, recommendations from international conferences and donor interests. **Land commissions and special, inter-line ministry task forces** might solve the necessity for co-ordination and policy coherence. Making the **EU Cohesion Fund** work with a variety of instruments seems to be the key for reversing the negative trends in rural areas.

Samples from Estonia demonstrate, how **self-help initiatives** from the farming population might be valuable for a minimum level of service provision in rural areas. They might even initiate more comprehensive **rural strategies** from governments and states to be formulated and put into action. **Marketing of regions** and **co-operation among regions** might be the prime strategy to establish functioning networks of expertise, expert personnel and even joint pooling of financial resources.

Countries from CEE and CIS, regardless of their numerous encountered problems and severe short-comings in land administration, should be **self-confident and outspoken** enough to select donors, reject actively donors being unwilling or unable to adjust to the country demands, insist on harmonised (cadastral) systems and technical solutions and insist on joint approaches and co-ordinated efforts. Diversity of donor offered solutions and systems imposes a large burden on the countries and their technical and planning capacities. In many instances, **donors contribute to the piling up of problems** and to a stagnating situation in land management.

GTZ' experiences in Land Consolidation in CEEC

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GTZ is supporting several projects in CEEC dealing with land management. Specific (preliminary) experiences in land consolidation have been gained in two municipalities in Romania where an integrated approach to land management is promoted. The project includes the following main components:

- Updated digital cadastral system supporting urban administration, planning and tax/fee levying
- Updated computer-based land registry including networking with cadastre and notaries
- Development of an appropriate valuation system for urban and rural areas
- Investigation of need and feasibility of land consolidation for rural areas as well as of land readjustment (land conversion for urban purposes).

Preliminary investigations show clearly the need for a more systematic approach of developing land for urban purposes (residential, commercial etc.) in order to ensure a more harmonised development and higher cost-efficiency with regard to infrastructure. *Land readjustment* seems to be an appropriate instrument although the lack of a legal frame and of means for pre-financing land acquisition and infrastructure appear to be major obstacles. Due to the high demand and the increase of land values through such a conversion full cost recovery can be expected.

The consolidation of fragmented rural areas seems to be much more complicated since in particular the economic impacts on macro and on micro level are difficult to assess realistically. Although costs for *land consolidation* are roughly estimated at around 1.300 €/ha being low compared to experiences in Portugal or Germany (2000 to 4000 €/ha) external funding is required and has to be justified. In this context principle questions arise like:

- What are the macro-economic prospects of rural/agricultural areas in Romania (or other countries in CEEC) taking into consideration EU-integration and what are the consequences for the formulation of land policies
- What are criteria and factors that justify land consolidation for specific areas; when is land consolidation sufficient or what other measures are to be taken to promote development
- Is intervention by state needed at all and to what extent should 'normal' processes like keeping small parcels for subsistence agriculture or land concentration through leasing and purchasing not be left on its own.

Only when such overriding questions have been answered challenging issues like the creation of an appropriate institutional, legal, financial or administrative framework for land consolidation shall be tackled.

Land Fragmentation and Land Consolidation in the Czech Republic

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Introduction

Czech agriculture still carries the stigma of the situation of the Czech countryside in the period from 1948 to 1990. Under the influence of the Soviet example, the Czech village underwent an exceptionally complex development, especially in the field of legal regulations. From 1949, up to, and including, 1990, the basis of agricultural enterprise was the socialist form of co-operative farming, or state enterprise on state agricultural property. Forty years of communism left people's access to property rights in the Czech Republic highly restricted. The repression of property rights severely impacted nearly 3 million Czech landowners, who could not farm on their own farm and fields. Property rights redistribution and restitution has been one of the main economic changes after velvet revolution in 1989. However, the renewal of land ownership rights and private farms after 40 years of communist regime has been no easy task.

Immediately after the enactment of the Land Act in 1991, the restitution of agricultural and forest property became a core activity of the district land offices. In the Czech Republic, nearly 232,000 restitution requests were submitted. By January 1, 2000, the district land offices had resolved, or nearly resolved, 96.3 percent of these cases, 85.1 percent of cases being completed. Overall, they have made decisions on 1,556,300 hectares of land, i.e. 1/5 of the land in the entire Czech Republic. From these decisions it follows that the Land Fund of the Czech Republic, who administrate State fund, has still to release 117,800 hectares of scarce substitute lots of land.

Land consolidation is viewed as the most rational instrument for arranging ownership relations to agricultural and forest land, not only with regard to prudent and rational management but also with respect to landscape requirements and needs.

Current situation in land fragmentation

In the CR natural physical fragmentation of the landscape is not considered to be a major constraint to production; however, problems exist regarding fragmentation of land ownership rights, the identification of parcels and environmental damage etc. From the point of view of legal ownership, the land of the CR is very fragmented. Between 1990 and 1996 approximately 3,798,000 owners were registered and the area was divided into 12,625,000 plots.

The Land Resource Institutions comprise 13,066 cadastral units, 6,288 communities and 76 districts, excluding the capital, Prague. Private individualised holdings predominate, accounting for over 3,400,000 Ha. Various private societies and associations also exist. The remainder of agricultural land is still owned by the State. Although legally fragmented in physical terms, individual privately owned land plots are still incorporated into the larger land structures that still represent the old structures of the production cooperatives of the communist era. This situation does not enable private landowners to use their land for farming efficiently. This is because the process of land consolidation is time consuming and is a physically and technically complicated, thus, it is a reason of many problems and difficulties. Many recipient farmers cannot use their own land due to technical impossibilities. They have to use other land, because complex land consolidation does not exist. It also inhibits land market development, investment in land and the completion of the restitution process.

A major prerequisite for the development of a land market is the determining of plot boundaries in the cadastral units by land consolidation, or by geodetic mapping. The need to complete land consolidation, as an instrument for settling ownership rights with respect to land parcels, is part of an on-going debate about land reform and is detailed in many policy documents related to the agricultural sector. According to the Czech Statistical Office "Agrocensus" of 1995, the average size of a farm in the CR is 131 hectares. Since the 1990's, the average area of State-owned farms has decreased from 6,259 hectares in 1983, to 660 hectares in 1995. Cooperatives and private associations maintain, a relatively large average area of 1,447 hectares. There are more farms of less than 10 hectares, because many farmers own an area of less than one hectare, and are engaged in subsistence production.

Land consolidation process

Since 1991, land consolidation has been carried out in the Czech Republic pursuant to Act No. 284/91 Coll. on land consolidation and land offices. Under the Act, land consolidation is pursued and implemented by a variety of the following activities: ownership rights to parcels are arranged, spatial and functional characteristics of land are adjusted, plots are merged or divided, access to plots is ensured and boundaries are straightened. An objective of land consolidation operations is to create conditions for rational land management, for the protection of soil quality and fertility improvement, and for the increased stability of the ecological landscape. Comprehensive land consolidation makes a significant contribution to the use and organisation of agricultural land. Land consolidation is a prerequisite for the completion of the restitution process and restoration of private land ownership, and is referred to in the Position Paper of the Czech Republic as the main instrument for ensuring real and identifiable ownership and for settling ownership rights with respect to land parcels.

As a consequence of collectivisation and large-scale land cultivation under communism, field roads, natural structures, such as, water lines and vegetation belts, and other landscape features suited to individual farming were destroyed. The ecological stability of the landscape was disturbed, biodiversity was reduced and the overall landscape was affected.

An integral part of the current land consolidation process is the implementation of the so-called 'common' facilities, pursued through the Territorial System of Ecological Stability (TSES). Act No. 114/1992 Coll. on nature and landscape conservation, defines TSES as "a mutually interlinked group of natural, as well as altered, but closely resembling natural, ecosystems, which maintain the natural balance". TSES contributes substantially to the fulfilment of the International Convention on Biological Diversity, to which the Czech Republic acceded in 1994.

Common facilities, as a part of land consolidation, also include anti-erosion measures, anti-flood measures, the building and renovation of field roads providing access to lands and other technical measures.

The implementation of the above measures creates the conditions for rational land management, conservation and increased ecological stability of the landscape.

Land consolidation activities are closely connected to the activities of surveying and cadastre. Besides the actual objective of comprehensive land consolidations, one of the results of the proposals for the new arrangements of proprietary ownership is a brand new digital cadastre map. The replacement of the existing, inaccurate and obsolete cadastre map is a very important goal. The present problems that surveying and cadastre must overcome are very well known. The improvement of the condition of the cadastre is one of the most challenging and pressing tasks. That is why the law, in its current form stipulates that the results of land consolidation (especially complex land consolidation) are to be used for the renewal of the cadastral operations. Since March 2000, the new law has been in effect, supporting the renewal of cadastral operations by way of land consolidation. This law is Government Decree No. 4/2000 Coll., on the Execution of the Act on Land Consolidation and Land Offices. It is basically a code of practice for land consolidation and gives guidelines for the exchange of plots of land. At the present time 126 complex land consolidations on 40,992 Ha are completed and another 636 are in various stages of implementation. Complex land consolidations are the most complicated activities of the District Land Office, and only in the last three years have they become more experienced in their implementation.

Types of land consolidation

Simple land consolidation

After 1989, it was considered necessary to transfer land quickly to those owners who requested it. This specifically required ensuring access to plots of land locked inside large blocks of land by providing access paths. In the early stages of reform it was not practically possible to pursue formal or "complex" procedures for land consolidation proper, in the sense that complementary provision of public facilities (e.g. roads, water management and anti-erosion, ecological and other measures) would take a long time.

Thus, it was necessary to implement a temporary solution, introducing widespread simple land consolidation (SLC), and the establishment of the temporary-use rights. In simple land consolidation an owner acquires the use-rights of another owner's accessible plot of land. The latter is typically not interested in managing the land, thus, is happy to exchange his land for another piece so that it is easier for the person acquiring the land to farm. For instance, the latter land may be more accessible or even contiguous to other land plots of the person who wants to exchange. The exchanged value of these plots of land should be equal. The State, through its land offices, plays the role of middleman, or clearing house, in an effort to speedily provide the use of land to owners in particular areas. SLC was implemented from 1991 with the purpose of making it possible for newly created private farmers to farm on partially consolidated plots of land. Simple land consolidation provides the settlement of user relations to land – not an arrangement of permanent ownership relations.

Unfortunately, SLC was carried out haphazardly in the first few cases after 1990. Sketches of allotment plans providing a basis for the handing over of the land to farmers were executed very simply and inaccurately. These plot boundaries were marked out in a permanent manner by erecting land markers, thus making it complicated to later correct any inaccurate measurements for legal purposes. An attempt to overcome inaccurate surveys of the plots of land and bring "order" to the land registry was supposed to be implemented at the expense of the State. However, these inaccuracies have been further exacerbated by the fact that historical and political developments after 1948 created disinterest in the accurate keeping of land books and, consequently, lists of allotted plots of land were not completed. In most cases only inaccurate, graphical allotment plans, without the proper marking out of allotted land and the delineation of new boundaries were drawn up. Many allotment plans were seriously damaged, or even destroyed, during the past decades. This made it very difficult to verify ownership documents with cadastre maps and with what was going on in reality.

Up to the present, 20000 such simple land consolidations have been instigated. The temporary use-rights allowed the land offices some time to process the initial rush of applications (Act No. 284/1991 Coll. And Order of the Ministry of Agriculture No. 427/1991 Coll.) without severely constraining the agricultural sector. By the end of 1999, as many as 19,227 SLC cases were resolved in the CR. Overall, 309,326 Hectares of agricultural land (i.e. 7.2 percent of the Agricultural Land Fund) was taken up using this procedure. The remaining part of the Agricultural Land Fund is predominantly in the possession of the agricultural co-operatives, limited liability companies and joint-stock companies, having direct contracts with landowners for a limited period of time, usually up to 7 years. On lots of land leased this way, land consolidation is not being implemented, i.e. no changes in size and shape of lots are contemplated. In 2000, more than 800 simple land consolidations were supposed to commence, but this is significantly lower than in 1994 or 1995, when 5,000 were started.

Besides "non-formal" land consolidation implemented in this manner, there are an unspecified number of cases where owners' plots of land are leased out or let for use without formal agreement.

Complex land consolidation

The other solution to land consolidation is termed as "complex" or "comprehensive" land consolidation and this represents a longer-term solution to agrarian structure. Complex land consolidations aim to preserve and enforce the stability of farmland, in parallel with the preservation of habitation and harmony with agricultural production in the countryside. It aims to enhance the non-productive functions of agriculture and to enhance the activities in the design of countryside in general.

Contracts for the development of complex land consolidation are awarded by District Land Offices in competitive bidding under Act No. 199/1994 Coll., on Competitive Bidding Awards, as later amended. Under Act No. 284/1991 Coll., on Land Consolidation and Land Offices, it is the duty of District Land Offices, as land consolidation funds providers, to execute the plan of cadastral area choice. The choice of cadastral areas, where land consolidation is to be implemented needs to be discussed with the cadastral office a year in advance.

The criteria for the choice of cadastral areas where land consolidation is planned:

- Following requests from owners of more than one half of the cadastral area.
- The activity and diversity of farmers in the area.
- An emergency requirement for environmental protection.
- Obvious discrepancy between data of the real estate cadastre and the actual situation.

Complex land consolidations are usually implemented in those municipalities where land-use plans, zoning plans (of the built-up parts of a municipality) and rural renewal programmes (Program for Countryside Renovation – Ministry of Rural Development and other various programs of Ministry of Agriculture) are already prepared, or in an advanced stage of preparation. Both land-use plans and rural renewal programmes are usually developed in those municipalities where a significant increase in economic activity is expected. Requests for the drawing of subsidiary funds from the Ministry for Local Development and the Ministry of Agriculture usually coincide with this activity.

Institutional securing of land consolidation

The Central Land Management Office of the Ministry of Agriculture safeguards the methodology and financial backing for land consolidation in the Czech Republic. The private sector has no share in land consolidation financing. The Czech Land Survey and Cadastral Authority in Prague methodically and financially oversee reference documents detailing land

titles, in both written and map form. For this purpose a special Land Survey Office was established to centrally administer all cadastral data. In addition, the Land Survey and Cadastral Inspections were established, with powers of inspection over land survey works.

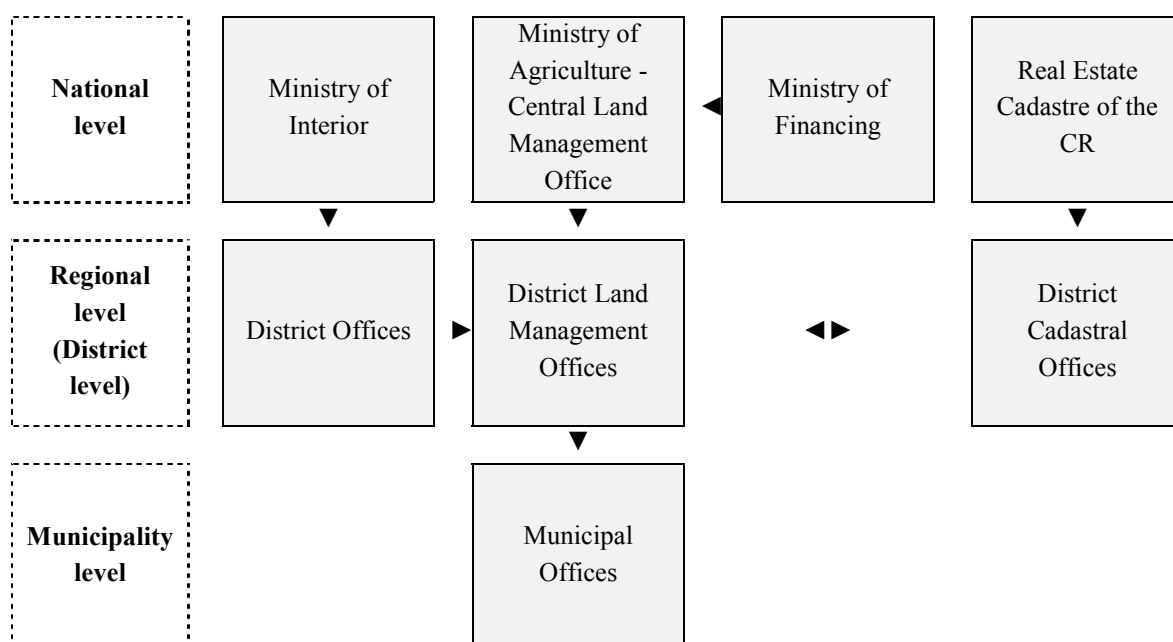
The Ministry of the Interior established District Offices operate at a regional level. The Central Land Office supervises the land office departments. In each region, or district, there is a Land Register Office, which, according to the size of the district, can contain several branches and manages the written and graphic database of land owners in a particular cadastral areas and the municipalities within each district.

At a local level there are Municipal Offices which manage one or more cadastral areas. With land consolidation, especially complex land consolidation, municipal offices make decisions in their sphere of authority on:

- Changes of cadastral boundaries.
- Safeguarding the public interest on the structure of the road network, water-management facilities, anti erosion measures and ecological measures such as bio-corridors and bio-centres, in a given location.
- Town and country planning and its connection to land consolidation outside built-up areas of the municipality.

The District Land Office ensures the preparation of land consolidation proposals with privat designers. The project designers, or executors of a land consolidation proposal, can only be legal entities or physical persons, who are certified for land consolidation design. The conditions for granting such certificates are stipulated by the Ministry of Agriculture of the Czech Republic in strict legal regulations.

Organizational model of land consolidation



In 76 districts of CR 1,350 civil servants work in land offices dealing with the agenda of the restitution of property and land to original owners and land consolidation. There are 35 employees in the Central Land Management Office of the Ministry of Agriculture. These civil servants run the District Land Offices, secure the financing of land consolidations and geodesic work in progress, connected to restitution. They also design the methodology, decrees and source materials for legislation. Private companies design land consolidation projects. By April 2000, more than 450 authorisations for the design of land consolidation were issued. It can be assumed that 1,200 people work on land consolidation design in the CR. There are also around 1,000 people who carry out geodesy projects connected to restitution and land consolidation. Overall in the CR, there are approximately 3,600 people working in the field of land consolidations.

Land consolidation procedures

Act No. 284/1991, Coll., and Government Order No. 4/2000 Coll. determine the organization and regulate the speed of implementation of land consolidation. The procedure is as follows:

1. The District Land Office requests competitive bids for the selection of the most suitable land consolidation project designer. The actual awarding of the contract is usually takes from two to six months, assuming that the statutory time limits under Act No. 199/95 Coll., on government contracts, are adhered to.



2. The Land Office Department of the District Authority summons an initial meeting of all the landowners which takes place 14 days after the sending out of invitations.



3. Some of the participating land owners depending on the number involved in the initial negotiations are selected to form a board of deputies.



4. In cooperation with the land office the designer delineates a perimeter of the area to be consolidated, including boundary changes of lots of land and cadastre. Both landowners and municipal representatives of all concerned municipalities should approve the changes in the cadastre boundaries. This can take more then 6 months.



5. The project designer carries out an area survey and land quality evaluation. Changes in the land quality of lots of land must be clarified with the Research Institute of Amelioration and Land Protection. This can take up to 12 months. The determinations of the perimeters of the consolidated area, its marking out and collection of basic maps are done by the project designer, in cooperation with the Commission of Representatives of Land Office and Cadastre. Depending on the size of the consolidated area this takes around 6 to 8 months. The marking out of the area of land for consolidation usually takes place outside the growing season.



6. The project designer, in cooperation with each participant, determines the initial claims of landowners. It is necessary to determine the following facts:

- The area of the claim – i.e. the size and dimensions of the lot of land.
- The quality of the claim - i.e. the price of the lot of land.

Original claims determined in this manner, are processed into comprehensive summary tables called "claims balances". The approval of the claims of landowners who participate in land consolidation can take from 2 to 8 months, dependent on the quality of the base documents and the extent of the landowners' cooperation.



7. The project designer charts a summary map of "claims", i.e. plots of land before the land consolidation adjustments. The activities work usually take from 1 to 2 years. Before the exchange of plots of land proper, the project designer works out a plan for the multifunctional framework of complex land consolidation, in which he takes into account the broader social interests of all the parties to the land consolidation project.

The multifunctional frame of land consolidation contains the following requirements:

- The delimitation of the transportation system, (e.g.. the network of field roads).
- The delimitation of the systems of ecological stability (e.g. bio-corridors, bio-centres).
- The delimitation of anti-erosion measures (e.g. the reconstruction of drainage facilities and the revitalisation of water courses and water reservoirs).
- The delimitation of protected strips of land (buffer zones) and the resolution of ownership relations.



8. The board of deputies, the municipal board and other relevant organisations and institutions then approves the compiled plan of the multifunctional framework. The necessary work for the drawing up and approving of plans for the multi-functional framework usually takes from 6 to 8 months.

The exchange of plots of land requires the elaboration of exchange plans in maps of scale 1 : 5,000 or 1 : 2,880. There are usually 2 to 4 alternatives to be considered by the board of deputies. If the board of deputies approves a particular alternative, it is then discussed with individual landowners.



9. The proposed "new-for-old" compensation plan has to be discussed with the owners individually. The basis for this is a comparison of the "input", the area and value of old land parcels in situation, and the intended "output" (register and map). The proposed new-for-old compensation plan includes total land needed. Not only for land ownership but also for other common use. It means waterlines, roads, landscape elements and so the total land needed for common facilities, waterlines, roads, landscape elements, etc. also in situation, area and value (register and map).



10. After the consideration and approval of plan of newly proposed plots of land, the preparation of written and graphical documentation is completed. Based on this documentation, the land office makes a decision regarding the changes in lots of land ownership. The owners of more than two thirds of the overall area of land in the project must approve this decision.

If any of the participants expresses disagreement, after the decision of the land office, the Central Land Management Office of the Ministry of Agriculture reviews the project of land consolidation proposals. In cases where a landowner disagrees with their subsequent decision The Court decides the proposal. The overall time for the resolution of complex land consolidation is at least 2 years, but can take as long as 6 years. Assuming smooth implementation at all stages, exchange of lots of land and their entry in the land register takes about three years.

An estimation of required resources

From their establishment in 1996, up until 1999, the District Land Offices have spent Kc 5.6 billion in the process of the implementation of the Act on Land Consolidation and Land Offices. The financial situation is not healthy, since the initial needs have not been fully provided. For the years 1998 and 1999, the State budget allocated the amount of Kc 847 million annually to the District Land Office for complex land consolidation, but the actual requirement is around Kc 2 billion per year.

It means that the land offices, in an effort to maintain the progress in completing land restitution and the most crucial geodetic activities, must limit their activities to only the renewal of field roads, a necessary condition for making owners' plots of land accessible. In the entire CR 450 km of field roads were built or renewed in recent years. Water management and anti-erosion measures were carried out in a number of cases as an exception rather than a rule.

There are about 30 cadastral areas that can be considered as models, which means they have had common facilities put into place. There is a need to implement as many land consolidation proposals so far approved as possible. In many cases there are some obstacles in the commencement of land consolidation for the people in the municipalities in question, who, in accordance with the law, expected tangible improvements in the rural landscape. Merely the minor problem of completing consolidation by specifying and reconstructing allotments requires an expenditure of Kc 2.6 billion. The major part of the estimated expenditure is primarily on the activities and analysis of the results of the surveys in hand, the minor part is the project design work.

To solve this problem by 2006, as demanded by Government Decree, Kc 400 million would have to be spent in 2000 alone. But despite all this, the State budget allocated for the overall activities (all activities of District Land Office, not only for land consolidation) of the land offices is only Kc 652.2 mil. This amount is 23 percent lower than in 1999. There is much talk of the problem of ownership being a key to solving the agrarian structure problem, but the State does not pay sufficient attention to it. It is not allocating the needed resources, which would make it possible to resolve at least the most problematic areas of ownership. Without improving this situation, the fulfilment of the tasks in response to effective rules, regulations, or Government Decrees cannot be expected.

Conclusion

Some general characteristics of the land consolidation are as follows:

Strengths

- The interest of landowners to participate in the land consolidation programme.
- The extensive experience of the District Land Offices with the land consolidation programme.
- The experience of the District Land Offices with the implementation of the TSES elements.

Weaknesses

- The widespread use of short-term tenancies.
- The incomplete transformation of land ownership rights.

- The lacks of defined land ownership in regions where consolidation and land transfer are incomplete (e.g. in border regions).
- A lack of physical access to some land parcels.
- The acquisition of agricultural land for infrastructure and TSES elements.

Land consolidation has created opportunities for:

- The participation of local authorities in the implementation of the programme.
- The participation of landowners in the maintenance of the local infrastructure and TSES elements.

While at the same time producing threats such as:

- The non-adherence to the agreed land consolidation programme.
- A lack of maintenance of the local infrastructure and TSES elements.

The latest amendment to the Act of Land Consolidation and Land Offices makes possible more exact procedures in cases of allotment areas, i.e. the reconstruction or specification of an allotment. However it provides a solution only to problems connected with unfinished consolidation. There still remain some questions, which can only be competently assessed, in a fixed legal environment by the courts. In the course of land consolidation proceedings, District Land Offices can stipulate only in those cases in which it is necessary to take legal action over ownership disputes. Without this intervention the ownership of an unclaimed plot of land would never be resolved.

In the process of land consolidation a substantial part of the cadastral area can be renewed by new mapping or land survey operations (especially "extravilan" - village land that is located outside the legal urban perimeter of the village – usually agricultural land). The built-up parts of a cadastral area (especially "intravilan" – village land located within the legally defined urban area) remain in an original, un-renewed condition and this is undesirable. For these reasons, it would be possible to link the new mapping to the land consolidation procedures; so one entity could carry out the mapping of an entire cadastral area, i.e. both extravilan and intravilan. Such a firm would be subject to a selection procedure, as determined by provisions in the Act on Public Tenders.

By law, there is no legal obligation to start land consolidation at the behest of a particular applicant. This means, that initiating land consolidation in a particular cadastral area is at the discretion of a District Land Office. In the past, some District Land Offices came under pressure from landowners who requested land consolidation implementation, under the impression that it was obliged by law to resolve their ownership problems at once. A District Land Office is required to begin comprehensive land consolidations only at the request of the owners of more than half of the overall land area in a particular cadastral area. In an effort to

help owners, the District Land Offices were starting simple land consolidations and implementing temporary usage in a majority of cases, especially where the tentative owners were unable to reach a settlement with current users, or other owners. District Land Offices are using their powers under the law to issue decisions on temporary allocation of land into temporary usage in cases opposed by some owners not managing land themselves.

In some districts (even in some cadastral areas) there are frequently quite different conditions for implementing land consolidation, and that is why owners have different experiences of District Land Office policies. Also, land offices themselves have very different experiences of the implementation of the practice of temporary usage. At present, the growing body of experience shows that temporary usage can solve the most pressing problems, but there are more and more cases where temporary users are failing to manage the land in question.

Also some landowners, having thus far failed to manage their plots of land, have decided to try again rather than endure temporary users on their land. This creates the necessity to fully complete complex land consolidation in many cadastral areas.

On the other hand, there are places where land is managed without legal title, because the user does not deem it necessary to identify the location and make contracts with all the owners of used plots of land. It must be said, that for a sizeable group of owners this situation is convenient, and they are basically content not taking care of their land themselves. This situation is an aftermath-of-the-revolution state of affairs, a transitory period that must be replaced by complete transparency in ownership and users relations to land.

Summary

Land improvement and parcel restructuring are accepted as the two of the main challenges in agriculture and rural development in the Czech Republic (CR). The primary objectives of land consolidation in the CR are:

- To complete the transformation of ownership rights.
- To enable farming on people's own land.
- To organize land resources in the best possible way and to make them accessible.
- To facilitate investments in land with the aim of protecting the land while enhancing the landscape.
- To clarify the operational and clear identification of ownership titles required for development of a land market.
- To improve ecological stability.

Land consolidation (LC) objectives, and other related activities of land management (land bank, leasing, land use directives etc) are aimed at mobilising and developing land as a central factor in the development of the economy.

The main advantages in the course of designing and implementing land consolidation in CR are:

- The legislature concerning land consolidations is at a very good stage and is already harmonised with EU legislature.
- The Private sector is active and ready to do more, although consultancy work is necessary.
- Landowners are interested in direct and indirect use of their land and also in land values.
- There are marketing opportunities presented by the proximity of central Europe's large markets, but access to more information about them is necessary.
- Technical knowledge/expertise and personal skills are available.

Experience from Land consolidation and Land and Geographical Information Systems (GIS), pilot projects already exists. Land consolidation experiences are already widespread (mostly simple and fast, but with relatively modest reorganisation targets) and can easily be further developed. Also LIS / GIS experiences approved in pilot projects can be relatively easily extended to start creating the basis for a nation wide planning and multipurpose management.

- There already exists a well qualified human potential (survey and civil engineers, agricultural experts, environment specialists, machinery technicians and last, but not least, economists) that only need to be trained in the special 'know how' for target orientated new tasks.
- There is relatively good computer equipment, no older than 3 to 5 years.
- There is a relatively good institutional structure, from the Ministries to the Districts and Municipalities.

The main problems in designing and implementing land consolidations in the CR are:

- The great potential of thousands of square kilometres of state owned or state managed land is inhibited by possibly justified compensation claims and ancient owner rights, which have not yet been raised, but formally may still exist with original and later owners now settled on expropriated land.
- The purpose and results of the targets of land reorganisation are often so modest, that the administrative and survey costs are almost not justified (this could be soon be made more economically worthwhile by extending the results without considerably changing the expenses).
- The poor marketing structure, with problems that cannot be solved by a land market.
- The high fluctuation within leasing systems.
- The lack of software products for the creation of digital maps in cadastral offices and designers' offices.

- Ortho-photomaps are available, but often not consequently used in their extended variety of application. The special knowledge of foreign experts is needed in this area.
- The authenticity of property limits in map and book registration (land use) has been lost in around 2,200 cadastral areas. To reliably clear up these deficits for planning, reorganisation and land use in general is very time consuming and requires highly qualified and experienced staff.

The overall lack of financial means for implementing land consolidation at a rapid pace, which would harmonize with the needs of land consolidations in the CR with those of the countries of the EU is a limiting factor. It is assumed, that the shortfall of resources will be partly compensated from the resources of the SAPARD programme of international assistance for the candidate countries for EU admission. It is assumed that the EU contribution for this measure is 75 percent of public expenditure. This contribution is approximately 3.5 to 5 million Euros per year.

It will be necessary to ensure confidence in the cadastre and to correct the lack of clarity in ownership relations. The unfinished allotment process is very problematic. It creates great uncertainty over the owner or about the extent of ownership. A large percentage of owners is registered on the basis of dubious information. The consequences of the unfinished allotment process, which was executed in the post-war period, make it very difficult for the citizens of these regions. A very similar situation exists in the regions with an incomplete consolidation process, which was interrupted in the 1950's and has not been finished until the present day.

The consequences of the unfinished allotments and consolidations have a serious impact on the preparations of investment aims and on the development of cities and villages. It complicates regional planning and the construction process and could be an obstacle for the flow of foreign investment into the CR. It creates problems for the tax offices during tax collection from real estate and it also complicates the selling of State land.

Land Fragmentation and Land Consolidation in Hungary

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In Hungary the land ownership and the land use has changed dramatically over the last 12 years due to the large-scale land compensation and privatisation. This resulted social, economical and ecological consequences, which are hampered the viability and competitiveness of the family farming and has some negative effects especially in less favoured and environmentally sensitive or endangered areas.

About 80% of the 7,8 million hectares agricultural area is suitable for farming. By the execution of the Compensation Act and the further land privatisation of the former co-operatives' the land ownership structure has been totally modified. Over 5,1 million ha area suffered by fragmentation whereas 2,6 million parcels have been created, shared between estimated 1,8 million new owners.

As a result of the land privatisation, the previous farming-on-large-scale was replaced by the farming based on private ownership, characterised nowadays by inadequate property field size for sustainable and competitive family farming. Based on the 2000 Agricultural Census, almost 70% of the private farms operating on one hectare land properties as a maximum, while the average property size is between 1-10 ha. According to the Census 2000, there are 958 000 private farms and 8200 farming companies in Hungary. The sizes of the properties belonging to farming companies are between 500 and more than 10 000 ha.

To ensure the transparency and effectiveness of the land registration as needed by the market-oriented economy and the Acquis communautaire made it necessary to improve the public service provided by the Land Administration via its Land Office Network (LON). A series of relevant EU supported IT development projects (TAKAROS, TAKARNET, META) are shortly mentioned. The importance of the land-related information in the national spatial data infrastructure was realised and acknowledged on governmental level and discussed also by the first ever EU Cadastre Workshop held in Budapest last year.

The German-Hungarian TAMA project on the computer aided land consolidation (1993-1999) and TAMA 2 a pilot on the integration of land consolidation into rural development programme (1999-2000) is introduced. As by product, also the Bill on Land Consolidation has been drafted and relevant vocational training of the LON has been started partly in international co-operation (OLLO, LIME etc.).

An update is given on the very recent development in legislation around the land issue (amendments of the Land Act and the Act of Land delivering and Land Managing Committees, the new Act on National Land Fund, and the directives of the Land Tenure Policy). The institutional development is driven by the tasks as required by the EU accession, listed in the Hungarian NPAA Action Plan updated in January 2002.

Finally some new activities is shortly mentioned:

- Recent establishment of the National Land Fund institution
- Measures to eliminate of the properties having shared ownership
- Completion of the FAO supported „Forestry and Rural Development Plan of the Buják Region” project
- FAO TCP proposal on the use of land consolidation in frequently flooded areas
- Dutch-Hungarian project on the Practice of Integrated Rural Development having land related actions
- Land tenure policy implementation and SDI support in the further development of the Vásárhelyi Plan
- Lands and mapping contribution to the elaboration of the international Tisza Agreement

Launch of the project on „Property rights and land market development project for EU Candidate and Balkan Countries” supported by the World Bank

Land Fragmentation and Land Consolidation in Romania¹

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Abstract

In Romania as a result of Land Laws application, the ownership system has changed. Private property became prevailing with an average area of 2 ha. Furthermore, land property is extremely fragmented, into about 50 million parcels, and one third of agricultural land belong to people who do not live in the rural areas. The establishment of private ownership right upon the agricultural land represents a first step towards a new agrarian structure; however, in the absence of efficient measures that should have in view ways for the agricultural land consolidation, there would be late the working of the commercial farms. The objective of this paper is the analysis of land fragmentation coordinates and the identification of land consolidation rationality. One can conclude that in order to consolidate the agricultural land, there is an obvious and imperative need to conceive an well-articulated and coherent framework of support measures, understood and treated as a complex of economic, social, legal and technical measures, aiming at rural community development.

Key words: fragmentation, consolidation, Romania

Introduction

The transition from command to market economy has created and aggravated a series of systemic and structural disequilibria hindering the best use of production potential and farmers' competitiveness implicitly. A series of factors also contributed to the perpetuation of that situation, among which the most important are the following: persistence of a frail and unbalanced competitive environment; excessive land fragmentation, together with labor force surplus lacking possibilities of alternative jobs; identity crisis of rural players involved in farming in relation to market economy rules; shortage of operating capital and extremely low on-farm capitalization possibilities; maintaining of a traditional production structure, non-sufficiently correlated to the market needs, etc. All these contribute to the further enlargement of the existing gap between the Romanian farmers and the EU farmers, as well as between Romania and other Central and East-European countries.

¹ This paper is based by „Social and Economic Impact of Land Fragmentation in Rural Space: Romania' Case” Study. Team, comprises of the following specialists: Mr. Virgil Pamfil – Team Leader; Ms. Marioara Rusu - Rural Economist, Ms. Violeta Florian – Rural Sociologist, Mr. Mihail Popa – Land Use Planner and Mr. Popescu Marin - Legal Expert. The co-ordination of the project was carried out by FAO-SEUR, represented by Mr. Fritz Rembold – Land Tenure and Rural Development Officer and Mr. Marc Duponcel – Agriculture Policy Officer. Charged with the technical advice for the project was Mr. Karl Kollmer - Land Consolidation Expert, from GTZ.

In the wish to go beyond the general aspects of the agrarian reality offered by the statistical information, in this paper it used both available statistical data and data obtained from the field surveys conducted at the national (1996, 1998, 2001)² and local level³.

1. The Place of Agriculture in Romania's Economy

Agriculture represents one of the most important resources of Romanian economy. The agricultural land totals 14.7 million hectares, out of which 63.1% is arable land. More than 3.2 million inhabitants are working in this sector, i.e. 40% of total employed population.

The increase of agriculture share in labor force represents a contrary trend to that of the developed countries. Restructuring the industrial and constructions sectors, by which an important part of labor force was rationalized, being "constrained" to come back to the agriculture, mainly generated this increase.

Not even the relatively high share of agriculture in GDP (12.9%) is the expression of developed agriculture. On the contrary, the decreasing trend of agriculture in GDP that followed since 1994, together with the increasing trend of agriculture's share in total employed population reveal the continuous decline of labor productivity in agriculture, estimated at 32% of national labor productivity (Popescu M., 2001, p.19).

The low share of agriculture in capital investments (6.7%) and in the fixed assets (3.1%) reveals the precarious technical endowment and the extensive character of production.

As regards the competition for European Union integration, the increasingly pronounced agrarian character of national economy and the decreasing trend of farming activity represent a handicap that will be very difficult to surmount.

2. Land Reform: Predictable Consequences?

In agriculture private property has become predominant due to the application of Land Law no.18/1991⁴ to the detriment of public property: it represents 78% of agricultural area and 86% of arable area. By the further restitution of certain land according to the provisions of Law 1/2000⁵, which is in course, it is estimated that the share of land private property in agricultural will increase by other 10 percent.

² field surveys conducted in rural households in 1996 and 2001, financed by the World Bank and/or European Union. They were a similar sampling methodology and maintaining a common approach so they are comparable.

³ field survey conducted in 2000 in Balaciu commune, Ialomi'a county, within „Social and Economic Impact of Land Fragmentation in Rural Space: Rpmnia's Case”, FAO/GTZ Project.

⁴ known as Land Law, published in the "Official Gazette" no.37/1991 and republished in the "Official Gazette" no.1/1998.

⁵ known as Lupu's Law, published in "Official Gazette" no. 8/2000

The individual farms (households) represent the main results of land ownership right reconstitution and constitution on the basis of Land Law and the prevailing form of agricultural production organization. The average area operated by these households is extremely small, i.e. 2.3 ha. Their analysis by categories of size reveals that households up to 5 ha account for 88.5%, while those over 10 ha only 0.5%.

Between 1993-2000, their number and total operated agricultural land area increased, while the average area remained relatively constant. A twice as high share of households with areas less than 1 ha represents according with field surveys a characteristic phenomenon for the period 1996-2000. This seems to be a consequence of the fact that the heirs of the former owners registered in the ownership titles, in the case of reconstituted land, went out of joint-ownership status. In the investigated period, private agriculture, „ stake of political bets”, has still remained a subsistence agriculture, far from operating according to market rules. The lack of balance as regards labour, land and capital resources at household level determines an extremely low productivity. The technical and economic changes are still modest, mainly due to the very high share of agricultural labour, which makes production investments unnecessary. The sector of rural households was dominated by self-consumption, with weak connections to inputs and outputs market. The operation of land, credit, input and agricultural output markets has been and is still deficient, mainly due to the inadequate and changing legal and institutional framework and to the lack of adequate infrastructure.

Although the share of private sector in agriculture had a continuous and constant increasing trend, the radical change in the ownership structure did not have a favorable impact upon the level of agricultural production. The cultivated area had a significant decreasing trend. In 2000 the cultivated area was smaller by over 950 thou. ha (10% of total arable land) than in 1989. In the majority of the 90's, crop production in private sector was under the 1989 level, with larger or smaller variations. The main reasons of it are: a small average area of rural household; agricultural property fragmentation; unclear legal regime of agricultural land; insufficient investments in agriculture; absence of agricultural equipment and implements in most rural households; insufficient support to farmers by the state.

The share of livestock production in total agricultural production declined (from 45.6% in 1989 to 36.5% in 1999), which reveals efficiency diminution in this sector.

Land reform has seriously affected the use and integrity of irrigation and land melioration system. The utilization of land equipped with irrigation facilities has dramatically decreased after 1989. The modality of agricultural land privatization as well as the high degree of land fragmentation created important obstacles to the land irrigation. As a result, although Romania has about 3 million hectares agricultural land equipped with irrigation facilities, the area which is effectively irrigated declined from 82.4% in 1989 to 10-15% after 1991.

The mechanization of agricultural works also declined, small farmers coming back to draft animals and manual labor in many cases. Although it has experienced slight increase, the technical endowment degree of farming activities is still low, i.e. one physical tractor per 56 ha arable land. The structural deficit, generated by the insufficient equipment, is aggravated by its physical and moral wear and tear (50% of existing tractors have more than eight year of service life).

The amount of chemical fertilizers used in agriculture decreased more than 3 times between 1989-2000 (the application rate was about 23 kg of active substance per hectare). The amount of organic fertilizers applied also decreased more than 2.5 times. A drastic diminution was also found as regards the amount of pesticides (from 71.4 thou. tons in 1989 to 14.8 thou. tons in 1999) and certified seed used by farmers. The main cause of this situation was the increase of prices paid for those products in the context of farmers' scarce financial resources.

We can draw the conclusion that agricultural land privatization proved to be insufficient for the initiation of agricultural development. The cause is not privatization as objective process, but rather the modality in which it was carried out, the type of private property, i.e. coming back to an extremely fragmented property, characteristic to the subsistence peasant household, accompanied by the delay in issuing the ownership titles, technological regress, deficient management and precarious situation of national economy.

3. Land Fragmentation

By Land Law application, about 4.7 million persons will receive about 9.4 million hectares, i.e. an average area into ownership of 2 hectares.

3.1. Present situation

The excessive concentration of land ownership before 1989 switched over to an exaggerated fragmentation, i.e. from the operation of large land areas to the small households.

In present the land fragmentation process is considered among the main causes of the Romanian agricultural crisis. The dimension of land fragmentation is an unknown problem: according to the most optimistically estimations it will reach about 20 million parcels and to the pessimistic ones about 50 million parcels. But anybody does not know the truth.

As there are no official data on land fragmentation, the results of field surveys conducted at national level in 1996 and 2000 will be presented. These reveal that the negative consequences of small land property are aggravated by the exaggerated fragmentation of it: 4.61 parcels on the average in 1996 and 4.14 parcels in 2000. We are now experiencing an apparent diminution of land fragmentation degree:

the share of households with only one parcel increased by 120% but the share of households having an area less than 1 ha increased instead by 80%.

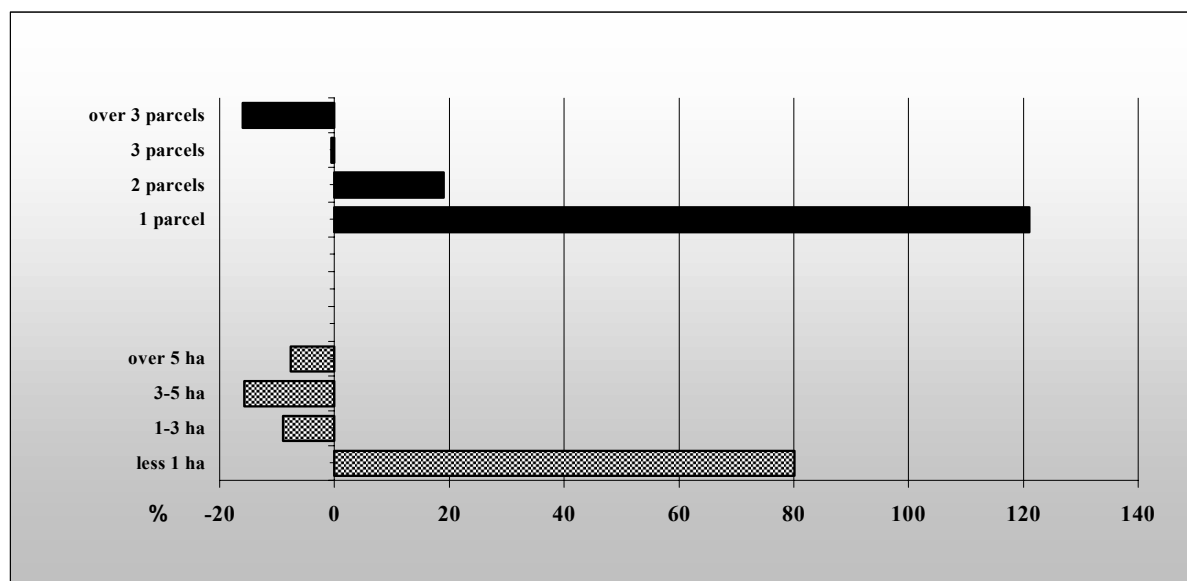


Fig.1. Evolution of rural households by size categories and number of parcels (1996-2000)

Specialists consider that land restitution on the old locations represents a serious error of the agricultural policy, that would be extremely difficult to correct. The private agriculture crisis, amplified by low property size and high fragmentation degree, is also aggravated by the delay in clearing up land ownership rights. At ten years after dismantling agricultural co-operatives the Land Law provisions were not completely implemented: more than 20% of entitled persons did not receive the ownership titles, while 13% did not get back their land. Furthermore, this law application has already generated more than half a million legal disputes so far (Popescu M., 2001, p.52).

In the field surveys, only 68 % of the interviewed persons declared that they received their ownership title, while in 32% of cases, ownership was attested by a certificate, in which the area is specified, and its location is not written down. Between the data published by the Ministry of Agriculture and Food and the interviewed persons' answer there is a difference which can be explained by the many cases in which land owners have not taken their ownership titles from the town hall. The lack of money seems to be the main reason for this situation and also is the unstable legal environment, having in view the issuing of new regulations in relation to land tenure (Law no.169/1997⁶ and Law no.1/2000).

⁶ published in "Official Gazette" no.299/1997

The excessive land fragmentation presents a serious impediment to the development of a modern and competitive agriculture. Any attempt at efficient economic operation of these properties becomes unworkable, and the administration in fiscal and legal terms of this huge amount of data presents a technical challenge, even for states with extremely evolved resources and informational systems, not just Romania.

Although there was practical experience, as well as the use of technical methods and rules, often with extremely positive results in economic efficiency, in a centralized agricultural economy, they are not relevant in today's climate, due to the land property type transformation.

3.2. A Survey Investigating the Potential for Land Consolidation

A field survey for the analysis of concrete social and economic possibilities for agricultural land consolidation was conducted in the Balaciu commune, Ialomita County, in the Southern region of Romania. On the basis of this study we tried to identify some agricultural land consolidation pro's and con's both at level of rural community and rural households.

First we tried to identify the degree of fragmentation using the following parameters: households' size, the number of parcels, parcels' size and distance to parcels. The size of the parcels is between 0.4 to 0.92 hectares, with an average of 0.85 hectares per parcel. The average number of parcels per property, i.e. 4.39, is quite close to the average number at national level. The average parcel size increases with an increase in household size. The parcels have shown inadequate geometrical shapes, with angles that hinder carrying out mechanization works. Length to width ratio is generally unfavorable, ranging from 1:5 to 1:100. The location of parcels does not take into consideration the existing irrigation system scheme.

According to the Januszewski fragmentation index⁷ all households, regardless of size, are considerably fragmented. Those larger households also have the highest degree of fragmentation. The average distance to the nearest parcel is 1.88 km and to the farthest parcels 7.15 km. From this, one can draw the conclusion that distance is a further stress factor in the degree of fragmentation.

⁷ It was calculated for the first time in 1964 and it is used commonly to evaluate levels of fragmentation in contemporary agricultural systems. This index divides the square root of total farm area by the sum of the square roots of the plot sizes. (Source: Jolyne Melmed-Sanjak, Peter Bloch and Robert Hanson, „Project for the Analysis of Land Tenure and Agricultural Productivity in the Republic of Macedonia”, Working paper no.19, Land Tenure Center, University of Wisconsin-Madison, 1998, p.137)

Table 1. Aspects of land fragmentation

| Households structure by size | Mean parcel size (ha) | Mean no. of parcels | Januszewski's fragmentation index | Mean distance to nearest parcel (km) | Mean distance to farthest parcel (km) | Average age of hh head |
|------------------------------|-----------------------|---------------------|-----------------------------------|--------------------------------------|---------------------------------------|------------------------|
| < 1 Ha | 0.40 | 1 | 0.88 | 1.92 | 4.50 | 45.5 |
| 1-3 Ha | 0.79 | 3 | 0.63 | 2.06 | 7.04 | 60.2 |
| 3-5 Ha | 0.88 | 4 | 0.54 | 1.70 | 7.20 | 63.8 |
| 5-7 Ha | 0.91 | 6 | 0.48 | 1.95 | 7.56 | 67.9 |
| > 7 Ha | 0.92 | 8 | 0.40 | 1.82 | 7.46 | 74.8 |
| Total*) | 0.85 | 4.39 | 0.55 | 1.88 | 7.15 | 64.0 |

*) All totals are weighted averages according to population distribution across household size

A social and economic analysis of the investigated commune offers arguments both in favor of and against land consolidation. As main arguments in favor of land consolidation one can mention: there is a high share, 86.2 % of arable land, situated in plain region, making consolidation of parcels easier; there is a fast re-orientation of agricultural activity (in the last 3 years the peasants introduced rape seed in cultivation and renounced at soybeans and sugar beet); a strong associative behavior is present (in commune operated 3 legal associations and 28 family associations); the land leasing is a common practice; there is a high share (25 %) of landowners who do not live in the commune.

The factors representing arguments against land consolidation, or that could become obstacles difficult to surmount in the case of this process are: the decline of the association phenomenon as a result of moral and professional prestige erosion of associations leaders; community poverty, that comprises over 60 % of the commune's population, estimated as traditional poverty by the authorities; land sale-purchase market is at the beginning; there are no many alternative jobs for rural population (one small dairy unit, one workshop for wood processing, two forges and four units for fodder processing, all with a small number of workers). Some cultural and informational aspects could encounter problems in assimilating the consolidation patterns: the church has no role in community life; the local authorities are not strong enough involved in the commune activity; there is too much bureaucracy; there is no cooperation/cohesion among people living in the community; the educational, medical and banking infrastructure are weakly developed; only 30% of landowners received their ownership titles; etc.

At rural household's level there were studied the pro's and con's land consolidation on a sample of 146 households. The socio-demographic structure could be one of the positive factor in land consolidation: the relative high level of education (13% have high education of which 3% in agriculture) ; the flexibility in changing occupational structure; the relatively low average age of sample; etc. Others aspects which could represent the arguments in favor of land consolidation refer to: the relatively high average area into property (3.74 ha); land operation under associative (38.6%) and leasing forms; the high awareness of households' heads (71%) to land fragmentation phenomenon; the high share of respondents (above 60%) who thinking that land should be consolidated in an way or another; the negative heads' perception of the land fragmentation consequences: 32.2 % consider that fragmentation generates low efficiency and 24.7 % believe that it is due to the application of crop technology under optimum conditions.

Arguments against land consolidation are mainly linked to: the legal system of land inheritance division in equal shares which dominates the property transfer and represents the most significant barrier to of land consolidation; 50.7 of interviewed households want to share the agricultural land in equal parts to heirs; 32.9% want that their land remaining to one heir; only 8.2% of households want to give the agricultural land to one single heir, who will continue agricultural activity; the positive perception of the agricultural land fragmentation consequences: 7.5% of the interviewed persons think that fragmentation has positive results related to the head of the household's ability to spread risk by cultivating a series of crops on several parcels, each with its own soil and microclimate characteristics, 5.5% consider that the existence of several parcels offers greater security of harvests against theft; lack of financial funds makes respondents perceive the impossibilities to buy land as the main obstacle to having a less fragmented land area; a low experience in parcels' exchanges between landowners (2.7%).

In order to consolidate the small-sized parcels, the main directions could be: stimulation of parcel exchanges by the simplification of necessary operations and granting facilities concerning cadastral registration; avoiding land fragmentation in the case of land restitution on the basis of Law no.1/2000; legislation change referring to land inheritance, so as to avoid the division of land between several heirs; elaboration of certain regulations that should forbid plot diminution below certain limits; incentives for buying small parcels and for their inclusion into larger parcels, through land consolidation, etc.

4. Institutional and Legal Framework

4.1. General background

The legal and institutional framework newly created in the Romanian has no precedent in our history. The paradox of the Romanian society in transition is “the limited capacity of society to absorb change, while it is under the terrible pressure of accelerating the change” (Daianu, D., p.160).

The institutional building initiated in Romania has in view the creation of a frame that should permit the “reign of the law”, law being considered as a norm that is socially accepted. One should never forget that during the communist period the market economy compatible laws generally disappeared from the collective memory. At the same time people forget that “even before the communist regime was established, Romania had also looked upon the Western society as an institutional model that was worth following” (Daianu, D., p.161). One of the crucial points of the transition period is the coexistence of strong inertia/resistance of old institutional structures with an attempt of building up new institutional patterns. In many cases the legal system operation has to suffer under the conditions in which people do not believe in their individual and collective responsibilities so as make other respect them. Sometimes, under the conditions in which there is a confusion regarding the ownership rights, the observance of contract and of property is looked upon as “a piece of paper lacking significance”(Daianu D., p.165).

The delay of institutional perpetuated reform and contributed to a state incertitude and lack of responsibility, with large loss of resources, at the level of economic agents, public organization and civil society. The changes in the institutional system presuppose modification for formal rules, of informal restrictions and of the effective enterprises; the changes are produced in a continuous and relatively smooth form, as the institutional system also includes informal restrictions (represented by customs, traditions, moral norms) that are persistent over time (as against the formal ones that can be changed relatively fast).

In Romania, the institutional reform must represent one of the exigencies of society modernization and its getting in line with the developed European countries. After 1990, the economic reform represented a first priority, while a more reduced importance was given to institutional framework establishment. In general, the legal framework related to institutional structures is poorly represented and the laws on public administration and different NGOs, meant to support civil society and a real democracy are still under analysis and approval.

The legal and institutional framework improvement was explicitly stipulated in 1993 and then in 1996. The governmental programs and most undertaken actions focused on: providing the legal framework for the support of macroeconomic policies and of their structural components; the amendment of legislation in force for the working of government programs;

institutional organization of the implementation of legislation adopted by government decisions.

The policy decisions of 1994, 1997, 1998 and 2000 that had in view the institutional system restructuring mainly referred to staff rationalization in ministries and not to the change of tasks and modalities of connecting the whole society to the market economy requirements.

4.2. Main laws which determined land fragmentation

The legal causes of excessive fragmentation of agricultural land may be analyzed from several points of view. Some of them are generated by the imperfections of the laws and rules, others, on the contrary, by the non applied of some special stipulations of them.

In the objective category could be included: the limiting of the restorable area to a maximum of 10 ha; the Land Law stipulation, by which people who worked in the agricultural productive cooperatives, and did not own land, may receive up to 0.5 ha, where were available; the unclear stipulation, by which the assignment will be made as a rule on old locations, although the the law stipulation refers to the hilly areas.

Subjective causes refer to not abide by some legal Land Law stipulations: “the territorial delimitation of the new properties resulting from the application of the present law shall start from the present territorial organisation and shall be made on the basis of some parcelling-out projects prepared by specialized bodies (Art. 44).”; “the Ministry of Agriculture and Food and the Ministry of Environment together with the Academy of Agricultural and Forestry Sciences shall take measures for the development of the national surveillance, estimation, prognosis, and warning systems regarding the quality condition of agricultural and forestry soils. These institutions will create an informational and provision system and assure databanks at country and county levels.

They shall propose the necessary measures for land protection and improvement, in order to maintain and increase the production capacity (Art. 68).”; ignoring Art. 35 from the Application Rules, which shows the way of land restitution in hydro-ameliorative works; the provisions of the law, mainly referring to the legal circulation of agricultural land, were totally blocked due to a non-establishment of the Agency for Rural Development and Territory Organisation.

Land fragmentation is an evolving phenomenon, especially due to: the beginning application of the Law 1/2000, that extends the returnable area up to 50 ha; the privatization of the former state farms; the unfinished of the Land Law application; future division of private property between heirs; etc.

4.3. Main laws for land consolidation

4.3.1. *Land market laws.* A crucial role in counteracting land fragmentation and in the establishing of optimum-sized farms is played by the various functions of the land market, by land sale/purchase and land leasing in particular.

*Law on circulation of land no. 54/1998*⁸. By removing the prohibitions regarding legal circulation of land, this Law stipulates that land areas under private ownership are, and will remain, in the civil domain, regardless of their owner. In order to impose limits to very large land properties, the property of the person acquiring agricultural land cannot exceed 200 hectares in arable equivalent, per family (Land Law provided an upper limit of only 100 hectares). The limit provided by the present legislation for ownership right re-constitution/constitution would be exceeded so farm sizes could increase that is an essential requirement for efficient and competitive agriculture.

The liberalization of land sale and purchase offers a series of advantages designed to stimulate agricultural development. The application of co-owners', neighbors' or lessees' preemption rights will contribute to the reduction of land fragmentation, with beneficial effects upon productivity, costs and profitability. Hereby the structure of land tenure could be improved.

*Land Lease Law no.16/1994*⁹, modified and completed in 1998¹⁰, regulated leasing land areas and other agricultural assets. According to this law, leasing is based upon a written contract between the lessor and lessee. Contracting parties may be physical or legal entities. Agricultural land lease has a series of advantages, namely: it gives peasants, with parcels too small the possibility to set up farms that permit them to use their full labor potential and increase their production; it represents a profitable alternative for those who cannot work their land by themselves, for different reasons; it could lead to the establishment of commercial farms, which favors efficient agriculture; compared to land purchase market land lease requires lower financial inputs; those who lease land keep their ownership rights to that land, having a source of income.

4.3.2. *Environments Protection Law*¹¹ stipulations influence land utilization, establish the regulations which provide the maintaining of an ecological balance, and indirectly favor sustainable agricultural development.

Landowners have the following tasks in order to provide soil quality protection: to prevent soil quality deterioration; to provide location, design, building-up and to set into operation projects for different units, as well as change of land use category.

⁸ published in "Official Gazette". no. 102/1998

⁹ known as Lease Law published in "Official Gazette" no.91/1994

¹⁰ published in "Official Gazette" no.126/1998

¹¹ Law no. 137 published in "Official Gazette" no.304/1995

4.3.3. *Associations' law*¹². An important role in land consolidation is held by the operating of associative forms, appeared on the basis of Law 36/1991. It was believed that these associations would help to alleviate some of the transition problems facing new landowners. The associations have had a series of difficulties, which led to their decline numbers and area. The poor managerial training of association chiefs causes difficulties through lack of cash for production development, the inheritance of some agricultural practices and behavior characteristic of the former production co-operatives, etc. In many agricultural associations, the problem of private ownership right is maintaining into an unclear framework.

4.4. *Assessment of the institutional framework*

From an institutional point of view, land problems are quite dispersed and they are indirectly approached by a series of government institutions: The Ministry of Agriculture and Food - in charge of technically coordinating the procedures of the Land Laws; The Ministry of Justice - co-ordinates legal land registration in the Land Books; The National Office for Cadastre, Geodesy and Cartography - co-ordinates technical land registration; The Ministry of Public Works and Regional Planning - organizes, manages, directs and controls the execution of the special cadastre; etc.

At the same time, certain local problems regarding the agricultural land are also founded in the activity of certain public services, subordinated either to different ministries or to certain governmental agencies locally coordinated. The role of all these structures is limited, owing to the lack of well-defined and coherent objectives area and to the lack of communication among these institutions, in this kind of problems. The relations between local and central level in defining and implementing the agricultural policy should be based upon a full clarity as regards the role of each administrative level. It is very important that enlarged partnership relations to be created between the public and private institutions at different levels. It is worth mentioning that certain good results obtained by institutional reforms in Romania are also found in the established partnership structures, in particular with foreign assistance.

We consider that when the institutional crisis will be surmounted, the reform acceleration will be possible in the whole rural area.

4.5. *The situation of the cadastre*

The cadastre and land registration system is organized on the basis of Law no.7/1996¹³. The general cadastre provides a unitary and compulsory system of technical, economic and juridical evidence, by which, all areas of land, as well as other immovable assets on the whole territory of the country, regardless of their location and owner, are identified, registered and

¹² published in "Official Gazette" no.97/1991

¹³ published in "Official Gazette" .no. 61/1996

represented on maps and cadastre plans. The cadastre is organized both at the level of each administrative unit (i.e. a commune, town or city) and at the national level through the institutions created for this purpose (i.e. the National Office of Cadastre, Geodesy and Cartography at national level and its territorial offices at each county level). The objective of land registration is recording into the Land Book of the ownership rights. The Land Book is, in fact, the identity card of a property and it is unique to any real estate item. Any owner who wishes to transaction land must obtain its cadastre documentation.

The creation of a national land pool/ fund that should be used for the stimulation of the land market, land consolidation, rational land concentration and agriculture restructuring. Romania is at an early stage in this field, the investment resources, infrastructure and human resources necessary for the establishment of an efficient cadastral system are limited.

5. Institutional Arrangements against Land Fragmentation

In the transition period a series of measures were taken in the direction of counteracting the negative effects of agricultural land fragmentation.

5.1. Land Market

The establishment of the land market presents a particular importance, being able to contribute to: land property size increase; decrease of agricultural land fragmentation through the application of the preemption right of co-owners, neighbors or lessees; gradual transition of agricultural labor in the non-farm sectors, etc.

At present in Romania the land market has already begun its operation. It is a timid beginning, but we should not forget that during the communist period this market was not functional.

5.1.1. Land lease. As institution that had been forbidden during the communist period¹⁴, has become functional starting with the year 1994. The importance of this institution cannot be contested, as it is one of the most efficient modalities for land consolidation.

Although there are no official data¹⁵ regarding the land lease market, this is recognized as the main segment of land market in Romania at present. The specialists think that land lease market has got larger and larger in the latest years.

Information regarding land lease market and its main characteristics also results from the field surveys conducted in the rural area. The 2000 survey indicates that land lease, has had an

¹⁴ Decree no.115 of March 28, 1959

¹⁵ There was an attempt in this respect of the Directorate for Rural Development within the Ministry of Agriculture and Food that was materialized through data centralization at commune level only for the year 1997. According to these data, in Romania land operation on land lease basis is about 10% of agricultural land.

expansion tendency. As compared to the year 1996, the share of households leasing out land increased by one third and the share of households leasing in land also increased by about four times. The multiple job-holding households, which operate land on individual basis, with hired labor, have a well-defined lessee behavior. The household that lease out agricultural land, the whole property or only part of it, generally consist of old-aged persons or persons confronted with a series of financial difficulties, as well as owners who live in towns. Under the conditions in which most leasing agreements are informal (about 90%), it is difficult to assess the real size of land lease market (total leased area, number of lessees, main features, etc.).

5.1.2. Land sale-purchase market. Since early transition to market economy, land transaction emerged, on an informal basis, under the conditions in which the legal and institutional framework was absent. Those interested by land transaction appealed to a series of solutions, such as apparent juridical documents of donation, accompanied by sale-purchase documents, under private signature, etc.

Land sale-purchase market has become operating under a legal framework since 1998. The share of households that had land transactions is low, less than 1% of the total agricultural land area, while the transacted land areas are small - 1.26 ha on average.

Though, less developed than the land lease market, agricultural land sale-purchase market is increasing and probably it is larger than it appears in the official statistics. The average price of one hectare of land in extramural areas was 7.05 million lei in May 2001. Land price is different from one county to the other. We consider these prices underestimate the current average prices to a great extent. The notary's fees, which are high enough, make the participants to land transactions declare lower prices that those paid in reality. At the same time, the official statistics regarding land market volume may not reveal the real activity level on this market, considering that sometimes land is still sold on an informal basis. It is the case of persons who have not received their ownership titles yet or persons who wish to avoid notary fees.

It must be mentioned that land transactions have not taken place in all the localities of the country (2686 communes) only in 1516 of them. At present in Romania, land sales market is a mixture of smaller markets that operate in different areas and have in view different modalities of land use, being characterized by an extreme diversity.

Data from the field survey of 2000 indicate the households consisting of old-aged persons, with no heirs, lacking technical production means and financial resources mainly represent those who sell land. In the case of pensioners who live in the rural area, these keep a certain land area for their own use, for food security reasons, and sell the remaining land. Mainly households consisting of young persons, with higher incomes, that operate larger areas and have lager human resources buy and are interested in buying land.

There seems a low possibility for the land market to significantly develop in the years to come: only 1.6% of respondents manifested their option to sell land in the near future. Prosterman, L.,R., and Duncan, J., reached the same conclusions during their field visits in five Romanian counties. They state that “only several farmers expressed their interest to sell land. Many landowners, either young or retired people told us they would never sell their land” (p.9).

The slow beginning of the agricultural land sale-purchase market in relation to agricultural land lease market has been frequently explained by the lack of legal framework for quite a long period (about seven years from the coming into force of Land Law), as well as by the delay in issuing the ownership titles. In my opinion these are important causes, however some other causes can also be identified: relatively low incomes obtained from farming activities offer low possibilities for capital accumulation that should facilitate buying land; high inflation makes certain potential sellers to wait for a better moment; very high banking interest rates are limited farmers access to credits; agricultural land cannot be used as the collateral in getting credits; a small number of entrepreneurs are willing to start activity in agriculture; by tradition, land is a valuable asset for Romanians and they alienate it with great difficulty; landowners' reluctance to sell agricultural land mainly refers to the possibility to lease out it under the better conditions too.

The negative impact of high land fragmentation could be reduced by land market transactions. The improvement of legal restrictions in this field, together with an efficient cadastral system might lead to a more efficient operation of land market, to fragmentation decreasing implicitly.

5.2. Legal and family associations

The agricultural associations appeared as a result of the concerted action represented the fastest modality of land area concentration and hence of relative diminution of the negative effects of private property excessive fragmentation, mainly in the plain areas. In this case, agricultural land is contributed only for use, the associated members maintaining their ownership right upon land. Membership is quite heterogeneous: those persons are prevailing who lack financial sources and mechanization equipment, which live in rural area but, there are also cases in which the members live in town.

Blamed or overestimated, these organization forms have had an important role in the transition period. The defining characteristic of the period 1993-2000 is the decrease of legal associations both as regards their number by 13% and the operated agricultural land area by 17%. In the last time many associations leased in land on formal and informal arrangement basis, ranging from tens to thousands of hectares.

The increase of land consolidation degree implicitly through the development of association forms can be achieved only by solving up certain problems referring to: ownership right clearing up; improvement of legal and institutional framework in the direction of promoting modern cooperative principles; financial support for the technical endowment of associations; managerial and professional training of staff; etc.

5.3. *Entrepreneurial family farms*

Agriculture practised by rural households did not feature uniformity. In parallel with subsistence agriculture, entrepreneurial agriculture also operated, although on a very small scale. The presence of entrepreneurial behaviour in private agriculture is an early start in agriculture operation in conformity with market economy rules and it represents a first step towards its modernisation and development. The field survey conducted in 2001 attempted to identify certain entrepreneurial orientations and aptitudes in the peasant economy context. Unfortunately, the entrepreneurial tradition is very weak in Romanian agriculture under the conditions in which the private land farming tradition transmitted from generation to generation was interrupted during the communist period, and the opinion of a large part of civil society referring to private entrepreneurs is quite unfavourable.

It might be useful to see what happen with agricultural entrepreneurs between 1996 and 2000. What changes occurred in terms of incidence and structure? Defining agricultural entrepreneurs is always a controversial issue. However we are going to use four dimensions of agriculture related entrepreneurship in Romania by means of endeavouring to make agriculture a business: buying or/and leasing land; making productive investment; buying inputs/selling outputs; hiring labour force.

According to the schedule above we identified three types of entrepreneurial households.

Table 2. Types of households according to entrepreneurial behaviour (%)

| Type of entrepreneurial household | 1996 | 2000 |
|--|------|------|
| Households with weak entrepreneurial behaviour | 38.4 | 27.6 |
| Households with medium entrepreneurial behaviour | 19.3 | 15.8 |
| Households with strong entrepreneurial behaviour | 5.5 | 6.2 |

The economic crisis that not only persisted but also deepened in the investigated period of time has determined a significant decrease (28%) of the share of rural households with weak entrepreneurial orientation and of those with medium entrepreneurial orientation (18%).

At the same time, the households considered as having strong entrepreneurial orientation better adjusted to problems occurring in the investigated period and even increased by 13%.

The aspects presented regarding the characteristics and changes produced at the level of rural households with entrepreneurial orientation invite to reflect on this matter. Agricultural sector performance is mainly influenced by two factors, i.e. the quality of entrepreneurs in the agricultural sector and a favourable economic environment. During the transition period, the governments that have been in power mainly focused upon decollectivisation and denationalisation, while the problems linked to competitive family farms development, such as land consolidation, were on the second place in the agricultural policy agenda.

Conclusions

In Romania as a result of Land Laws application, the ownership system has changed. Private property became prevailing but is extremely fragmented. Land fragmentation is an evolving phenomenon that is not finished yet.

Land consolidation represents a necessity but any type of agricultural land consolidation program can be achieved only by taking into account the local specifics and the social and economic needs. The application of any uniform consolidation schemes could be destined to failure. In order to consolidate the agricultural land, there is an obvious and imperative need to conceive an well-articulated and coherent framework of support measures, understood and approached as a complex of economic, social, legal and technical measures, aiming at rural community development.

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Land Fragmentation and Land Consolidation in Bulgaria

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The following is an attempt to summarize the various aspects of possible land consolidation schemes in Dobrich region. In order to gauge comprehensively the specific Bulgarian conditions, several key factors have been addressed.

Legal Legitimacy. It is indisputable that the strategic objective of establishing an 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 this is not comprehensively addressed. Politically and conceptually, there is no consensus nor clear government strategy as to whether achieving such consolidation should be left to purely market mechanisms, or to government intervention and special legislative limitation of individual land use/ownership rights.

With this background, land consolidation schemes, defined as the 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 program (with certain opportunities for consolidation) has been completed. Survey results indicate that any proposed government intervention in individual farmland interests may face opposition from a considerable proportion of the population. Apart from this, 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.

The organisational model. A possible land consolidation scheme can be accommodated within the regional/rural development framework; however, it must involve the central, regional and local authorities. The responsibilities of such a joint effort have only been outlined in the relevant legislation, but there is a shortage of detailed rules and procedures, as well as positive work experience in this planning field. Only the consultative and 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 local level, in co-ordination with the regional level. The co-ordination mechanism, via the regional development council, has hardly been tested.

Existing land administration institutions are charged with different challenging tasks, and so have little capacity to take over land consolidation. They are still unstable due to the radical transition they underwent in relation to cadastre/land registration.

Furthermore, owners/tenants seem to distrust any existing administrative institutions, so a new type of public-private partnership body should be established. In order to initiate project preparations, the core of a land consolidation body should be identified, at least. The present lack of an earmarked budget for such organisational work is a real obstacle to any progress in setting up the requisite organisation. Bearing in mind the present financial state of the Bulgarian municipalities, the provision of municipal funding for a new executive body is highly unlikely. Landowners and tenants, as stakeholders, cannot afford such funding. It seems that, at present, only the MAF may be able to 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 the case of any land consolidation initiative.

Technical Aspects. Technical issues seem to be the least problematic. Provided that the organizational model exists, the requisite LIS/GIS can easily gather geo-referenced database from the relevant central/regional/local sources. The digitising of existing mapping sources and the 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/GIS software systems.

The present stage of land restitution and cadastre/land registration reform - particularly in Dobrudja - favours the availability of up to date large-scale mapping and land records. With minimum effort spent on the verification and updating of land records (this is to be funded under the cadastre/land registration program), any possible land consolidation initiative may rely on relatively good quality data. The 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 re-allocation design, and will require less orientation and training. More training should be focused on land valuation.

Recommendations

The actual process of land consolidation, in the cases where the process will be carried out under the guidance of the state, in the absence of a land bank, should proceed in the following way:

1. A vote takes place in the territory belonging to the settlement for the start of the process of land consolidation.
2. There is the drawing up of a new cadastre plan.
3. The designing and marking out of the new road map.
4. The showing of the cadastre plans to the participants.
5. Constituting and constructing the land consolidation plan.
6. The distribution of the new parcels of land amongst the owners and the participants in the project and the marking out of their property.

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

- The grouping of the scattered parcels of land, the property of one person in one or two parcels of land, in correct and suitable forms for agricultural work, with specific borders and free access to nearby roads.
- The provision of opportunities for the use of highly productive technology and equipment.
- A guarantee of entrepreneurial freedom to the owner when introducing new crops.
- Freedom for decision-making and taking relevant measures against diseases and pests.
- Complete protection of the land and the crops from theft.
- Easy processes of fertilising, in respect to the existing permanent roads.
- The short distance from the farm to the allotments and a reduction in the expenses for non-productive labour, when travelling between the separate allotments, as a result of their grouping in one whole plot.
- The increase in arable land from land consolidation of former boundary strips, inter-land spaces, the boundaries of the numerous separate allotments and plots.
- Land development, i.e. re-directing rivers, bridge construction, drainage, wells, springs, pump stations, and reservoirs, strengthening riverbank facilities, the improvement of land consolidation of the roads, land reclamation, etc.
- An increase in the yield of crops per unit of land and a corresponding increase in revenues of the agricultural farm.
- The increased opportunities for the use of agricultural land as procurements and collateral, as well as opportunities for mortgaging (upon the provision of changes in the existing legislation).
- Obtaining lands for common use, parks and gardens, playgrounds, holiday centres, markets, etc.
- The increased opportunities for credit for different landowners and agricultural producers as a result of increased crop yields and revenues and documented land ownership.
- Conditions and opportunities for irrigation.
- The 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.
- Indirect profits from the destruction of the sources of diseases and pests.
- The decreased cost of labour in agricultural production.
- The value of lower production costs.
- The increased quality of the produce.
- The development of the land market and the land lease market.
- Incentives for keeping people in the villages.
- Job-creation.

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

1. The lack of resources for the initiation and implementation of the process;
2. The lack of calculations of the value of land consolidation per unit of land;
3. A possible lack of enthusiasm and the presence of scepticism on the part of the land owners;
4. The impossibility of land consolidation as a result of the rough mountainous relief and soil variety;
5. The lack of political will, especially in pre-election periods;
6. The presence of anticipated discrepancies between the different ministries, services and sub-contractors regarding the administration of the processes and conditions for the selection of sub-contractors;
7. The question: “Why do we have to start a land consolidation process after spending so much money for restituting land ownership in real boundaries?”

To summarise, the restitution of land is just the beginning of agrarian reform. The restructuring of the agricultural sector and improvement of land relations should accompany it. The state can successfully implement 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. Steps to assess the possibility to implement land consolidation policy are being taken. The development of a free market for land would be a major 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 the control of natural resources and the environment. It supports land markets, the provision of information for planning and monitoring of land use and also provides tools for the implementation of land policies, e.g. land consolidation, resolving land disputes or the compulsory acquisition of land.

The accession of Bulgaria to the EU calls for the harmonisation of Bulgarian legislation with that of the EU. The agricultural legislation is now undergoing this process. It can be said that the main agricultural laws have already been adopted and we are now facing the longer-term process of their implementation.

From a legal perspective, two approaches to land consolidation exist:

- 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 greater private initiative with respect to land consolidation.

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

The present transition state of agriculture and forestry in Bulgaria is not yet favourable for systematic land consolidation, despite the vast problems posed by fragmentation. Public attitude, land policies, the legislative framework, land administration reform, the lack of planning experience and the unstable structure of farming enterprises are not conducive to classical consolidation schemes involving the 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 leasing market and driven by purely economic motives. These need special attention and timely support, in order to achieve better results and to sustain the structural reform of farming enterprises.

Strategy for Land Consolidation and Improved Land Management in Armenia

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Land reform in Armenia was started in 1991 and completed in 1993. The privatisation programme led to the emergence of 324,000 family farms. The current number of farmers may be even higher due to subdivisions resulting from inheritance. The present average farm holding size in the country stands at 1.21 hectares, which are divided into three or four parts.

The Government is currently undertaking a programme to issue title certificates and to establish the associated land registries, maps and services. Important legislation for sustainable land management has been enacted. New Land Code was enacted by Parliament in Jun 2001.

Despite not good ecological conditions Armenia's agriculture plays an extremely important role in the economy of the country, but the agricultural support infrastructure is not equal. The irrigation system is partially defunct and does not serve the newly established private farms well. Access to farm mechanisation is not available for majority family farms.

It is clear that Armenian farmers suffer from a number of interrelated problems, which hamper the full development of their potential. In our view a number of factors could be construed as arguments in favour of land consolidation:

- There is a high incidence of land fragmentation in most parts of the country.
- There is a lack of basic farm infrastructure in the rural areas (agricultural roads, irrigation systems.).
- There are too many small farms in the country.
- Parcels are uneconomically shaped.
- There is a need for soil conservation and other erosion control measures.
- There is a high demand for agro-processing industries to be set up at village level.
- The land registration process is well advanced.
- There is experience of land use planning at village level.

On the other hand there are a number of obstacles, which would make land consolidation extremely difficult:

- There is not only land fragmentation but also multiple ownership.
- Land markets are just emerging.
- Many farmers have very little experience in cultivation.

- Quite a lot of new legislation has been enacted within a short period of time; a new law on land consolidation might not be acceptable in the short term.
- There are currently very few off-farm employment opportunities in the villages that would provide alternative employment for those farmers prepared to give up farming.

When weighing up the above arguments in favour of and against land consolidation in Armenia, one can draw the following conclusion:

The time is ripe to introduce a procedure for land consolidation in Armenia, as this would provide a framework for solving the multiple problems with which rural communities are faced simultaneously. However, as the rural areas of Armenia are still in a situation of transition, *highly flexible* approaches are required.

The proposed concept for land consolidation

Land consolidation should be preceded by a land use planning effort. In the process of land use planning alternative scenarios for the future development of the respective community will be discussed. The land use plan would also provide the basis for decisions on the type of interventions most urgently needed to improve the living conditions of the local population. In the course of land use planning it would become clear what type of land consolidation would be appropriate in the given situation.

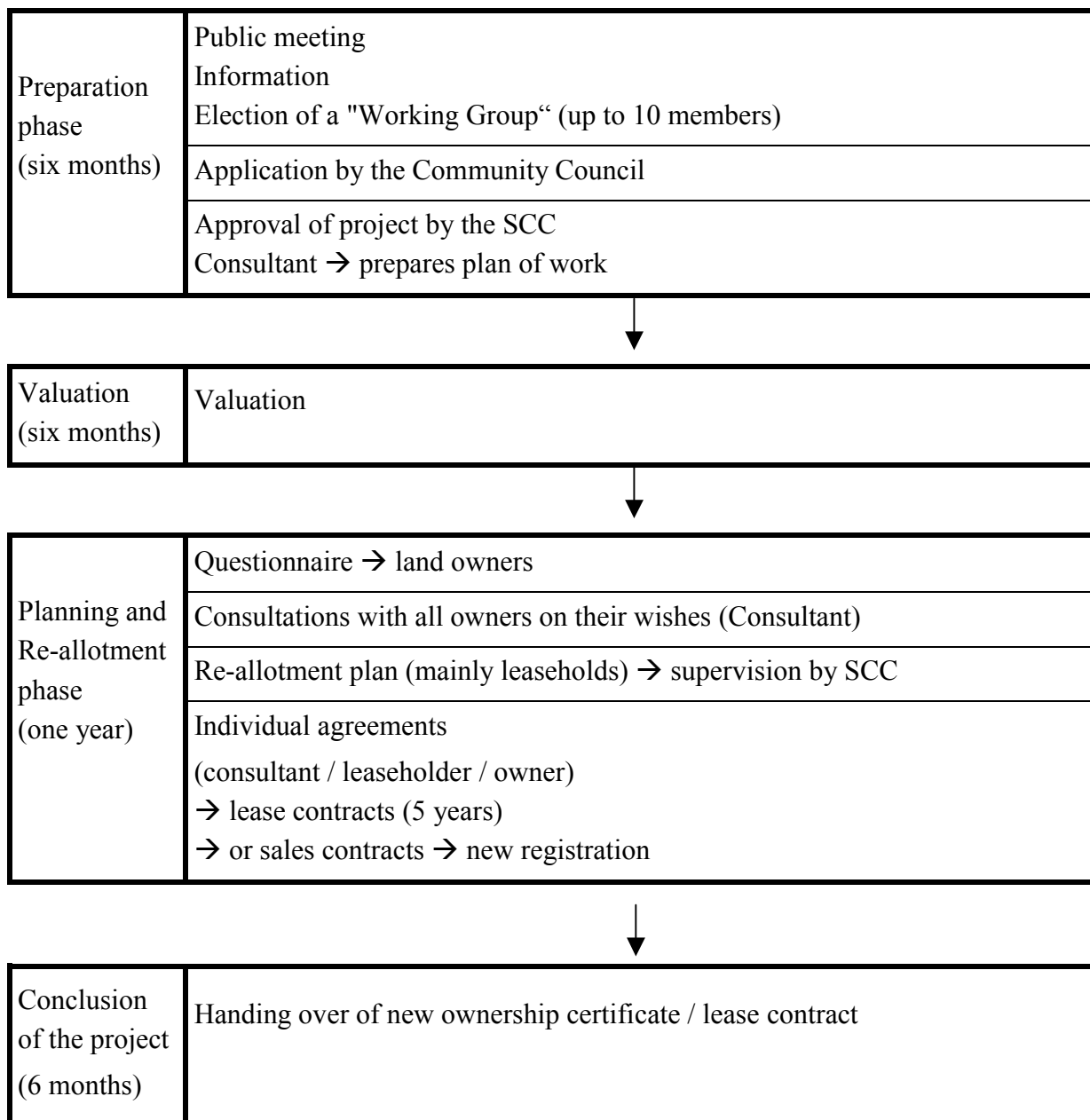
In Armenia two alternative models for the process of land consolidation, depending on the complexity of tasks to be reached:

- The first is a simplified model, which would focus on re-distribution and consolidation of land parcels on a voluntary basis and which would try to support (encourage) leaseholds within the community. This model can be started if at least 40–50% of property owners agree to participate.
- The second is a comprehensive model, which would incorporate considerable civil works such as the construction of new irrigation networks and agricultural roads and which would include the re- distribution of all land parcels in the community. This model requires 100% participation of all property owners in the community.

The Simplified Model of Land Consolidation

The simplified model of land consolidation does not require the participation of all property owners. But in our opinion at least 40–50% of all owners should participate. The model consists of four phases:

The Simplified Model



- a preparation phase
- a valuation phase
- a planning and re-distribution phase
- a conclusion phase.

The preparation phase:

To start the project, a public meeting will be called by the State Cadastre Committee on the initiative of the community. The purpose of the meeting is to disseminate up-to-date and comprehensive information about the process of land consolidation.

It will be proposed that the participants form a working group, in which the landowners will be represented. The landowners will elect the members by a vote.

Other important government agencies, such as representatives of the Ministry of Agriculture or the State Committee on Water Resources, may also be invited. If necessary, there will be a series of public meetings.

So the community council will officially apply to the State Cadastre Committee to start a land consolidation project. Following approval for the starting of land consolidation in that particular community, the State Cadastre Committee will appoint a consultant for the implementation of the project (normally through competitive bidding).

The State Cadastre Committee will also develop a cost estimate, a broad timetable and a cost-sharing formula for the project. Based on these parameters the consultant will prepare a more detailed plan of work.

Valuation:

The consultant will reach agreement with the working group on whether a new valuation is required or not. If the consolidation consists mainly of parcel exchanges on a leasehold basis a new valuation may not be necessary. Should a valuation be required, it could be done in the same way as it is for the comprehensive model.

Planning and re- distribution phase:

This is the most important phase of the entire project. First of all, the consultant will invite all the landowners to participate in land consolidation. Then he will hold in-depth consultations with each individual landowner to find out about his/her respective wishes and requirements for future agricultural use of the land. On this basis he will elaborate a preliminary re-distribution plan. This plan will then be submitted to the State Cadastre Committee for approval. After that the consultant will support to make leasehold contracts or sale contracts between the landowners. We think that the minimum duration of leasehold contracts should be five years.

Conclusion of the project:

To conclude the project the new land parcels will be registered with the State Cadastre Committee local office. In the case of sales, the new landowners will receive a certificate of entry into the land registry. The consultant will deliver the completed documents to the State Cadastre Committee.

The Comprehensive Model of Land Consolidation

The comprehensive procedure will consist of six phases:

- a decision on land consolidation

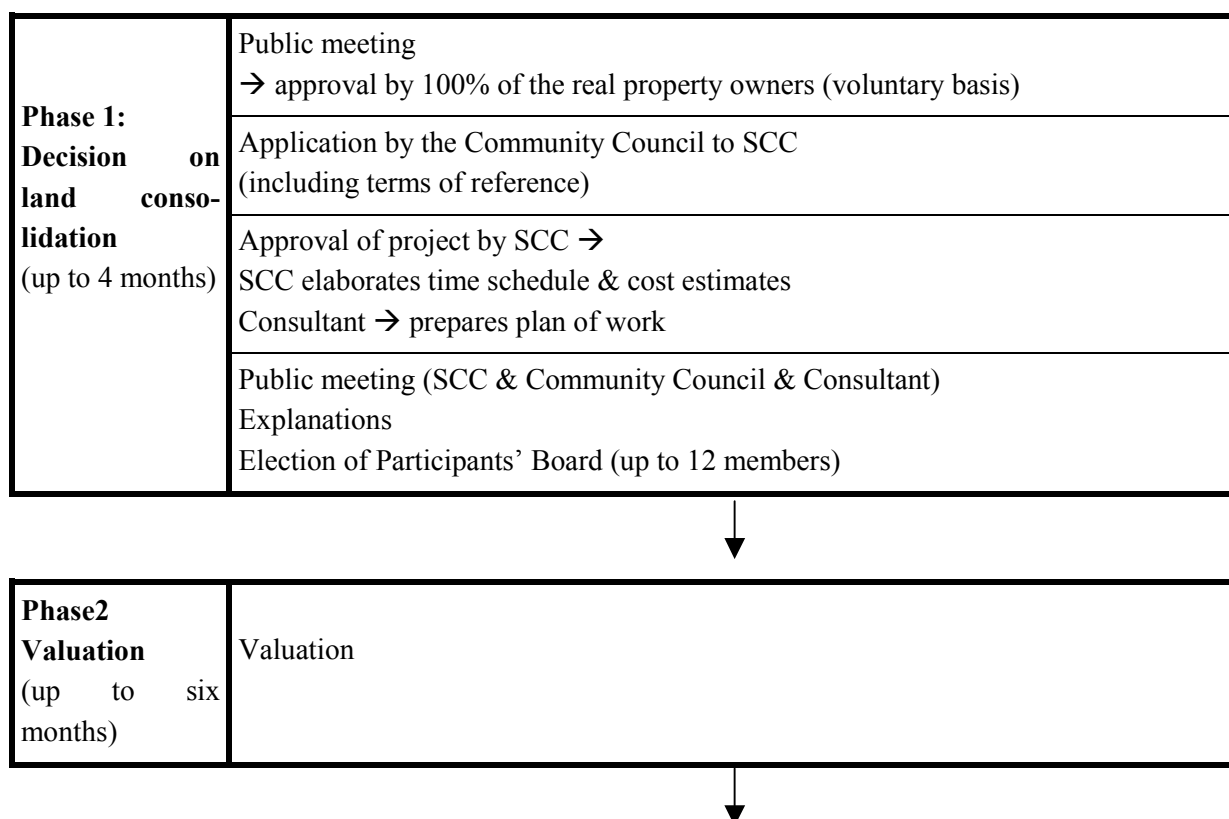
- a valuation
- a planning phase
- a construction phase
- a re-allotment phase
- a conclusion phase

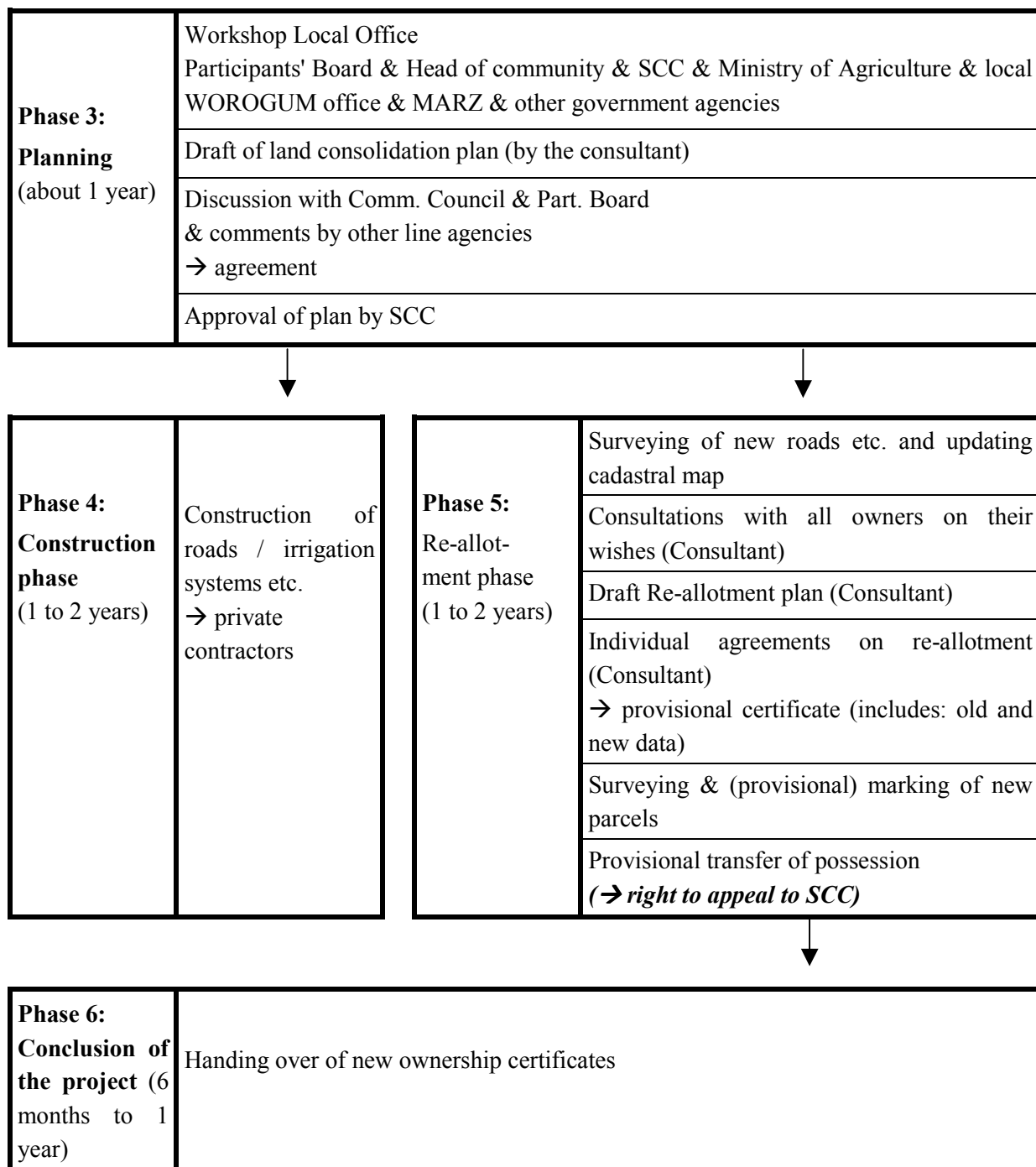
Decision on land consolidation:

To start the project, the State Cadastre Committee will call a public meeting on the initiative of the community. The purpose of the meeting will be to give up-to-date and comprehensive information about land consolidation procedures to the farmers. Other relevant government departments may also be invited. If the comprehensive model is to be implemented, 100% of the real property owners in the community must be in favour of land consolidation, since the process must be strictly on a voluntary basis.

After the meeting the community council will officially apply to the State Cadastre Committee to implement comprehensive land consolidation in that particular community. Following its approval, the State Cadastre Committee will appoint a consultant for the implementation of the project (based on tender and competitive bidding). In addition the State Cadastre Committee will determine the exact boundaries of the land consolidation project area and prepare a cost estimate and timetable for the procedure and the cost-sharing formula.

The Comprehensive Model





Once appointed, the consultant will take all the required preparatory steps. All existing data (maps, land use plan, land register) will be reviewed. Then he will do site inspections and ground checks on the validity of the land use maps. He will then prepare a preliminary design of the future farm road and watercourse plan.

Then the formal approval for the land consolidation project will be processed by the State Cadastre Committee. All landowners will be informed of the decision.

In a second public meeting the Participants' Board will be elected. The meeting will be chaired and facilitated either by a representative of the State Cadastre Committee or by the consultant.

Valuation:

The valuation process consists of four steps:

- preparation
- public meeting
- elaboration of a proposal for the valuation
- decision on the valuation.

Preparation of the valuation

This is one of the most important steps in the valuation of land parcels. The valuation must be easy to understand and transparent for everyone.

The consultant will prepare the valuation. He will draw up a framework, which will be presented to the Participants' Board. This framework will be discussed first with the Participants' Board and subsequently with the community.

Public meeting

Once the framework has been prepared a public meeting will be held. The proposed framework will be presented to the landowners. Then site inspections in the community will be conducted jointly with the landowners. Samples will be taken for different type of the soils in the locality. Adjustments will be made to the framework based on the results of the site inspections.

Preparation of a proposal for the valuation

In the subsequent weeks all land parcels within the land consolidation area will be inspected and valued. The consultant will prepare valuation maps, which will be publicly displayed and available to all landowners. Farmers should be involved in the valuation process.

It is recommended that two evaluation frameworks be drawn up, one for soil type (differentiated by irrigated arable land, non-irrigated arable land, natural grassland, pasture, etc.) and one for perennial plants and trees (e.g. vines). This means that the value of trees can also be included in the valuation.

Decision on valuation

Upon completion of the valuation proposal, the results will be presented to the public. If the landowner disagrees, he has the right of appeal to the State Cadastre Committee.

Planning phase:

The planning phase will start with a workshop with the Participants' Board, the community and all important government agencies.

On the basis of the discussion with the various stakeholders the consultant will elaborate a draft farm road and watercourse plan. This will be discussed with the Participants' Board and the community at large. If need be, additional meetings with important government agencies will be held. Once all the relevant government agencies, the Community Council and the Participants' Board have approved the planning, the plan will be submitted to the State Cadastre Committee for approval. It is also recommended that the plan be put on display to the public.

Construction phase:

The various civil works, such as the construction of new irrigation canals and new agricultural roads with small bridges will be put out to tender to local contractors. It may also be possible to include a self-help element in the construction of these civil works.

Re-allotment phase:

At the beginning of this phase the consultant will hold detailed discussions with all landowners on their wishes and requirements for the new allotments. He will then elaborate a preliminary re-allotment plan. This plan will be submitted to the State Cadastre Committee for approval. To conclude the consultations with the individual landowners the consultant will sign individual agreements with all landowners on their re-allotment. After that surveying and marking of the new parcels will take place, and the landowners will receive their new plots, together with provisional property rights certificates.

Landowners who disagree have the right of appeal to the State Cadastre Committee.

Conclusion phase:

To conclude the project all new land parcels will be registered at the State Cadastre Committee Local Office. The landowners will receive a certificate of entry into the land registry. The consultant will deliver all completed documents to the State Cadastre Committee.

A Strategy for the Introduction of Land Consolidation in Armenia

Preparations are already under way to set up an interministerial task force on land consolidation. This task force will act as a steering committee for the introduction of land consolidation in Armenia.

It is recommended that at the operational level the land construction Department of the SCC be entrusted with the introduction and co-ordination of the land consolidation.

The introduction of land consolidation would occur in three phases:

- In the first phase there would be mainly land consolidation schemes following the simplified model.
- In a second phase there would be more pilot projects of the comprehensive type, based on a government decree, but still without specific land consolidation legislation.
- In a third phase a Land Consolidation Act would be drafted based on the experience gained from various pilot schemes, and then land consolidation would be introduced throughout the country.

Some features of the proposed land consolidation procedure should be emphasised:

1. Implementation of the individual schemes would be entrusted to private consultants.
2. Good horizontal co-ordination of all the sector ministries involved will be essential.
3. The success of the individual land consolidation scheme depends on in-depth consultations with all landowners.
4. There will be a need for good training for land consolidation, both in the public and the private sector in Armenia.

Proposal for a Package of Pilot Interventions

We would like to ask FAO and other interested organisations, to support the efforts on the Armenian side through an TCP project. This TCP project would have a duration of two years and would consist of a number of pilot interventions for facilitating the introduction of land consolidation in the country.

In our opinion there are three key interventions that would make a great impact on establishing the practice of land consolidation in Armenia:

1. Support for land use planning and land consolidation in minimum three pilot communities
2. A training package
3. Support in the drafting of guidelines

Strategy for Land Consolidation and Improved Land Management in Georgia

David Egiashvili

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1 Acknowledgments and Foreword

This Case Study is mainly based on the outcomes and findings of the pre-feasibility study ‘Strategy for Land Consolidation and Improved Land Management’ conducted by UN/FAO through its Sub-regional Office for Central and Eastern Europe, Budapest (November 18-30, 2001).

We like to express my sincere appreciation of the work of the international experts’ Messers. W. Mueller, J. Lieberei and V. Lejava, and the decisive contribution from organizers (FAO, Budapest) side that is duly reflected on the quality of the aforementioned Study.

In this Study land consolidation is to be understood as *concerted effort towards sustainable rural development at the local level*.

The term "*concerted*" implies that many actors are involved and many different interventions take place in the process of land consolidation.

There are no queries necessary to detect the problems land consolidation in Georgia can tackle. However, all those problems are being dealt using sector approaches, whereas modern land consolidation can offer the synergy of *concerted inter-sectoral approach*.

2 Country Profile

2.1 Background Information

When discussing Georgian case, low income mountainous country with the area of app. 70 000 sq. km with the population of ca. 4,4 million (preliminary results of the 2002 census) is to be considered. Out of this population about 40% is rural, with higher percentage of involved in agriculture as the considerable share of the population in medium and small size towns is also involved in the primary agricultural production. Starting in January 1992 the Georgian Government privatized approximately 25% of agricultural land. Citizens who were directly involved in farming had the right to receive up to 1.25 hectares of land per family. As a result of the land reform 1.055.200 million families – i.e. an estimated 4 million Georgian citizens - became owners of small land parcels, with an average of 0.9 hectares per household and 0.22-0.25 ha size of an average parcel. This privatization was free of charge – so called social privatisation. The land was not provided in one parcel to the different recipients.

Because of the chosen kind of allocation, each family was given approximately 4 to 5 different types of land parcels located in different areas. This has led to the fragmentation of privatized land throughout Georgia. Agricultural land in Georgia is recorded as being 3020 thousand hectares (44%). The remaining area (57%) is covered by forests, urban settlements and other uses. 942 thousand hectares of state owned land were transferred into private ownership free of charge. 762 thousand hectares of privatized land were suitable for agricultural use, which amounts to about 25% of the country's total farmland. 2256 thousand hectares of agricultural land (75%) remained in state ownership, out of which 940 (31%) thousand hectares are currently leased.

Most of the land that was privatized lies in the vicinity of settlements and in Georgia's more important agro-ecological zones. The majority of the land designated as arable (55% of total arable) or used for perennials (68% of total perennials) was privatized. The remaining state owned land is mainly to be found in remote, often mountainous areas where there is a clear dominance of pastures. Most of the seed production, breeding, testing and other experimental farmland is not yet privatized. Sought-after land still remaining under state ownership is largely leased under long-term lease contracts. Often this land has been leased in large blocks (following the former Kolkhoz boundaries) to individuals or legal entities. Although the fact that 75% of land is in state ownership might at first glance indicate that land is available, the actual situation is that the "valuable" land in the vicinity of villages is either privatized or leased, so that not much reserve land is available in the agriculturally important areas. It also needs to be stressed that over 60% of the country consists of mountainous regions, which is reflected in the large area designated as pasture often with very limited accessibility.

2.2 Legal Framework

The first stage of land reform as described above coincided with political and economic crises, civil war and a difficult criminal situation without a legislative framework. Only in March 1996 did the Parliament approve the Law on Agricultural Land Ownership. Basically the Law has legitimized all the previous acts aimed at the privatization of land in the country. Since then a number of efforts have been successfully implemented with regard to the registration of land and the land cadastre. The Georgian framework legislation regarding land, landownership and land related issues includes: *Constitution of Georgia, Civil Code, Law on Agricultural Land Ownership, Law on Land Registration, Tax Code, Law on Land Parcel and Related Immovable Property State Registration Fees, Law Regulating the State Land Management, Law Regulating Local Self-Governance*. Neither the legal nor the institutional framework in Georgia is at present adequate to address issues of land consolidation or rural development. No specific law has yet been framed to address land consolidation and fragmented agricultural parcels and to promote rural development. In November 2001 the draft law on the privatization of agricultural land remaining in state ownership was finalized and it is presently being discussed. However this law is not yet approved.

2.3 Institutional Framework, Main Actors and Stakeholders

The State Department for Land Management (SDLM) is responsible for developing state land management policies, designing and implementing programs, and assisting in the preparation of legislation on land management issues. Currently the SDLM is mainly occupied with the ongoing land registration and cadastre and has made significant progress in the execution of the first registration. In 65 rayons there are land management offices to carry out the initial land registration and cadastre operations. *The Ministry of Agriculture and Food* is responsible for agrarian reform. The Ministry is in charge of offices on the second level, i.e. the 65 rayon offices. The number of members of staff in one office depends on the size of the rayon and varies from 6–15 employees. *The Ministry of Urbanization and Construction* shares responsibility with the SDLM for land-use planning and policy formulation.

The Bureau of Technical Inventory (BTI) is subordinate to the Ministry and has records of real estate. The Ministry of Urbanization and Construction is assisted by regional and local offices. *The Ministry of Environmental Protection and Natural Resources* is responsible for all the planning and implementation of environmental measures and natural resources. Currently its main tasks focus on pollution, mining works, oil transport, pipelines and field pesticides. Among other stakeholder are *the Ministry of Environmental Protection and Natural Resources*, *the State Department for Irrigation and Water Management* and *the Department of Geodesy and Cartography*. *Local self-government* at municipal level is presently very weak. The existing municipalities are administrations with governing mayors appointed by Government. Municipalities do not own land, but they are responsible for administering the disposal of state-owned land. Some *Non-Government Organizations* (NGOs) and associations are important partners for land consolidation and rural development and should be involved in planning activities, especially in coordinating possible activities. *Utility Companies* such as power, water, sewage and telephone companies may be affected by consolidation procedures and be interested in co-operation. Some legal regulation of the registering of user rights is required. *Private Persons* living in the land consolidation area or nearby may profit from rural development and have a special interest in the benefits of land consolidation.

Landowners and farmers are interested in simple land transfers without charges and farmers may be stimulated to improve their farmland and holdings. The consolidation of parcels, the building of new roads and the improvement of access would make an essential contribution to efficient farming by shortening the working time required. It is to be found in the villages that there is an interest in consolidating parcels not only among larger scale farmers but also among some farmers with smaller holdings. Co-operation takes place e.g. with regard to the use of machinery, usually on the basis of private verbal agreements. No great knowledge of farming is generally evident amongst the farmers. The small farmers in particular do not aim to become professional farmers; they are just trying to survive with their families through subsistence farming. Dwellers in rural areas complain about poor conditions with regard to essentials such as roads, water supply, power supply, sewage treatment systems etc.

Small-scale enterprises and handicrafts are lacking in the villages. The inhabitants cannot see any future in the villages and complain about the departure of young people. *Politicians* are aware of these problems in rural areas but there is no political program and no strategy to improve the situation. Rural areas are less developed and in a much worse condition than urban areas. As a consequence people are abandoning rural areas and moving to the cities, expecting to find work and better living conditions. The political aim of creating equally good living conditions in both urban and rural areas has to exist. The time now seems to be ripe for an active rural development policy.

2.4 Donor Activities

Subsequent to land reform a number of donor-funded projects have made progress with aerial photography, mapping, registration software, database development and registration of land titles, thus contributing to more secure land tenure in Georgia. However, the initial registration process has not yet been finalized (40–50%). Coverage of more territory by cadastral data and its integration into a unique database system will increase the effectiveness of the cadastral system. The initial registration can be completed within 2-3 years. International donor organizations are also making efforts to improve land management in Georgia. Currently there are seven donors (GTZ, WB/IFAD, USAID, UNDP, KFW, SIDA,) involved in projects with the State Department for Land Management (SDLM) in Georgia. Most of the above projects are aimed at the improvement of the cadastre and registration system in Georgia, which is an important precondition for further land consolidation efforts. In addition there are a huge variety of projects in the field of agriculture as this sector is the donor focus in the country. Many of these projects work on community level, sometimes in co-operation with NGOs. According to the NGOs' experience, outcomes have been positive with respect to community mobilization.

2.5 Status of Land Markets

The land market is very weak, especially in rural areas. Registered secondary land transactions are scarce. Although figures indicate a doubling of land transactions every year for the last four years, the total number of transactions was no more than 17.000 in the year 2001.

This is a result of general economic conditions as well as a number of other specific reasons, as: existing credit system, present taxation system, underdeveloped land valuation, informal land market, etc.

In spite of the negative environment for land market development, some initiatives can be observed with regard to land transactions in rural areas: there are examples of private leasing, instances of co-ownership and joint cultivation, many landowners have reached pension age.

2.6 Review of Georgian Agriculture and Rural Development

There is a clear distinction between the humid Western Georgia and the more arid Eastern Georgia. In addition the majority of Georgia consists of mountainous areas of up to 5000 meters. This geographical variety is also reflected in the agricultural structure and the settlement structure. Diverse agricultural production systems with a huge variety of products can be found in the different areas of Georgia. After independence and the collapse of the Georgian economy, the situation in the agricultural sector has completely changed. Today Georgia is a “low income country” (WB classification), based on agricultural subsistence farming. The agricultural sector is still the main source of income and employment (50% of the population) and accounts for more than 20% of the GDP. Rural incomes have remained practically stagnant. The rural physical infrastructure is desolate. This infrastructure was built for large-scale farming in sovkhozes and kolkhozes and is now totally ineffective for current farming in small-scale units. There is no general accessibility of land parcels by rural roads, and the existing roads are in a poor state.

The irrigation system, established during the period of large-scale farming, is insufficiently adjusted to the new land tenure structures. The water management system has collapsed. There is a great lack of efficient agricultural machinery and trailers. Most of the state co-operatives have been abandoned or are unlikely to be restarted without major capital investment. The once important agricultural processing industry has also been seriously damaged. Many of the former facilities are not operating any more and those that still work are operating with reduced capacity. Employment opportunities in other formerly important sectors have also become scarce and are now to be found mostly in towns and bigger centres. Rural Development used to be coordinated by a separate authority during Soviet times. Today responsibilities for spatial planning and rural development are split between different Ministries. In fact no spatial planning takes place and no strategy for rural development is defined.

2.7 Analysis of the Extent of Land Fragmentation

Nowadays there are only 200 to 300 joint stock cooperatives, mostly with leased land. The other landowners are mostly working in subsistence farming. The land reform has allotted 25% of the total agricultural land for privatization. The land that was owned by individuals (subsidiary household plots) prior to land distribution was counted as part of the 1.25 hectares. In fact, many households received less than the specified 1.25 hectares, due to lack of land in some areas. The quotas did not mean that the land was provided in one piece, each family was given 4 to 5 land parcels located in different areas.

Therefore the average parcel size amounts to only 0.25 hectares and the distances between the various parcels of one owner and his home may be more than 1 km.

Land fragmentation in privatized agricultural land in Georgia is a major obstacle to economically viable farming for the large number (app. 94.5%) of smallholdings of approximately 1.25 hectares. These farmers apply risk-avoiding strategies and their

development potential is very limited. They consider their land as social security rather than as an economic asset. There is a second type of approximately 32,000 farmers (app. 5.4%) who have about 10 hectares. These farms have either pooled land between relatives, friends and neighbouring landowners or have leased additional land from the state or applied both strategies to upgrade their farming operations in size and quality. There is a third group of roughly 6,300 commercial farms (0.1%) with an average size of about 90 hectares. These farms (often legal entities as cooperatives) have leased large units of adjoining plots of former kolkhoz land. Farm structure and the infrastructure are also affected by fragmentation. Irrigation is affected in particular and many of the former irrigation schemes are defunct and do not reflect the requirements of the new farm structure after the land reform.

3 Approach to Land Consolidation

3.1 Pros and Cons of Land Consolidation in Georgia

The fragmentation of agricultural parcels, together with a generally fragmented settlement structure, is definitely a serious problem, especially for commercial farming. In addition there are a number of other problems and framework conditions that hamper agricultural development. Some of the most important problems are: poverty and low income in rural areas, insufficient physical and social infrastructure, the poor condition of irrigation and drainage systems, lack of agricultural credit and insurance systems, low capacities of agricultural industries and lack of off-farm employment opportunities, poor domestic markets and strong competition from foreign markets, few commercial farm enterprises and a high number of subsistence farms, unsatisfactory provision of services and inputs to private farmers.

At this juncture the question that should be addressed is whether an established procedure of land consolidation would make a meaningful contribution towards resolving the multiple problems facing Georgian farmers. Given the difficult general economic conditions, land consolidation will not resolve the overall situation, but it can contribute to: improving rural infrastructure and settlement structure, reducing existing fragmentation on privatised land, avoiding further fragmentation through privatisation and inheritance. Even though the contribution of land consolidation in its initial stages might not be so important for the country as a whole, it should be noted that there would be extensive structural improvements in the areas concerned and in the living conditions of the citizens in and near these areas. The impact of the development would be felt in the longer term.

There are a number of arguments in favour of a strategy that seeks to introduce land consolidation in the country:

- (1) Most of the “high quality” agricultural area is either privatised or leased already;
- (2) The civil code and a number of laws have been successfully implemented. Land tenure and property rights are protected by law and security is given in the case of official transfer;

- (3) Recent maps and orthophotos are available for the agricultural area of Georgia;
- (4) The cadastre and registration process is proceeding successfully at the moment, including software and database development. About 40% of initial registration is finalised; the remaining privatised area is expected to be registered by 2004-2005;
- (5) There are a number of successful donor funded projects dealing with issues that are useful for land consolidation e.g. land market development, cadastre and registration, soil/land valuation;
- (6) There is an awareness of the necessity of land consolidation in government agencies and NGOs;
- (7) There is a demographic dimension in Georgia that needs to be addressed in a rural development strategy. The population in rural areas will shrink. Many landowners are old today and will not participate in farming in the future and many people do not see farming as a long-term prospect.

In addition there is rural – urban migration, which further contributes to the shrinking of the rural population.

On the other hand there are a number of background conditions that could hamper the successful introduction of land consolidation:

- (1) The land market is blocked. Land transactions in rural areas are rare. However, the land market may take off slowly in the next few years;
- (2) The majority of the rural population does not consider farming to be a viable alternative and are therefore not inclined to become involved in land consolidation efforts. In addition there are few self-help initiatives in the villages and a poorly developed community spirit;
- (3) Apart from the problems in the communities as described above, local self-government is very weak;
- (4) No budget is allocated to activities related to spatial planning. This hampers the implementation of rural regional development policies, strategies, programs and projects aimed at improving rural livelihoods;
- (5) The situation and general conditions in rural Georgia vary widely. There is a clear distinction between the humid Western Georgia and the more arid Eastern Georgia.

In addition the majority of Georgia is made up of mountainous areas of up to 5000 metres. This is also reflected in the agricultural structure and the settlement structure.

3.2 Preconditions for Land Consolidation

The first steps should address some key issues that are important preconditions for the establishment of a land consolidation strategy. These are: *Public Awareness*: Currently neither the rural population nor the decision-makers at various levels have a clear understanding of the potential contribution of land consolidation. The meaning of land consolidation needs to be understood and communicated in the same terms by the various stakeholders. A much higher level of public awareness is required, in particular on the part of politicians, if land consolidation is to be accepted as a possible strategy for rural development in Georgia. An essential contribution for public awareness could be made through pilot projects. *Legislative Framework*: The existing instruments for the improvement of land management, e.g. leasing procedures and ownership transfer regulations, are not entirely conducive to the development of a land market. The simplification of current procedures and legislation may have a considerable impact on the development of the land market, which is seen as an important element in land consolidation.

A legal act on land consolidation needs to be drafted and introduced in Georgia. The legal framework is the necessary basis for the implementation of land consolidation procedures. It would also provide the necessary incentives for landowners to participate in rural development efforts. Land consolidation must not necessarily be implemented by the public sector. Private enterprises can be contracted for implementation. But the co-ordination and supervision of land consolidation should remain within the remit of the public sector. An appropriate institutional set-up needs to be created and the legal framework should define the respective roles and responsibilities of the communities, the state and the private sector. *Spatial Planning*: A strategy needs to be developed to reintroduce spatial planning in rural development in Georgia. A possible approach on the national level could be the introduction of a coordinating body. This body could consist of a working group with members from the relevant government agencies as well as specialists, e.g. from relevant NGOs. On the local community level spatial planning is an integral part of a land consolidation procedure. A spatial plan would also provide the basis for decisions on the type of interventions most urgently needed to improve the livelihood of the local population, the rural economy and localized economic circuits.

3.3 Required measures in Land Consolidation

Land consolidation is commonly perceived as one of the most important measures for improving agricultural production by reducing land fragmentation through the re-allotment of parcels and the rearrangement of farm holdings. However, this is not the only instrument of land consolidation. The priorities for measures in a land consolidation procedure in Georgia are different to those in many other European countries. The urgent requirements in rural areas of Georgia are to be found in the improvement of the rural infrastructure.

The main priority can be defined as village renewal – i.e. the most urgent measures should be implemented in the villages (built-up areas) rather than in the agricultural fields:

- (1) Building or maintenance of roads and access roads, hydraulic structures, water supply, power supply, waste water disposal;
- (2) Renewal of community facilities such as school buildings, sports grounds, kindergartens etc;
- (3) Support to improved supply, transport and marketing, i.e. markets, shops; (4) Strengthening social cohesion and organization;
- (4) Training of farmers and landowners in capacity building and self-help activities;
- (5) Improvement of self-governance in communities and municipalities;
- (6) Capacity building in planning processes in the villages;
- (7) Land exchange and boundary improvement in the villages.

Additional measures/interventions in rural structures (outside in the fields):

- (1) Building, rehabilitation or maintenance of field roads, irrigation & drainage;
- (2) Consolidation of parcels, re-allotment of parcels with optimized shape, size and location;
- (3) Measures against water or wind erosion; (4) Measures for landscape protection, e.g. planting of trees.

3.4 The Main Players, their Roles and Responsibilities

Land consolidation as defined in this report is an integrated task that requires interdisciplinary expertise. Land consolidation needs to be well co-ordinated with the various stakeholders. Therefore an interdisciplinary working group on land consolidation should be established to carry out the task of co-ordination. The most crucial players in land consolidation schemes are the landowners. Their active participation in the procedure is the best way to fight mistrust against state driven measures.. The participating groups will have to elect boards or committees to represent their interests. These boards will be the main players in planning and decision making with regard to the land consolidation measures to be implemented. Of course the capabilities of such boards will be limited and they will therefore have to be assisted by an advisory body. It will be crucial to involve another external partner who can act as a mediator in the case of acute conflicts. This role could be taken over by NGOs. The NGOs could also contribute to the public awareness component and the legislation component of the land consolidation projects. The implementation of individual land consolidation schemes should be entrusted to private companies through competitive tender procedures.

Thus the SDLM would mainly play a supervisory and backstopping role. It would also be essential to provide good training for land consolidation in both the public and private sectors in Georgia.

4 Strategy of Land Consolidation

4.1 A Strategy for the Introduction of Land Consolidation

In order to establish a functioning system of land consolidation five results have to be attained:

- (1) The institutional framework for land consolidation has to be set up;
- (2) The legal framework for land consolidation has to be created;
- (3) Public awareness for land consolidation needs to be created;
- (4) A training programme for land consolidation has to be put in place;
- (5) Pilot projects in land consolidation have to be successfully implemented.

4.2 The Institutional Framework for Land Consolidation

Land consolidation as a strategy to improve rural development needs a co-ordinating body at national level. Thus an interministerial task force on land consolidation should be instituted. The members of the task force, under the guidance of the State Department of Land Management, would be representatives of the Ministry of Agriculture and Food, the Ministry of Urbanization and Construction and the Ministry of the Environment. Representatives of Non-Government Organizations, should also be included in the task force in an advisory capacity. This task force will act as a steering committee for the introduction of land consolidation in Georgia. First of all the task force should elaborate a common understanding of land consolidation and strategic guidelines for the land consolidation process. The task force will also decide on roles and responsibilities in the process of land consolidation. This concerns in particular the roles and responsibilities of the various government agencies in relation to private sector. The guidelines for land use planning, for voluntary land exchange, for simple land consolidation schemes and for comprehensive land consolidation schemes need to be discussed and finally approved by the interministerial task force.

4.3 Legal Framework for Land Consolidation

Depending on the measures to be implemented in a land consolidation procedure, a legal act or a temporary legal decree will be required. As long as land consolidation is restricted to the voluntary exchange of land, temporary regulations for the streamlining of procedures (e.g. leasing) and exemption from registration fees for participants may be the appropriate tools. But the legal framework needs to be in place if and when more complex measures and procedures are involved.

Existing legislation, the legislative gaps and requirements for land consolidation should be examined. Models from other countries should also be taken into consideration while drafting legislation.

4.4 Public Awareness for Land Consolidation

The meaning of land consolidation needs to be understood and communicated in the same way by the relevant stakeholders. A much higher level of public awareness is required. Therefore, the strategy should address the creation of public awareness on two levels:

- (1) Decision-makers on the national level have to understand that a concerted effort is necessary to improve rural livelihoods;
- (2) Local people on the community level will be the key players in the implementation of land consolidation schemes.

Thus, on the one hand, trust has to be built up regarding potential measures and, on the other, awareness needs to be created about the potential advantages of consolidation. Long-term comprehensive awareness campaigns will be required to create the necessary preconditions for land consolidation.

4.5 Training Programme for Land Consolidation

The ultimate success of land consolidation in Georgia therefore depends to a large extent on tailor-made training measures for the main players in government and in the private sector. Training measures would comprise:

- (1) Seminars;
- (2) Workshops;
- (3) Study tours to Central and Eastern Europe countries;
- (4) Post-graduate university studies in rural development;
- (5) On-the job training.

To start with a training, needs of the government departments involved, the private sector, Community Councils and participants' boards should be assessed. As relevant experience from other countries would be of great value for this task seeking donor funding for training courses in land consolidation is crucial. A comprehensive programme of short-term training curricula should be designed on the basis of the training needs assessment. The trainers would come both from local training institutions and from outside the country.

4.6 Pilot projects in Land Consolidation

The above-mentioned elements of a strategy (inter-ministerial task force, legal framework, public awareness and training) are necessary instruments. But these instruments will be of limited use if land consolidation procedures are not tested and implemented in the field.

Thus pilot projects should be carried out to gain experience with the different approaches and procedures in land consolidation at community level. These experiences will be fed back into the further development of a national strategy.

5 Endnote

Land consolidation has to be seen as an instrument in a long-term planning perspective for Georgia. With respect to the current situation a strategy to introduce land consolidation needs to be careful, well timed and flexible. Although the need of land consolidation is stated at present one should not try to establish a fixed land consolidation procedure for the whole country. This is neither feasible nor appropriate at the present time. A top-down approach, e.g. compulsory consolidation schemes, will not be an option since the population mistrusts government driven activities. Thus a careful step-by-step approach should be considered, with special emphasis on community and citizens' participation. The first step should address some key issues that are important preconditions for the establishment of a land consolidation strategy. There are a number of bottlenecks that may hamper the introduction of land consolidation in Georgia.

Among the many constraints the most striking are:

- (1) A very weak land market, developing only slowly in rural areas;
- (2) A policy framework that is still in a transitional stage;
- (3) The absence of spatial planning in rural development.

But there are also some elements that favour the introduction of land consolidation in particular:

- (1) The need to improve the situation in rural areas given the level of fragmentation of agricultural land and the poor state of the rural infrastructure;
- (2) The recent successful efforts towards improved land management within the State Department of Land Management in Georgia including the establishment of a cadastre and registration system.

When weighing up the above pros and cons for land consolidation in Georgia one can state that land consolidation would contribute to the improvement of the situation in rural areas because it would offer an intersectoral framework for tackling the multiple problems with which rural communities are faced. Poverty and the basic needs of citizens in rural areas with a livelihood on the subsistence level provide a huge field of activity for land consolidation, limited only by finite resources like finance or manpower. Given the overall economic conditions and considering that political transition is an ongoing process in Georgia, only a highly flexible approach will be successful. A number of preconditions must be met before land consolidation can be introduced on a nation-wide scale.

These preconditions are:

- (1) A strategy for the reintroduction of spatial planning must be elaborated and reflected in land consolidation procedures. This must also be reflected by the institutional set-up and the sharing of responsibilities between the various ministries;
- (2) Public awareness about the advantages of land consolidation both on the level of public decision makers and local actors must be improved;
- (3) The legislative framework, regulations and guidelines for land consolidation must be drafted;
- (4) Key players from the public administration and the private sectors must be trained.

List of Abbreviations and Terms

| | |
|------------------|--|
| APLR | Association for the Protection of Landowners' Rights |
| UN | United Nations |
| FAO | Food and Agriculture Organization |
| SDLM | State Department of Land Management |
| NGO | Non Government Organization |
| EU | European Union |
| KfW | Kreditanstalt für Wiederaufbau (German Bank for Reconstruction) |
| GEL | Georgian Lari (1 EURO=1,85 GEL; February 2002) |
| GTZ | Gesellschaft für Technische Zusammenarbeit (German Association for Technical Co-operation) |
| USAID | United States Agency for International Development |
| Rayon | District |
| Sakrebulo | Community / Municipality – Lowest level of self-governance |

Land Consolidation organized in a special Court Experiences from Norway

Professor Per Kåre Sky

Agricultural University of Norway and Land Consolidation Services of Norway

Abstract

In Norway land consolidation is carried out by a permanent public institution, entirely within the framework of the judicial system. The institution is called *The Land Consolidation Service* and has 250 employees. The jurisdiction is divided into 34 land consolidation court districts and 5 land consolidation court of appeal districts. As far as we know, Norway is the only European country that has organized its land consolidation process completely within the framework of its judicial system. In short; the land consolidation court follows a normal court procedure in all kinds of decisions, even in matters like valuation and physical planning. This procedure is well known and generally accepted. The jurisdiction covers: Land consolidation in rural areas, boundary disputes both in urban and rural areas, valuation in connection with expropriation and exchange of properties in rural areas, contractual appraisal (valuation court), and appraisal for private roads, fences and easements (valuation court).

Development of land consolidation in The Netherlands from project objective to project instrument

Jack Damen

*Senior Advisor International Affairs
DLG Service for Land and Water Management
Utrecht, the Netherlands*

Abstract

In the Netherlands, land consolidation was carried out throughout the 20th century. The first Acts on the matter were issued in 1924 and 1938. However, only after World War II, substantial land consolidation really started in the framework of integrated land development projects. In these projects, land consolidation was carried out, integrated with infra-structural and landscape improvements, while the main purpose was to improve the agricultural structure, in order to increase productivity and lower the production cost. The legal basis for the post-war consolidation activities was provided by the land consolidation Act of 1954. From 1945 up to the year 2000, some 650 land development projects were implemented, covering about 2.5 million ha, involving a State investment of an estimated 5 billion Euro.

After more than achieving the agricultural production targets in the seventies of the last century, perceptions about the use of the rural areas started to change. Apart from providing the necessary space for agricultural production, these areas were increasingly seen as attractive open space for nature development, ecological zones and recreation purposes for both city and rural area residents.

The instrument of land development for agricultural restructuring, transformed into a multi-purpose instrument to solve the occurring conflicts between land use claims for various purposes. The latter developments required a new Act, which was finally validated in 1985.

As a result, land consolidation has, since the 1980ties, quite rarely been used for solely agricultural reasons. The more frequent use of this land exchange tool focuses in the present time on rearranging the local areas to provide an attractive sustainable rural environment, in which it is pleasant to work, live and recreate for residents and visitors from the cities alike.

Institutionally land consolidation is facilitated by three executive public organisations, the Service for land and water management (DLG), the Cadastre and the Bureau for land procurement and management (BBL), which was in 1995 merged with DLG. However the decisive factor for the success of land development projects has always been the committee of local stakeholders, in which next to the main interested private parties also water boards and municipalities are represented. As regards the administrative decision authority and responsibility for land development projects, the centre of gravity has shifted over the years from relevant central ministries to the provincial governments.

Land consolidation in Denmark

Karl Aage Eskildsen

Head of Division, Land Consolidation Division, Ministry of Food, Agriculture and Fisheries

Abstract

The legal basis for the Danish land consolidations is the Land Consolidation Act. The principal features of this land management instrument include the following:

Land consolidation consists in a number of sales and purchases of land parcels, which are made effective at the same moment in time.

The majority of participants buy and sell land.

Agreements are made with a land consolidation planner, typically a land surveyor, who is assisted by a committee of elected representatives of the landowners.

Participants in a land consolidation do not have exchange relations with each other but sell to and buy from the land consolidation perceived as a fictitious person represented by the land consolidation planner.

There are no economic commitments between participants. Each landowner pays to and is paid by the land consolidation.

The land consolidation planner ensures that all rules concerning property transactions are adhered to and that the final result is registered in the Land Book.

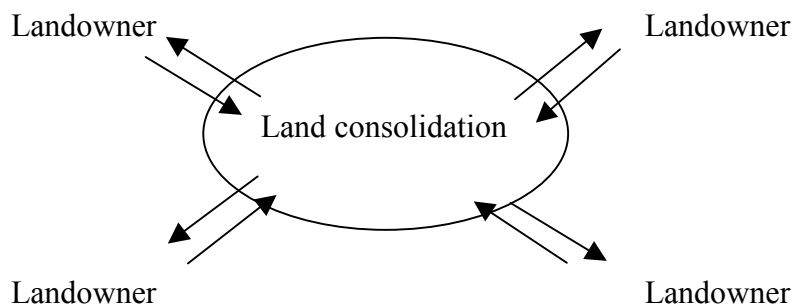


Illustration: Exchange of land takes place via the land consolidation.

The overall objectives in land consolidation are:

- To support agricultural development in a certain area,
- To improve the location of farm land of particular farm units,
- To provide additional land for farms which may so need,
- To supply land of particular suitability to particular types of farms,
- To support territorial planning in the area.

Land consolidation may at first sight appear simple but reality is quite different. The success of a land consolidation depends on the psychological understanding by the land consolidation planner of the owners' attachment to their land. It is also critical that confidence is established in the pricing of each land parcel and that the agreements are finally made effective and legally valid. The land consolidation planner must also ensure the overall quality of the plan in that *all* participating landowners obtain advantages.

Challenges in East German States

Andreas Drees
DVW-Vice President

Abstract

The situation in the East German States is comparable to that in many CEECs. Problems with disordered ownership as a consequence of the socialistic large area farming without consideration of property hinder the process of privatisation and necessary investments in agriculture and as well in general. Linked to investments missing opportunities of work lead to a migration from rural to urban areas, which brings problems both in the rural regions and the cities.

First experiences of finished measurements of Rural Land Consolidation lead to the conclusion that the tasks facing the administration need to be done as soon and as quick as possible. Here the support of private companies is very valuable. Additional the standard of technical (cadastral) work has to be lowered to the minimum to keep an adequate proportion between costs and land value. The measurements should integrate as many tasks as possible. Strengthen the rural area is not only strengthening the agricultural sector but also the solution of land use conflicts, encouragement of ecological projects, support of non-agricultural investments and increase the attractiveness of rural living.

The right mix of instruments - land consolidation, land management and land banking

Josef Attenberger

Ministry of Agriculture and Forestry of Bavaria, ARGE Landentwicklung

Abstract

Based on a bottom up approach Land Consolidation in Bavaria contributes to a sustainable development of rural areas, including economic, ecological and social aspects. Accordingly, villages are included into the Land Consolidation procedure as centres of rural life and germ cells for rural development.

Experience shows that rearrangement of scattered property of peasant farmers in combination with the construction of roads to access the new plots as well as land banking and land management in a broader sense are important preconditions to achieve good results in land consolidation. Only thereby it is possible to support and realize other urgent measures of public interest while protecting the property rights of land owners. In this way, 6.400 ha agricultural land have been purchased in total between 1996 and 2000 and made available for nature protection areas, infrastructure facilities, public transport facilities, water bodies, and water protection areas.

20 years of Land Consolidation in Portugal

Alexandre Abreu Lima

President of the Agricultural Association of Tras-os-Montes / Alto Douro:

Abstract

Before 1980 the farming sector in Portugal was composed, especially in the North and far South, by small size and high fragmented householdings.

The main goal of these farms was the self-sustainability, trying to produce a big variety of products in order to avoid the acquisition of goods outside the householding.

With the opening economy the price of farm products dropped dramatically, being the farmers asked to produce more and better at lower prices.

The small size and high fragmentation of their farms didn't allow the decreasing of production costs, lowering more and more their income.

Large parts of population were forced to leave the rural areas, specially the young and better educated, searching for better remunerated jobs within the coast belt and abroad.

In order to stop this tendency, Portuguese Government initiated several actions in the field of Rural Development, being supported by GTZ in the legal and technical procedures, training of staff and starting pilot projects to prepare portuguese farmers for the request of the European Market.

After ten years of work, the good results of land consolidation projects in improving the economy of rural areas were realized.

However, the costs and time of execution were considered still too high.

In 1994 (2° Community Support Framework) the Ministry of Agriculture allowed the farmer's associations as promoters of land consolidation projects, to go into these activities in order to have closer and more intensive relations and connections with the farmers.

As result, the time consumption in execution of prestudies and projects for execution decreased 20 % to 30 %, showing the private sector acting more efficiently in Land Consolidation projects.

Another advantage was the confidence of the farmers in the follow up of the projects, with the assistance of their associations.

It has to be remarked that Land Consolidation as a very complex procedure is not always understood in its remarkable results especially in the decision making levels, what will be one of the major problems to be solved in future.

This concerns also the extension of goals e.g. in using *land banking* for structure improvements or *village renovation* as even more direct support of families within the rural space.

One example :

Project: Lagoa – Macedo de Cavaleiros

Region : Trás-os-Montes e Alto Douro

Promotor: FATA – Federação da Agricultura de Trás-os-Montes e Alto Douro

Number of beneficiaries : 295

Number of parcels before and after the project : 2.729 - 1.180 ;

Needed time for prestudy : 24 months ;

Needed time for LC project : 27 months ;

Specific targets besides reorganization of propoerty:

- Improvement of infrastructures, specially the road network ;
- Building of facilities for sheep, used in cooperation;
- Olive oil mill – Olives are the main crop in the zone. FATA promoted the creation of a private enterprise with 30 farmers. Objective: transforming olives in olive oil, bottling and marketing ;
- Forest project of 300 ha, involving 130 farmers in cooperation, promoting collective planting and managing of the area;

Conclusions :

- *As results of the last 20 years of experiences, must be counted the following needs:*
 - Improvement in the procedures, in order to save still more time;
 - Land Banking, to improve property and land use structures and to cover public land requests;
 - Adaptation to special requests (e.g. village renovation, change of land use, intensification of production methods, development of cooperation especially in marketing)

- Medium and long term working and financial plans within national budget and administration.

- *As positive aspects can be observed:*
 - Active support by farmers associations;
 - Good capacity and independence within the private sector;
 - Private sector operating faster and more efficient than public administration;
 - Closer contacts to farmers and rural population.

Conference Programme

Monday, 25.02.2002

9.00 – 11.00

Plenary

Opening Speeches

- 09.00 Prof. Dr. Holger Magel, *Chair of Land Tenure and Land Development, TU Munich, FIG–Vice President*
- 09.10 Dr. Hannemor Keidel, *Vice-President, TU Munich*
- 09.20 Dr. Christoph Kohlmeyer, *Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (BMZ) (Federal Ministry for Economic Cooperation and Development)*

Keynotes:

- 09.30 David Palmer / Fritz Rembold, *Land Tenure Service, FAO:*
Framework paper on land consolidation
- 10.00 Reinhold Bäuerle / Christian Graefen,
Thematic Group Land Management, GTZ:
GTZ' experiences in land consolidation in CEEC and relevance to rural development

10.30 –11.00

Coffee Break / Open Space

11.00 – 13.00

Plenary

Words of Greeting

- 11.00 Erwin Huber, *Minister, Bayerische Staatskanzlei (Bavarian Prime Ministry)*

Case Studies:

- 11.30 **Land Fragmentation and Land Consolidation in Czech Republic.**
presented by Jiri Trnka, *Central Land Management Office, Ministry of Agriculture*
- 12.00 **Land Fragmentation and Land Consolidation in Hungary**
presented by Dr. Gabor Remetey Fülöpp, *Chief Counsellor Department of Lands and Mapping, Ministry of Agriculture and Regional Development*
- 12.30 **Discussion**

13.00 – 14.00

Lunch

14.00 – 15.30

Plenary

Case Studies:

- 14.00 **Land Fragmentation and Land Consolidation in Romania**
presented by Marioara Rusu, *Senior Researcher, Institute of Agriculture Economics*
- 14.30 **Land Fragmentation and Land Consolidation in Bulgaria**
presented by Diana Kopeva, *Institute for Market Economics (IME)*
- 15.00 **Discussion**
- 15.30 – 16.00** *Coffee Break / Open Space*
- 16.00 – 17.30** **Plenary**

Case Studies:

- 16.00 **Strategy for Land Consolidation and Improved Land Management in Armenia**
presented by Hayk Sahakyan, *State Committee of the Real Property Cadastre of the GoA*
- 16.30 **Strategy for Land Consolidation and Improved Land Management in Georgia**
presented by David Egiashvili, *Georgian State Department of Land Management – Head of International Relations Office*
- 17.00 **Discussion**
- 19.00** **Meeting of the drafting group and moderators of breakout sessions**
Information on organisational aspects, objectives, tasks, time frame etc. (room 0714)

Tuesday, 26.02.2002

- 9.00 – 10.30** **Plenary**
- Western European Experience*
- 09.00 **Experience from Norway:**
Prof. Per Kåre Sky, *Agricultural University of Norway, Department of Land Use and Landscape:*
Land consolidation organised in a special court.
- 09.20 **Experience from the Netherlands:**
Jack Damen, *DLG International:*
Development of Land Consolidation in the Netherlands, from Project Objective to Project Instrument.
- 09.40 **Experience from Denmark:**
Karl Aage Eskildsen, *Head of Division, Land Consolidation Division, Ministry of Food, Agriculture and Fisheries:*
Verdict in a Danish Land Consolidation - documents and procedure.
- 10.00 **Discussion**
- 10.30 – 11.00** *Coffee Break / Open Space*

11.00 – 12.30

Plenary

Western European Experience

Experience from Germany:

11.00 Dr. Andreas Drees, *DVW-Vice President*:
Challenges in East German States

11.20 Josef Attenberger, *Ministry of Agriculture and Forestry of Bavaria, ARGE Landentwicklung*:
The right mix of instruments – land consolidation, land management and land banking

11.40 **Experience from Portugal:**

Alexandre Abreu Lima, *President of the Agricultural Association of Tras-os-Montes / Alto Douro: 20 Years Land Consolidation in Portugal*

12.00 **Discussion**

12.30 – 14.00

Lunch

14.00 – 16.00

Breakout groups

Group 1: Is land fragmentation always a problem? And land consolidation the (only) solution? What are alternative approaches to land consolidation.

Moderator: Wehrmann (TUM), Room: N-806

Group 2: Relevant framework for successful land consolidation:

Moderator: Rembold (FAO), Room: 0790

Group 3: Technologies, procedures and legislation:

Moderator: Stumpf (ARGE Landentwicklung), Room: 0714

Group 4: Institutional setting and capacity building

Moderator: Bäuerle (GTZ), Room: 0790

Group 5: People's participation:

Moderator: Thomas (ARGE Landentwicklung), Room: 0120

Group 6: Economic and Financial Issues:

Moderator: Kirk (University of Marburg), Room: 0606

16.00 – 16.30

Coffee Break / Open Space

16.30 – 17.30

Plenary

Pulling together the themes

19.00

Meeting of the drafting group (room 0714)

- a) Preparation of Framework and Key Issues for Guidelines
- b) Preparation of the ‘Munich Statement on land consolidation in CEEC’

Wednesday, 27.02.2002

Field Trip to Lower Bavaria

Head of excursion team:

Dr. Michael Stumpf (ARGE Landentwicklung)

Team members:

Reinhold Bäuerle (GTZ), Dr. Andreas Drees (FIG),
Babette Wehrmann (TUM)

8.00

Departure from Munich:
Theresienstraße, in front of conference hall

9.15

Welcome Address by Herbert Beer

Head of the Office for Rural Development,
District of Lower Bavaria

9.30

Land Consolidation Mammig II

- Solving disputes between several parties each claiming a different kind of land use for a certain plot
- Improving agrarian structure
- Developing community infrastructure
- Promoting rural tourism
- Encouraging the establishment of industrial units
- Meeting actively the demands of ecology
- Facilitating a large public construction scheme: the barrage on the river Isar

Mayor

Georg Eberl

Head of the project

Rudolf Riedl

11.15

Departure to Englmannsberg, Markt Reisbach

11.45

Village Renewal Englmannsberg

- Retransforming the village main road to its original size and purpose after the construction of a by-pass
- Constructing a new village square as a center for communication and other social activities

- 11.45 **Village Renewal Englmannsberg**
- Retransforming the village main road to its original size and purpose after the construction of a by-pass
 - Constructing a new village square as a center for communication and other social activities
 - Transforming a listed farm building into a rural pub

Mayor Josef Steinberger
Head of the project Johann Preiss

12.45 Lunch in country restaurant “Späth” in Englmannsberg

- 14.00 **Land Consolidation Englmannsberg – Hötzenmühle**
- Implementing land management for all sorts of development purposes
 - Improving agrarian structure by means of rearrangement of parcels and construction of new farm roads
 - Revitalizing rivers and streams including protection from flood damage
 - Creating a network of biotopes

Mayor Josef Steinberger
Head of the project Johann Preiss

15.15 Departure to Reisbach

- 15.30 **Village Renewal Reisbach**
- Revitalizing the historical market square by changing the priority from traffic to mankind
 - Smoothing the local transport flow
 - Improving the town's ecological standard
 - Transforming an abandoned part of a former monastery into a meeting point for social and cultural events
 - Restoring the outer appearance of private buildings by their owners according to local guidelines

Mayor Josef Steinberger
Head of the project Werner Weny

17.30 Dinner in Restaurant “Schlappinger“ in Reisbach

Return to Munich

Thursday, 28.02.2002

9.00 – 10.30 Plenary / Breakout groups

Framework and Key issues for the Guidelines

09.00 introduction

| | |
|----------------------|--|
| 09.15 | <u>Breakout groups</u> |
| | - putting the main issues from Tuesday's group-work into statements - discussing the proposed structure and contents for guidelines - adding issues from the own group to the structure for guidelines |
| 11.00 – 11.30 | <i>Coffee Break / Open Space</i> |
| 11.30 – 12.30 | <u>Plenary</u> |
| | <i>“Munich Statement on Land Fragmentation and Land Consolidation in CEEC”</i> |
| | Presentation and Discussion |
| 12.30 – 14.00 | <i>Lunch</i> |
| 14.00 – 15.30 | <u>Plenary</u> |
| 14.00 | Hans Martin Lorenzen, <i>European Parliament, Commission for Agriculture and Rural Development</i> |
| 14.15 | <i>Discussion of the structure / contents for guidelines</i> |
| 14.45 | <i>Approval of Munich Statement</i> |
| | <i>Outlook / Vision</i> |
| 15.00 | Prof. Dr. Holger Magel, <i>TUM</i> |
| 15.10 | David Palmer / Fritz Rembold, <i>FAO</i> |
| 15.20 | Christian Graefen, <i>GTZ</i> |

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