

**FAO LAND TENURE STUDIES**

**6**

**The design of land  
consolidation pilot  
projects in Central  
and Eastern Europe**

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## **FAO Land Tenure Studies**

FAO's Land Tenure Studies are concise presentations on the often complicated and controversial subject of land tenure, especially as it relates to food security, poverty alleviation and rural development. These guidelines do not seek to be exhaustive but instead reflect what FAO and its many international collaborators have discovered are "good practices" for a particular aspect of land tenure and its administration. The studies cover various aspects of improving access to land and other natural resources and increasing tenure security. They address the role of land tenure in rural development, gender and access to land, improved access through leasing arrangements, rural property taxation systems and land consolidation.

More information on the Land Tenure Studies, and on FAO's work in land tenure, is available at:

[http://www.fao.org/sd/LTdirect/ltstudies\\_en.htm](http://www.fao.org/sd/LTdirect/ltstudies_en.htm)

[http://www.fao.org/sd/IN1\\_en.htm](http://www.fao.org/sd/IN1_en.htm)

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## Foreword

The present volume is part of a series of Land Tenure Studies produced by FAO's Land Tenure Service of the Rural Development Division. Land tenure plays a vital role in promoting sustainable rural development, thereby reducing poverty and hunger. Increasing technological change and economic integration are requiring policy-makers, planners, development experts and rural producers to re-examine the institutional arrangements used to administer who has rights to what natural resources for which purposes, for how long, and under what conditions.

This volume is intended to support people who are involved with the design of land consolidation pilot projects in Central and Eastern Europe. Land consolidation can be an effective instrument in efforts aimed at making agriculture in the region more competitive and at promoting rural development. There is growing inequality between rural and urban areas in Central and Eastern Europe. This situation occurs for many reasons, and efforts to enhance the quality of rural life must include improvements to agricultural production, employment, infrastructure, environment and housing. The success of integrated rural development projects will depend to a large extent on how they address the great number of small, fragmented farms that currently exist.

Carrying out a pilot project is an effective way to lay the foundation for a larger, long-term land consolidation programme. This guide aims to provide advice on what countries could do to start a land consolidation pilot project. The guide is based on work undertaken by the Land Tenure Service together with its partners over several years. The financial and technical support of GTZ in this process is gratefully acknowledged.

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Land consolidation was one of the first areas of tenure reform in which FAO was involved and a number of documents were prepared in the 1950s to guide those responsible for land consolidation in Western Europe. Land consolidation is now back on the agenda but conditions have of course changed. The experiences of Western Europe regarding what should and should not be done have already proved valuable to transition countries. But while these experiences are important, they will not provide all the answers. Each country in Central and Eastern Europe will have to find solutions that address its own particular conditions of fragmentation; its social, cultural, economic, legal, administrative and political environment; and the financial and other resources that it is able to mobilise.

This book, like others in the series, does not seek to be exhaustive but rather reflects what FAO and its many collaborators have discovered are “good practices”. FAO’s Rural Development Division looks forward to continuing collaboration with its larger audience.

**Maximiliano Cox**  
Director  
Rural Development Division

# 1. Introduction

- 1.1 Rural conditions have deteriorated in countries in Central and Eastern Europe and will continue to worsen until the problems are tackled through integrated rural development projects and programmes. The success and sustainability of such projects and programmes will depend to a large extent on how they address the reality of the millions of small and fragmented farm holdings in existence.
- 1.2 There is growing inequality between rural and urban areas. Much rural infrastructure has deteriorated considerably. Villages are becoming less attractive places in which to live. Schools and other rural public and cultural facilities are suffering from lack of attention. Rural roads are in poor condition, power and water supply systems are less reliable, and communications and media infrastructure is inadequate. There is high unemployment, and migration to urban areas is resulting in a declining and ageing rural population. Agriculture has developed into a dualistic structure of a relatively small number of large-scale farms and many millions of microfarms. There is an almost complete absence of the competitive, commercial family farms that are necessary for today's Europe and a globalising economy, and little is done to encourage people who are capable of creating competitive farms to do so.
- 1.3 Such potential entrepreneurial farmers are unlikely to invest their time, energy and money if they believe the quality of their life will be unsatisfactory. If the local school does not give children a good education, if local medical facilities are not available, if there are no recreational areas to enjoy on the weekends, if roads make travel difficult and dangerous, and if electricity is often unavailable, those who could be successful commercial farmers may decide to follow a different career if it offers them a better quality of life.
- 1.4 Migration of potentially successful commercial family farmers from rural areas will result in agricultural production being left increasingly to either

very large agricultural enterprises or to those who have no other choice in life: the elderly, the infirm, and those who are too poor to invest in agricultural improvements needed to make existing farms viable. Many owners of microfarms will be forced to withdraw from agriculture because of age or illness, and many of their heirs have no interest in agriculture. A scenario such as this will cause continuing degradation of the rural space and agricultural production will continue to spiral downwards just when it should be becoming stronger to match that of Western Europe.

- 1.5 To prevent such a situation from occurring, rural development projects and programmes are essential. Integrated rural development initiatives to enhance the quality of life must include improvements to agricultural production, employment, infrastructure, public facilities, housing and the protection of natural resources. In order for such integrated rural development initiatives to increase the attractiveness of rural areas, they must be comprehensive, multidisciplinary and cross-sectoral. Integrated rural development projects must provide a suitable environment for people who want to become successful commercial farmers; they must address the needs of subsistence farmers who currently have no other choice; and they must provide opportunities in the non-agricultural sector. To be successful, such integrated rural development must take into account the land tenure structure which includes vast numbers of small and fragmented farms.
- 1.6 Land consolidation can be an effective instrument in rural development. Agricultural development is one area in which land consolidation plays a vital role. Land consolidation can facilitate the creation of competitive agricultural production arrangements by enabling farmers to have farms with fewer parcels that are larger and better shaped, and to expand the size of their holdings. But because of the extensive nature of fragmentation and the growing importance of rural space for non-agricultural purposes, land consolidation has become an increasingly important instrument in strategies and projects to enhance the quality of rural life through improving natural resource management and environmental conservation,

providing infrastructure and services, creating employment opportunities and ameliorating conditions in villages.

- 1.7 Land consolidation can be used to improve the tenure structure in support of rural development by addressing land fragmentation. Fragmentation can occur in several ways, for example:
  - As a fragmented farm, i.e. a farm that comprises a number of parcels located some distance from one another.
  - As fragmented ownership, i.e. a farmer's holding that includes land owned by the farmer as well as land leased from others. The leased land may be owned by a neighbouring farmer or it may involve a case of "absentee ownership" with the owner living in a distant city.
- 1.8 Land consolidation can assist farmers to amalgamate their fragmented parcels. For example, a farmer who owns one hectare divided into five parcels may benefit from a consolidation scheme which results in a single parcel. Although the farm size remains the same, a larger and better shaped parcel may allow the farmer to introduce better farming techniques. However, such microfarms are not suitable for most competitive agricultural practices and land consolidation can also provide farmers with opportunities to increase the size of their farms, for example by acquiring land from state land reserves and land banks, or by having access to land of others through sales or improved leasing arrangements. Land consolidation projects should result in the amalgamation of fragmented parcels but they should also include other appropriate measures to establish an improved tenure structure that supports rural development. The emphasis of such projects should be on providing practical and needed solutions to problems faced by farmers and other residents of rural areas.
- 1.9 Land consolidation projects should support attempts to make agriculture more competitive, for example through the promotion of commercially viable family farms. However, a goal of establishing medium-sized commercial farms may take a number of years to achieve and so land consolidation projects may have to support other farming models, such as

part-time farming that combines market-oriented production with non-agricultural sources of income, as well as subsistence farming for those who have no other alternatives.

- 1.10 Land consolidation projects will result in substantial changes in land tenure arrangements and these actions are executed under the leadership of a state entity. Nonetheless, *land consolidation is not a form of expropriation*, either fully or partly. This is especially important in Central and Eastern Europe since changes to land tenure were at the heart of the establishment of the earlier socialist regimes and the subsequent transition to democratic market economies. Land consolidation schemes should not dispossess people of their rights to land. It may offer opportunities for land owners to sell their land to others but this should be done willingly. Land consolidation should not result in making people landless. Instead it should enable all land owners to benefit, and this should take priority over benefits to the state. For this to happen, active participation of farmers and other rural residents in the process is essential.
- 1.11 A number of countries in Central and Eastern Europe have expressed interest in introducing land consolidation programmes to improve rural livelihoods and the use of rural space. While systematic, comprehensive land consolidation may be the long-term goal of a country, there is a more immediate need for knowledge on starting land consolidation activities. This guide aims to show what should be considered in initial land consolidation pilot projects and in the development of a strategy to move from pilot projects to an ongoing programme.
- 1.12 The guide is intended primarily to support land administrators in agencies responsible for the technical design and implementation of land consolidation projects in transition countries. Its contents may also be relevant to national decision-makers and those in ministries responsible for preparing legislation and development programmes. Those in the donor community and in non-governmental organizations who work in broader rural development programmes may also find the information to be useful.

In addition, the guide may encourage and help farmers in their efforts to understand the complexity of the issue and to form a better understanding of the land consolidation process.

- 1.13 The guide starts by showing why land consolidation should be considered within agricultural and rural development policies and programmes. It describes the essential elements of land consolidation and how it can be introduced in different situations. Carrying out a pilot project is an effective way to lay the foundation for a larger, long-term land consolidation programme. The guide identifies what rules would be needed to govern responsibilities and procedures during the pilot, and describes actions that will have to be taken to start the project.
- 1.14 Because pilot projects will be limited to a few communities, the guide presents some examples of actions that could be taken by the state to provide an environment that supports voluntary initiatives to consolidate parcels and enlarge holdings. Pilot projects and other initiatives will provide valuable information as to what should be incorporated in a long-term programme of land consolidation. The guide identifies areas in which the experiences and results of initial activities should be reviewed and evaluated in order to provide insights for the design of a long-term land consolidation programme.

## **2. Why land consolidation is important**

- 2.1 Life in many rural areas is characterised by decreasing opportunities to earn a decent living in both the agricultural and non-agricultural sectors. This situation occurs for many reasons, and efforts to enhance the quality of rural life must combine improvements to agricultural production, employment, infrastructure, housing and the protection of natural resources. Such integrated rural development must take into account the land tenure structure which includes vast numbers of small and fragmented farms. This chapter illustrates why and how land consolidation can be an effective instrument in advancing rural development, and it highlights the need for countries to develop their own strategies for land consolidation.

### **THE RURAL SITUATION AND LAND TENURE**

- 2.2 Rural conditions throughout the region have deteriorated during the transition period. There is growing inequality between rural and urban areas, with most of the poor now living in rural areas. These areas are characterised by declining populations that are increasingly represented by women and the elderly. They have been affected by national population growth rates that have slowed and even turned negative, and as people have migrated to urban areas and other countries in search of employment. Migration has been a predominantly male phenomenon and women now make up a large percentage of the rural poor. Household members in rural areas are much older than those in urban areas and increasingly households are headed by the elderly and pensioners.
- 2.3 High unemployment is a common feature of rural areas. In most countries, the agriculture sector accounted for the greatest decline in employment. Rural villages suffered, particularly those where agricultural concerns and heavy industries, now obsolete, were the main employers.
- 2.4 Rural infrastructure has often deteriorated considerably and many rural roads, irrigation systems and erosion control measures are in poor

condition. The roads and irrigation and drainage systems that were originally designed to suit the cultivation of large tracts of land have often not been reconstructed to suit the new smaller family farms. Power and water systems are prone to breakdown and other rural public and cultural facilities such as schools, libraries and community centres have also suffered from lack of attention.

- 2.5 Much of the environmental damage that occurred in rural areas during the socialist period has not been repaired. Large-scale cultivation destroyed field roads, water courses, vegetation belts and other landscape features suitable for individual farming. Production centres were often placed in the heart of villages with adverse ecological impacts. Environmental degradation has sometimes increased during the transition period, for example through the deforestation of valuable species, inappropriate tillage of soils and a failure to maintain a balance of nutrients in the topsoil.
- 2.6 One effect of land privatisation has been a shift from mechanised to non-mechanised production because new owners face great difficulties in getting access to machinery which was taken over by local monopolies or which remains state property. In some countries, a significant proportion of arable land is idle because of obstacles to cultivation and the absence of the present owners.
- 2.7 The agricultural structure comprises some very large farms and many millions of microfarms, with an almost complete absence of intermediate-sized competitive, commercial farms. The larger farms, sometimes covering thousands of hectares, are operated by the state, commercial companies, private associations or cooperatives. In contrast, farms of under five hectares account for 75 percent or more of the total number of farms in most countries. Many farms are even smaller: in Bulgaria, farms smaller than one hectare comprise 86 percent of individual farms and cover only 26 percent of the farming area. Most farms are subsistence farms that produce little for the market, but they are often an important source of income and food security for many rural residents. Daily food consumption is based to a large extent

on a household's own production. For many farmers, their strategy is one of trying to survive with no clear vision of how to advance.

- 2.8 In most transition countries the land tenure structure of many small farms, frequently divided into fragmented parcels that are often awkwardly shaped for agricultural purposes, is a legacy of the first phase of transition (see Box 1). In some cases, the principle of correcting property injustices resulted in the restitution of land to former owners. Land was usually restituted to the elderly, or in joint ownership to a group of heirs of an original owner. Restitution also established a large group of absentee owners residing in urban areas who have little or no involvement with farming or the rural economy. In other cases, the principle of equity applied in decollectivisation programs resulted in households receiving several parcels of different qualities of arable land, a portion of the vineyard, and of the orchard. In yet other cases, the pattern of small fragmented parcels is the perpetuation of centuries-old peasant holdings that survived limited socialist attempts to transform agrarian structures.

#### BOX 1

##### **LAND TENURE STRUCTURE**

- The great majority of farms are very small, usually under five ha and with many smaller than one ha.
- Farms comprise a number of parcels. About 4-5 parcels in a holding is common and some farmers have over 15 parcels. The size of a parcel is often between 0.25 and 0.6 ha.
- Parcels are often some distance apart, sometimes up to 20 km, and can be in different administrative districts.
- Parcels are often awkwardly shaped for agricultural purposes. Some parcels are very narrow and long, e.g. three metres wide and 1 000 metres long.
- Farms are often owned by the elderly.
- Farms are often jointly owned by a number of people.
- Farm owners are often absent, with many living in urban areas.
- Owners sometimes do not have legal titles.

- 2.9 While good progress has been made in building new registration and cadastre systems to administer rights to land, at times such rights have not yet been clearly established. In some case, owners have not received legal title to the land they occupy. In other cases, many new parcels are created informally through the division of agricultural land among the heirs or other entitled persons. When there is considerable soil diversity within a small area, subdivision tends to produce a physical division of each individual parcel according to the number of heirs rather than the distribution of intact parcels. Such informal arrangements within families are often not registered.
- 2.10 Farmers wanting to enlarge their holdings face many difficulties. The main way in which land is transferred is through inheritance, and land markets are weak. People wanting to purchase land have great difficulty in determining what land might be available for sale, and they often face problems in identifying who holds rights to the land. Records may refer to the original, often deceased, owners and present heirs may be difficult to locate, especially if they are not local residents. Delays in clarifying ownership and issuing title after the privatisation programmes add to the problems. The joint ownership of land also impedes sales as all owners must agree and this can take time especially if some owners are outside the country. Few farmers can afford to pay cash for land, and access to credit in rural areas is limited because of high interest rates, lack of collateral and bank policies that do not favour lending to rural people. High transaction costs compared with the value of the land further discourage purchases.
- 2.11 Rural conditions do not encourage land owners to sell their land. Some owners have a strong emotional attachment to newly restituted land or to parcels that have been passed down through generations even during the socialist times. Rural land holdings are an important safety net providing economic independence especially for those with a decreased capacity for work. They also serve as a last resort for those owners in urban areas should they lose their employment. Because of the low market value, money raised by selling rural land is not sufficient to allow owners to explore

other opportunities such as purchasing a house in an urban area or investing in business operations. Many people thus prefer to keep their land even if it is generating little or no income for them.

- 2.12 Leasing is the principle way in which farmers have been able to enlarge their holdings, allowing them to increase production for the market as well as for their own consumption. It is attractive to those wanting land because it has lower financial requirements, thus enabling farmers to invest their money in equipment and other inputs. Leasing also represents an alternative to many people, especially the large elderly population, who can no longer work the land themselves. Rents are usually arranged to meet the requirements of the owners: those living in villages often receive rent in kind (usually cereals for themselves or their livestock) while those residing in cities prefer to be paid in cash. While leasing is beneficial, it has proved to be only a partial solution. The small size of parcels in a holding and their distribution over a wide area make consolidation difficult. Assembling a holding suitable for commercially competitive operations can result in leasing agreements with many owners. Commercial operators who lease land often have contracts with over 100 owners and some manage over 1 000 contracts, and they must deal with the cumulative transactions costs implied by this.

## **RURAL DEVELOPMENT AND LAND CONSOLIDATION**

- 2.13 An important part of European policy is to reduce disparities between urban and rural areas by improving the rural situation. Upgrading conditions in rural areas requires sustained programmes and projects that lead to the development of farms, villages and small towns, and the rural space in which they exist. Because rural communities have diverse needs, an integrated approach to rural development should include:
- Improving the agricultural sector by enabling farms to become more efficient and competitive, and better integrated in agricultural chains.
  - Encouraging alternative ways of agricultural production such as the implementation of agri-environmental measures and good agricultural practices.

- Strengthening the rural economy by promoting broad-based growth, including supporting non-farm activities and providing access to credit, markets and infrastructure support.
- Improving social conditions by promoting employment opportunities and providing increased access to social services, water and sanitation.
- Providing greater protection of natural resources and for their sustainable management.
- Ensuring greater participation in the development process by those usually left out of it.

2.14 The success and sustainability of rural development programmes will depend to a large extent on how they address the vast numbers of small and fragmented parcels. Growing numbers of land owners are being forced to withdraw from agriculture because of age or illness. Many of their heirs have no interest in agriculture and are divorced from village life. Other land owners wish to consolidate and enlarge their holdings so that their farms are competitive with those in Western Europe. The present tenure structure arose in large part through the application of principles of justice and equity during the land reforms. Projects supporting agricultural development, natural resource management and broader aspects of rural development must address the consolidation and enlargement of holdings in ways that do not destroy gains made during the initial period of transition. Land consolidation can be used as a highly effective instrument in rural development, providing land owners with new opportunities to improve their situation. Box 2 provides some principles used in current approaches to land consolidation.

2.15 Land consolidation can lead to *improvements in agriculture*. Allowing farmers to acquire farms with fewer parcels that are larger and better shaped, and to expand the size of their holdings enables them to become more competitive. Improving the tenure structure can facilitate the adoption of new agricultural technologies leading to a more prosperous and efficient agricultural sector. Benefits from land consolidation in

## BOX 2

**PRINCIPLES OF MODERN LAND CONSOLIDATION**

- The objective should be to improve rural livelihoods rather than to improve only the primary production of agricultural products.
- The end result should be community renewal through sustainable economic and political development of the whole community, and the protection and sustainable management of natural resources.
- The process should be participatory, democratic and community-driven in practice and not only in concept.
- The intervention should be to assist the community to define new uses for its resources and then to reorganize the spatial components accordingly.
- The approach should be comprehensive and cross-sectoral, integrating elements of rural and broader regional development including the rural-urban linkages.

Western European countries include increases in gross income of farmers and a reduction in the working hours in the field.

- 2.16 Land consolidation can promote *improved management of natural resources*. Rationalising the tenure structure can facilitate environmental protection and can support better land use planning and land management. As a consequence of economic development, increasing amounts of agricultural land are identified for industrial and housing purposes, highways and other projects. Land consolidation can help in addressing potential conflicts over changes to the use of land. Projects can use land consolidation to provide alternative land as compensation to owners of agricultural land designated for other purposes. Improved planning of water and other resources often requires the readjustment of parcel boundaries. The structure of land can have a substantial influence on the geo-ecological and bio-ecological resources. The size and shape of parcels, the slope and type of land use can work to either cause or prevent the degradation of soils and landscapes. Increasing the size of micro-parcels can enable farmers to use less intensive methods and to decrease adverse environmental effects.

- 2.17 Land consolidation can play an important role in *improving rural development*. When applied as an instrument of rural development, land consolidation can improve the efficiency and cost-effectiveness of public and private investments in transportation and communication networks, utilities and irrigation systems. By facilitating renewal of communities, land consolidation can promote social stability. In Western Europe, many communities that have experienced land consolidation show increases in the number of new jobs created which in turn lead to increases in tax yields. Potential conflicts between the promotion of economic growth in the agricultural sector and the protection of the environment can be avoided through integrated local land planning and the effective coordination of all interests. Land consolidation projects can serve to provide the framework for implementing such integrating local land planning.
- 2.18 Land consolidation projects also serve to *improve land administration systems* as they provide an opportunity to clarify and update ownership records. The better quality of information on land rights in turn facilitates the development of land markets and the management of land conflicts.

### **THE NEED FOR A LAND CONSOLIDATION STRATEGY**

- 2.19 Important structural changes to agriculture can occur effectively only if land consolidation is part of integrated rural development. Without a concerted effort, structural changes are likely to be limited in scope and to occur at a much reduced rate. Farmers recognise the problems of land fragmentation but the market and voluntary efforts to consolidate have not made significant impacts. A land consolidation strategy is needed to ensure that necessary resources and assistance can be provided to farmers and other rural residents in a coherent manner.
- 2.20 A land consolidation strategy should recognise that *rural society is diverse*. Non-agricultural interests must be considered along with those of agriculture. The farming sector itself comprises groups having very different interests and aspirations. Subsistence farmers very often have no other opportunities. Some owners use subsistence farming as a temporary coping strategy while

for others it is a permanent condition: land consolidation cannot make them landless. Part-time farmers often maintain farms only as a sideline to supplement their incomes and do not necessarily want to expand their operations. Small family farms that wish to increase their production for the market, and larger-scale commercial farms, are usually interested in expanding their operations. The needs of farmers are also diverse. Some do not want changes. Others want to reduce problems of fragmentation and poorly shaped parcels, and yet others want also to increase their holding size. Some farmers need assistance with extension services, credit, machinery, processing facilities and marketing while others have addressed some or all of these problems. Land consolidation must be attractive not only to large-scale farmers; it must appeal to a broad cross-section of rural society.

- 2.21 The strategy should accept that *not all fragmentation is a problem*. In some cases fragmentation is beneficial as it reduces risk by giving farmers a greater variety of soils and growing conditions, especially in mountainous areas. Having fields at different elevations, or maintaining coastal and upland parcels, enables farmers to grow a wider variety of crops. Some fragmentation can be neutral. A concern of early land consolidation projects was the time taken to move between fields, and while this remains an important issue, it has become less of a concern as improved access to trucks and other motorised equipment has allowed farmers to travel more quickly and less expensively from one field to another. Fragmentation of holdings will and should occur as farmers respond to changing market conditions by periodically expanding and contracting their operations by leasing land in or leasing it out. It will not be possible or even desirable to eliminate land fragmentation entirely. Land consolidation must address cases where land fragmentation is a problem and not impose a solution where it is not needed.
- 2.22 The strategy should ensure that land consolidation *protects and enhances the environment*. Land consolidation is not automatically beneficial and the strategy should ensure that efforts do not make the situation worse. An over-reliance on certain technical aspects of consolidation in projects has resulted in degradation of nature and the landscape, and in over-production

at the cost of the environment and bio-diversity. Poorly designed projects have resulted in land degradation by encouraging the use of unsuitable land for agricultural purposes and have caused the drying up of wetlands through the construction of inappropriate drainage systems. Rivers were canalised and hedges removed, resulting in soil erosion through unchecked rain runoff, and in damaged habitats of native plants and rare animals. A large focus of rural development in Western European countries is correcting the environmental damage done in earlier projects. Land consolidation should not cause environmental damage.

2.23 The strategy must recognise the *need for diverse local solutions*. Land consolidation must take into account local agricultural, economic, social and environmental characteristics, and must be based upon expectations and needs of the local rural populations. Consolidation projects in mountainous areas, or in forested ones, will be quite different from those on agricultural plains. The influences of environment and culture, along with financial constraints and other limitations, will make a range of consolidation approaches necessary.

2.24 At the same time, a land consolidation programme will have to *accommodate national and sub-national priorities* as well as local ones. The strategy should address:

- Institutional issues: what tasks should be done at what level by which institution, and how will participatory, local level “bottom-up” involvement be implemented.
- Financial issues: how will money to pay for land consolidation be sourced, and how can the process be made cost-effective.
- Legal issues: what will be the legal basis for implementing land consolidation.
- Capacity building: how can participants at all levels and in all sectors acquire the knowledge and skills they need to carry out their responsibilities.

- International cooperation: how can countries gain access to the technical and financial resources of donors.

2.25 The strategy should look at a *phased approach to land consolidation* due to the complex nature of rural development. While the ultimate goal of a country may be a comprehensive land consolidation programme, it may be necessary to proceed with a learning phase. This guide provides one approach to phasing by starting with the implementation of pilot projects (see chapter 4). Additional steps can be taken simultaneously to promote land consolidation in areas that fall outside the pilot project sites (see chapter 5). Both measures should provide experience and information on institutional, financial, legal and technical matters relevant for the design of the comprehensive programme (see chapter 6). Before addressing these elements, chapter 3 provides a further description of land consolidation itself.

## 3. What is land consolidation

- 3.1 Land consolidation is sometimes incorrectly interpreted to be only the simple reallocation of parcels to remove effects of fragmentation. In reality, land consolidation has been associated with broader social and economic reforms from the time of its earliest applications in Western Europe. The first consolidation initiatives of Denmark in the 1750s were part of a profound social reform to free people from obligations to noble landlords by establishing privately-owned family farms. The consolidation of fragmented holdings did result in improved agricultural productivity but this was not the only objective of these reforms. This chapter illustrates the wide range of rural development objectives, ranging from agricultural improvement to village renewal and landscape development and protection, which can be addressed through land consolidation projects. It describes various land consolidation approaches and concludes with an overview of conditions that should be put in place before land consolidation projects can be undertaken.

### **SCOPE OF LAND CONSOLIDATION SCHEMES**

- 3.2 Land consolidation has always been regarded as an instrument or entry point for rural development. Early concepts of rural development were virtually the same as agricultural development because of the predominant role of agriculture in rural areas at the time. Improving the agrarian structure was viewed as being identical to maintaining the social viability in rural areas; what was good for the farmers was good for rural areas. An overall objective of early projects was thus to increase the net income from land holdings by increasing the volume of production and decreasing its costs. With this focus on agricultural development, these projects served to consolidate parcels and enlarge holdings and included provisions such as irrigation and drainage infrastructure to improve water management, construction of rural roads, land levelling, soil improvement measures and changes to land use such as converting agriculturally inferior land into forest land or wetlands.

- 3.3 Such agricultural improvements are still essential but rural space is now no longer regarded as one of agricultural production alone. Concepts of rural development have become much broader and have expanded to include increased environmental awareness and a wide range of non-agricultural applications. The emphasis of land consolidation projects has shifted from a focus on restructuring agriculture to one of achieving more efficient multiple use of rural space by balancing the interests of agriculture, landscape, nature conservation, recreation and transportation, especially when land is required for the construction of major roads.
- 3.4 Environmental conditions are being given increasing priority. Roads are being constructed to suit the landscape. Water bodies are being restored, often with buffer zones. Land consolidation projects are also used for the protection of wetlands and to change land use patterns especially in areas endangered by frequent floods or soil erosion.
- 3.5 Land consolidation now encompasses activities of village renewal. Projects include providing adequate land for new houses and workplaces to improve living and working conditions. Along with the changing rural economy, buildings previously used for agriculture are renovated and converted to other social and commercial uses.
- 3.6 In line with other changes in the concept of rural development, land consolidation now places increasing importance on gender inclusion, participatory approaches and the use of mediation and alternative dispute resolution in resolving conflicts.
- 3.7 Land consolidation projects have also served to modernise tenure arrangements by eliminating outdated rights of use, including some rights of access, grazing, hay-making, timber-felling, fishing and boating, and the extraction of peat, clay and sand.
- 3.8 In early consolidation projects the resettlement of farmers was often considered important. Family farmsteads, originally placed in old

established villages, were resettled at the external perimeter of the consolidation project area. As access to motor vehicles became more widely available, travelling from village to field was easier and modern villages became viewed as more suitable for retaining the rural population than isolated farmsteads. In some cases, farming families were moved from congested areas to more distant zones, often with considerable reluctance. Such resettlements are less likely to be a feature of land consolidation in transition countries since rural areas are not overly congested and, in contrast, their populations are declining. However, there may be occasions where farmers spend more time travelling between fields than working the land and resettlement may be a solution if families are willing to relocate.

### **APPROACHES TO LAND CONSOLIDATION**

- 3.9 The most effective consolidation instrument of rural development is comprehensive land consolidation but at times other approaches such as simplified consolidation, voluntary group consolidation, and individual consolidation initiatives can bring benefits. This section provides an overview of these different approaches.
- 3.10 **Comprehensive land consolidation** includes the re-allocation of parcels together with a broad range of other measures to promote rural development. Examples of such activities include village renewal, support to community-based agro-processing, construction of rural roads, construction and rehabilitation of irrigation and drainage systems, erosion control measures, environmental protection and improvements including the designation of nature reserves, and the creation of social infrastructure including sports grounds and other public facilities.
- 3.11 Procedures for land consolidation projects vary from one country to another but they generally involve the initiation of the project, design of the project, inventory of existing land rights and land values, elaboration of the detailed consolidation plan showing the new parcel layout, implementation of the plan, and finally a concluding phase in which final records are produced. Box 3 lists typical steps.

**BOX 3****STEPS IN COMPREHENSIVE LAND CONSOLIDATION**

1. Initiation of the land consolidation project.
  - a) Request for initiation of a project.
  - b) Analysis of the situation and identification of what is needed and wanted.
  - c) Preparation of an initial concept plan that states the aims of the proposed project and approximate estimates of costs and sources of financing.
  - d) Approval of the request by participants and the state.
  - e) Formation of a local management team with representation from the community.
2. Design of the project.
  - a) Selection of consultants to design the project.
  - b) Precise definition of the area and scope of the project.
  - c) Preparation of cost-estimate and schedule for the project.
  - d) Evaluation of projected costs and benefits.
  - e) Preparation of cost-sharing formula.
3. Inventory of the existing situation.
  - a) Identification or adjudication of boundaries and the legal status of parcels, including lease rights, mortgages, and easements or servitudes.
  - b) Delimitation of important environmental areas.
  - c) Determination of the value of parcels.
  - d) Handling of objections related to boundaries, ownership and valuations.
4. Elaboration of the detailed land consolidation plan.
  - a) Preparation of the draft consolidation plan showing the new parcel layout, location of new roads and other public facilities, and identifying those roads and facilities which will be removed.
  - b) Presentation of several plan alternatives with cost-benefit and environmental impact assessments.
  - c) Review of the options for consolidation by participants.
  - d) Preparation of the final detailed consolidation plan to accommodate comments of participants.
  - e) Handling of objections.
  - f) Approval of the detailed consolidation plan.

5. Implementation of the detailed consolidation plan.
    - a) Selection of contractors for construction works, etc.
    - b) Construction of public works (agricultural improvements, levelling, drainage, new roads with bridges and culverts, etc.)
    - c) Survey of new boundaries on the ground.
  6. Concluding phase.
    - a) Working out compensation and apportionment of costs.
    - b) Final updating of the cadastral map.
    - c) Issuing and registration of new titles.
- 3.12 The allocation of responsibilities for carrying out these steps also varies between jurisdictions. There is usually a clear division between responsibility for overall supervision, control and monitoring functions, and responsibility for implementation. The responsibilities for the supervising agency should be defined in legislation. One of the first considerations in proposing a land consolidation pilot project is determining the roles and responsibilities of the various parties. This matter is further elaborated in chapter 4.
- 3.13 Comprehensive land consolidation projects usually have extensive public works and so they require the participation of a large number of central government agencies such as the Ministry of Agriculture, Ministry of Justice, Cadastre offices, Registry offices, Ministry of Public Works, Ministry of Environment, Ministry of Transportation and Ministry of Rural Development.
- 3.14 With the trend towards decentralisation, projects increasingly involve local and regional governments, municipalities, water boards or water associations. These bodies are usually prepared to play active roles and to cover part of the costs.
- 3.15 The participation of farmers' groups and other representatives of civil society have always been considered necessary but, along with the

importance attributed to participatory development, their involvement is becoming greater and is occurring at the earliest stages of the process.

- 3.16 Comprehensive land consolidation projects introduce major changes throughout the project site, and they generally require the participation of all owners in the project area. In many countries land owners can be drawn into a project against their will. People may be required to participate even if they oppose the project as long as they will not lose as a result of it. The success of a project thus depends to a great extent on the initial steps taken to obtain the support and cooperation of farmers and other stakeholders who would be affected by the project.
- 3.17 Information and communication is essential. People must understand how they will benefit from the project and how the changes will impact on them. Providing information on the financing of the project, including who will contribute to financing, is important as it influences opinions of farmers. Providing information on the benefits of the project is equally important. Failure to communicate effectively results in misunderstanding and even misleading rumours. Negative views that are needlessly caused usually result in more difficult negotiations, delays and higher implementation costs. Information must be tailored to the knowledge and attitudes of different groups of stakeholders such as farmers and other residents of the area, and politicians at the local, regional and national level.
- 3.18 Because there are so many competing interests of the various stakeholders, objections may be raised regarding the initial inventory of ownership, boundaries and values of parcels, and in the preparation of the detailed consolidation plan showing the re-allocation of parcels. The role of mediation in resolving some of these disputes is becoming increasingly important.
- 3.19 A traditional principle has been that an owner should not be worse off after consolidation than before it. Projects often aim at ensuring that an owner's holding after consolidation is equal in value to the original holding; if the

value of the holding is smaller after consolidation, equivalency can be achieved by paying financial compensation. From one perspective, if a farmer received poorer quality land after consolidation, the amount of land allocated should be suitably larger than the original holding to ensure equivalency. The development of transparent rules defining the natural yield potential of land can be important in defining values. However, soil quality is not the only factor in valuation and the value of a parcel can be affected by its position relative to other parcels, roads, farm buildings and homesteads. “Equal value” is thus not only a question of soil values but includes all factors that have a substantial impact on the use of the land.

- 3.20 The principle of equivalency may be difficult to apply in practice, particularly when topographic conditions limit the arrangement of new parcels. Even where land is not irrigated, variations in water conditions and supplies can have a considerable influence on the location of farms and the arrangement of parcels. The existence of vines and fruit trees further adds to the complications of ensuring equivalency. These valuation problems are usually overcome by including farmers respected by community members in the land valuation teams or committees along with valuation experts.
- 3.21 Instead of merely maintaining the same value after a project, land consolidation offers the opportunity for some owners to enlarge their holdings. This may be done as other farmers choose to exit from agricultural activities. In some systems, a farmer participating in a project may be bought out completely or partially to provide additional land for consolidation purposes. Land banks are also used to allow farmers to increase their holdings and to cover requests for land for public facilities such as new roads, recreational sites and ecological protection areas. The transfer of state land reserves to a land bank should be addressed in a national land consolidation strategy. Privatisation of land could take place through land consolidation projects and a land bank could buy land in other areas for specific purposes of future projects and to provide alternative land for compensation for land used for public facilities, etc.

- 3.22 Some systems place limits or restrictions on rights during the project. For example, owners and tenants may not be allowed to make changes which affect the property values without authorisation after the valuation inventory has started.
- 3.23 Ensuring that the project is cost-effective is crucial. Geographic information systems and satellite positioning systems are now routinely used to reduce time and costs of surveying and planning. Several countries have developed semi-automated systems for use in designing the new layout of reallocated parcels.
- 3.24 Project management is important in order for the project to keep to budgeted costs and the time schedule, to maintain rapport with participants, and to ensure the legitimacy of all decisions and actions. Technical management skills are also important as huge amounts of data are collected and used.
- 3.25 **Simplified land consolidation.** Some countries have introduced simplified versions of consolidation. Simplified land consolidation optimises conditions in the agricultural sector through the re-allocation or exchange of parcels, and the provision of additional lands from land banks. These simplified projects are often combined with the rehabilitation of infrastructure and sometimes the provision of minor facilities. They do not include the construction of major public works, but they can provide the framework for their construction at a later stage. Procedures for simplified land consolidation projects tend to follow those of comprehensive projects but some of the requirements may be relaxed.
- 3.26 **Voluntary group consolidation.** Some countries provide for mutual agreement with no element of compulsion. As consolidation is entirely voluntary, all participants must agree fully with the proposed project. As a result, voluntary projects tend to be small, and voluntary consolidation tends to be best suited to address small and localised problems. In some countries, voluntary projects usually have fewer than ten participants but in Denmark almost all land consolidation projects are carried out in a

completely voluntary process and are typically based on negotiations with about 50 land owners, although some projects have involved about 100 participants.

- 3.27 **Individual consolidation.** Consolidation of holdings can take place on an informal and sporadic basis. The state is not directly involved and so these initiatives do not include the provision of public facilities. However, the state can play a significant role in encouraging consolidations that improve agriculture by promoting instruments such as joint land use agreements, leasing and retirement schemes. Chapter 5 provides more information on how the state can provide a supportive environment to encourage transactions.

### **PRECONDITIONS**

- 3.28 A number of conditions should be in place before a land consolidation project can be undertaken. Stakeholders should be willing to participate actively in the decision-making process of a project. The process should be demand-driven and a project site must be identified where local citizens and community authorities are interested in land consolidation. For the project to be most effective, reallocation of land parcels will need to be consistent with the rural development and agricultural sector strategy, and the protection of natural resources. A land bank is very important in a comprehensive land consolidation programme but it should not be considered to be a prerequisite for a pilot project. However, the site selected for the pilot project should have adequate supplies of land owned by the state or local government that can be used for exchanges, to enlarge holdings and to locate public facilities. While specific land consolidation legislation may not be needed for a pilot project, appropriate legislation must exist to provide a legal basis for the project. These conditions may not exist and so may have to be developed. Chapter 4 describes in more detail what would need to be in place for a pilot project.

## 4. What should be considered in a land consolidation pilot project

- 4.1 A land consolidation pilot project is a way to lay the foundation for future work to be carried out under a long-term programme. A pilot project usually pioneers new approaches and techniques, and thus its initiation, design and implementation may differ from the operations of later projects. Many of the organizational and legal elements that would be taken for granted when implementing projects within a mature programme will have to be devised, established and tested in a pilot. Such pilot projects are a vehicle for testing procedures and gaining experience and information needed for the design of a long-term programme. (Box 4 describes land consolidation pilot projects in Lithuania.) Pilots thus allow for a phased approach to land consolidation. Before beginning any land consolidation work, rules

### BOX 4

#### **LAND CONSOLIDATION PILOT PROJECTS IN LITHUANIA**

Lithuania, with Danish assistance, is carrying out land consolidation pilot projects to support sustainable rural development.

Three pilot areas, each with different conditions, have been selected in different parts of Lithuania. The main local measures in the project areas are:

- Land consolidation in connection with the construction of a new highway.
- Land consolidation in connection with afforestation on unused land.
- Land consolidation to improve the local agricultural structure.

The projects seek to implement the measures for rural development.

Participation of land owners is completely voluntary and is based on negotiations.

Lithuanian planners handle the negotiations with support of Danish advisors at seminars and monthly visits.

The projects provide detailed inputs for the development of a legal framework for land consolidation.

The project period is from October 2002 to January 2004.

governing responsibilities and procedures must be defined and approved. This chapter describes areas in which such rules will be needed and identifies requirements that must be met in order to start the project.

### **DEFINING THE RULES, ROLES AND RESPONSIBILITIES**

- 4.2 When starting a pilot project, the process may be more iterative than in the case of projects in a long-term land consolidation programme. What is included in the scope of the pilot project (e.g. agricultural improvements, environmental protection, public facilities, village renewal, etc.) will depend on the location selected for the pilot project. The selection of the project site in turn will be affected by the willingness of a local community and its farmers to participate in the project. This willingness will depend on the improvements to be provided and the way in which the costs will be shared between central government agencies, local governments and individuals. Securing donor funding will affect the financing of the project and what is included in the scope of the project. Some of the rules that will need to be established when working towards the pilot project are summarised in Box 5 and are further described below.
- 4.3 **Who will be assigned legal responsibility for the land consolidation?** A government agency should be assigned overall legal responsibility for land consolidation. In countries with long-term land consolidation programmes, the land consolidation agency typically has experts in agriculture and agriculture engineering, land administration, environment and landscape management, rural infrastructure, water management, finances and project management. This level of expertise will typically not exist in the lead agency in a country which is planning a pilot project. The pilot project should serve to identify how the necessary skills and expertise can be acquired.
- 4.4 The lead agency should initiate the development of a national land consolidation strategy that identifies land consolidation as an instrument of rural development. It will also be responsible for getting land consolidation pilot project activities started. During the project, work may be contracted to various individuals or companies under the final

## BOX 5

### ESTABLISHING THE RULES, ROLES AND RESPONSIBILITIES

Before a project can start, the following questions will need to be answered:

- Who will be assigned legal responsibility for land consolidation, i.e. what is the lead government agency?
- Who else will participate and how will efforts be coordinated?
- How long should the project take?
- How can additional lands be acquired for public facilities and enlargement of farms?
- Which community will be selected for the pilot?
- What will be included in the pilot project? What improvements and benefits will be provided?
- Will the benefits exceed the costs?
- How will costs be shared?
- How will leases, servitudes and mortgages be treated in the project?
- How will the request for the project be initiated and approved?
- Who will supervise the design and implementation of the project?
- How will the adjudication process be carried out?
- How will the valuation process be carried out?
- How will changes that are made during the project to ownership and valuation be handled?
- How will the detailed consolidation plan be prepared and approved?
- How will the consolidation project be implemented?
- How will the change to property rights occur?

responsibility of the lead agency for the project. The lead agency will have to coordinate with various line ministries that would become involved in a pilot project, the local government where the pilot projects will be sited, and perhaps donors and the European Union.

- 4.5 **Who else will participate and how will efforts be coordinated?** A pilot project will require the development of horizontal linkages between agencies and other bodies, and vertical linkages between different levels of participants. For example:

- A pilot project may require the allocation of significant resources from various *central government ministries*. How will key government agencies coordinate their efforts? Some form of inter-ministerial coordination will be required.
- With the trend towards decentralisation, projects increasingly involve *local and regional governments, municipalities, water boards or water associations*.
- The participation of *farmers and other rural residents* must be defined in the institutional framework. In some countries it is common to create a Body of Participants or General Assembly comprising all eligible members of the community. This Body is represented in discussions and negotiations by a smaller group of members, often referred to as the Local Management Committee, Advisory Board or Participants' Board.
- The potential role of the *private sector* as technical consultants or contractors should be identified. Some countries may encourage the private sector to undertake surveying, valuation and land planning activities, as well as to play a role in managing the pilot project, while other countries may look to the public sector to carry out these tasks.

4.6 **How long should the project take?** The project must not last so long that its activities adversely affect the community. The length of time will depend on the scope of the project and other factors but a time period of between eighteen months and three years should be acceptable to most communities.

4.7 **How can additional lands be acquired for public facilities and enlargement of farms?** Land may be required for the provision of new public facilities, and for improvements to existing infrastructure, e.g. the widening of roads and the protection of ecologically sensitive areas. Land for common rural infrastructure may be provided by all participants, although taking farm land for these purposes will further reduce the already small holdings. Land banks, land reserves and land funds may be a very

important source of land for improvements and for enlarging the size of holdings. As well, additional land may be made available by farmers who decide to cease farming. Rules and procedures for acquiring additional land may have to be devised. The acquisition of land, and the project itself, may result in changes of land use from agriculture to non-agriculture, and in changes in land use categories. Procedures for permitting such changes to occur within the project will need to be defined.

- 4.8 **Which community will be selected for the pilot?** The choice of community for the pilot project should reflect priorities of the central government and the interest of local communities. The availability of additional land from land reserves and land banks may be an important factor. In some countries, a community may already be a natural choice because of past activities. In other cases, communities within an area designated as a growth area could be invited to propose themselves as a candidate for the pilot project. Box 6 provides examples of criteria that could be used for the selection.
- 4.9 **What will be included in the pilot project?** The activities to be included will depend on the priorities of the project community and on the condition of the natural and built environment. It may also depend on the extent to which the lead agency has been able to interest other line ministries responsible for public facilities. This will be the case if those line ministries are expected to fund the construction out of their own budgets.
- 4.10 A thorough analysis of the needs of the community must be undertaken to determine if a land consolidation pilot project will be beneficial and, if so, what kind of land consolidation procedures should be implemented (e.g. comprehensive land consolidation with elements such as the reconstruction of rural infrastructure and village renewal, simplified land consolidation or voluntary land consolidation). The analysis should identify if informal consolidation efforts are being undertaken through leasing and other means and, if so, how the pilot project can benefit from these voluntary and informal actions. For example, a project could consider how leased parcels could be amalgamated with a farmer's own parcels if all parties agree.

## BOX 6

**EXAMPLES OF CRITERIA FOR SELECTING THE PILOT AREA**

An analysis should be carried to identify whether a location has satisfactory potential for land consolidation. Possible criteria include:

- An already exhibited interest in land consolidation activities by farmers and the local government, and the absence of strong opposition to land consolidation.
- A relatively small number of absentee owners.
- The existence of adequate records documenting land ownership and the absence of factors such as land disputes.
- The availability of land from a land bank or other sources to allow for the expansion of holdings and for the construction of new public facilities, etc.
- Potential for land consolidation to result in significant improvements. For example, if farmers already have established marketing channels they should be able to benefit immediately from increased production that would result from land consolidation. Close access to major highways could also be a factor.
- Location within a designated growth area of the country. This would allow benefits from consolidation to be linked to benefits arising from other development initiatives.
- Environmental considerations such as the protection of specific natural resources.
- Plans of other line ministries for the construction of public facilities, environmental protection, etc.

4.11 Such an analysis, using for example the SWOT (Strengths, Weakness, Opportunities and Threats) approach, should include the participation of the key people and institutions identified in previous steps. The analysis should recognise that there will be various categories of farmers and owners in the community (such as subsistence farmers, part-time farmers, commercial farmers, owner-operators, lessees and absentee owners) with differing interests and needs. It should assess the impact of a land consolidation project on these different groups.

4.12 The analysis of potential benefits should result in the project scope being defined in several ways:

- The *specific nature of improvements* to be included must be identified.

What types of agricultural improvements, public facilities, environmental amelioration and protection, village renewal, etc., will be introduced?

- The *parcels to be included* in the project must be defined. Which agricultural parcels, forest land, water rights, non-agricultural land, rural built properties, villages, etc., will be included? Will any parcels be excluded, for example because they are under special crops? Parcels where farmers have their homes are usually excluded.
- The *size of the project* must be defined. Too large an area will increase project costs and duration and complicate management. Too small an area will not bring benefits from economies of scale. Typically projects range from several hundred to several thousand hectares, with the number of participants being a determining factor. For a pilot project, a maximum of 100 land owners might be considered. The project boundaries should be chosen so that as much land of each holding is included in the project site. The boundaries of the project area should be kept flexible if possible, as small changes during the project will often give a better result.

4.13 A pilot project may have to balance a need for the project scope to be sufficiently comprehensive to address important needs of the community, and a need to keep the pilot as simple as possible in order to make management of the project easier. The result of the first pilot project will likely have a major effect on decisions for future land consolidation activities. The scope of the project, and its implications regarding the coordination of a number of stakeholders such as different sector ministries, should be evaluated for potential risks. A small, simple pilot that is successful will be more valuable than a larger comprehensive pilot that fails to achieve its goals. The scope of the pilot project should ensure an improvement to the agricultural situation, and care should be taken to ensure that any other components of the project (such as the provision of public facilities and environmental amelioration) are appropriate for the naturally limited scale of a pilot project. Box 7 summarises the scope of the Dotnuva area pilot project in Lithuania.

## BOX 7

**SCOPE OF DOTNUVA PILOT PROJECT**

Lithuania, with Danish assistance, carried out a pilot project in the Dotnuva area during September 2000 and January 2002. The soil in the selected area is generally very good and there is high potential for increasing agricultural production. No new needs for public facilities or environmental remediation were identified and so the project focused on improving the agricultural structure in the area.

The project area included 79 private land owners, of which only 19 farmed their own land. From preliminary interviews it was estimated that it would be possible to sign land consolidation agreements with about 20-30 owners. These interviews showed there were more interested sellers than buyers. In the planning stages, 5-6 potential buyers were identified and separate consultations were held with each person to identify his or her special interests in buying or exchanging parcels of land. Working maps showing these areas of interest were prepared and the most suitable potential sellers were identified and negotiations entered into. By the end of the pilot, 19 land owners had participated and 86 hectares had changed ownership. All participation was completely voluntary.

The pilot project enabled productive family farmers to enlarge the size of their holdings, and it minimised fragmentation and improved access to roads. It also provided input for the preparation of a legal framework for land consolidation. This pilot led to a subsequent more comprehensive pilot project (October 2002-January 2004) in which land consolidation was introduced as a tool for implementing elements of local rural development.

- 4.14 **Will the benefits exceed the costs?** The potential benefits that the pilot project is expected to bring to the community must be evaluated against the anticipated costs. Box 8 gives examples of costs that may be encountered. A rigorous cost/benefit analysis should be carried out. A positive outcome should be used to persuade farmers, politicians and others that the pilot project will be beneficial. A negative result would require the project to be substantially redesigned, or abandoned and a new community to be selected for a pilot project.

## BOX 8

### EXAMPLES OF COSTS

Costs of the pilot project:

- collection of basic information
- public facilities and infrastructure
- village renewal
- environmental amelioration
- land improvements to the farms
- landscaping
- improvements to individual holdings such as the construction of buildings
- land acquisition
- technical costs of re-allocation
- registration fees and transfer taxes
- administrative costs of the project

Other costs:

In addition there will be costs associated with getting the pilot project in place, for example:

- getting support of key agencies
- preparation and enactment of enabling legislation

4.15 **How will the costs be paid?** A formula for dividing the various costs between the different agencies of government, and between government and participants must be developed. Because farmers are unable to pay significant amounts for the reconstruction, the largest contribution will have to be secured by government, perhaps sourced from external funds. In projects in long-term land consolidation programmes, governments often pay 75 percent or more of costs, with participants paying in cash, in kind, or by assisting in the project. Expenses that benefit the interests of a specific holding are generally paid by the farmer concerned. When costs are shared, if farmers cannot make advance payments, the government may pay all costs up-front and require owners to repay in instalments over a period of

years. However, in a pilot project it may be necessary for the state to pay for a much higher percentage of costs, if not to pay for all the costs.

4.16 Countries joining the EU might not be able to subsidise farm restructuring measures if this is not included in the Single Programming Document (SPD) which details how European Structural Funds will be used. On the other hand, it might be possible for co-financing to be provided by the EU if the measure is included in the Single Programming Document or in the Rural Development Programme (RDP) as an accompanying measure to be funded under the guidance section of the European Agricultural Guidance and Guarantee Fund (EAGGF).

4.17 **How will leases, servitudes and mortgages be treated in the project?**

The project will enable land owners to acquire rights to different portions of land. What will happen to holders of other rights?

- In some systems tenants must be offered land of equal value to that which they had been farming; if not, changes in value are compensated for by changes in the rents. Tenants may be able to request a cancellation of lease agreements if they consider the land allocated to be unsuitable.
- Servitude rights may be transferred to new parcels but they may also be abolished as a result of consolidation, e.g. certain rights of way might no longer be necessary. The loss of such rights is usually not compensated.
- Mortgage holders must be protected. However, the lack of a strong credit market means that mortgages may not occur often in the project site.

4.18 **How will the request for the project be initiated and approved?** Even if the ultimate aim is to have a land consolidation programme wherein farmers and communities can initiate projects, the lead agency may be required to take an active role in initiating the first pilot project. Information on key elements of the proposed project will have to be discussed with the community. An initial concept plan, providing a framework of the project, can be used to solicit opinions from the

community and appropriate line ministries, thereby allowing the scope of the project to be defined in broad terms.

- 4.19 The consent of participants will be required for the project to go ahead. A decision will have to be made regarding who would be eligible to participate, e.g. owners of agricultural land, owners of non-agricultural land, village residents, community authorities, etc. Usually all land owners are participants. However, this could be particularly complex if there are a large number of absentee owners and consideration might be given to selecting pilot sites that have relatively small numbers of absentee owners. Should the project proposal require the agreement of all participants, a simple majority, or some form of qualified majority? In some jurisdictions, approval requires that the consenting owners must control more than half the area, or more than half the land value. As land consolidation projects become more comprehensive, more parties become involved in the development of plans and in some countries in Western Europe it is anticipated that the voting system will disappear. Nonetheless, there is need for substantial local support for a project.
- 4.20 The matter of consent of participants is more delicate in pilot projects than in projects implemented through a mature land consolidation programme. On the one hand, where land consolidation is clearly needed, a qualified majority could be considered important enough to overrule a few dissenting owners for otherwise the scheme will never get started. On the other hand, criticisms from dissenting owners, including allegations that they are being dispossessed of their land, may greatly damage efforts to introduce land consolidation.
- 4.21 Rules for handling objections to the proposal will have to be devised. Will there be appeals, and if so, to whom? While it is important to have a way to address objections, care should be taken to deliberately reduce the possibility of objections arising by carefully choosing the project community, and by ensuring that participants are provided with appropriate information from the start.

- 4.22 The consent of government will also be required as it will provide a considerable portion of the project funding. Depending on the cost-sharing formula adopted, various line ministries may be required to give their approval for the project.
- 4.23 **Who will supervise the design and implementation of the project?** The people responsible for carrying out the project must be identified. The lead agency should have overall responsibility for the detailed design and implementation of the project. A local management team of about five to seven people is usually formed (this management team is sometimes referred to as a Local Management Committee, Advisory Board or a Participants' Board). Members are typically elected from an assembly of participants. Where leasing is extensive, the team may include representatives of tenants. The chairperson may be elected or appointed.
- 4.24 Technical experts to assist the local management team must be identified. Expertise may be required in areas such as agriculture, land consolidation, environmental protection, public works and finance. If the project is complex, it may be necessary to hire a project management consultant to manage the project under the supervision of the local management team.
- 4.25 **How will the adjudication process be carried out?** The inventory of the existing situation should be based on the adjudication of the position of parcel boundaries and the legal status of parcels including lease rights, mortgages and easements or servitudes. The newly created registration and cadastre systems, where they exist, should provide the base for identifying holders of rights and parcels. Rules will need to be devised for cases where people do not have legal documentation of ownership rights. For example, the apparent owner could be considered the legal owner for the purposes of consolidation without prejudging the rights of other parties to initiate legal proceedings. Public notice may also be required to call upon parties who have not been individually contacted to identify their property interests in the project site. The people who will carry out the inventory must be identified. Rules for handling objections to the inventory of property rights will have to be devised.

- 4.26 **How will the valuation process be carried out?** Valuation of parcels is required to ensure fairness in the reallocation of land, and to establish if consolidation results in the need for compensation. The methodology for calculating value must be determined. The value may be based on market value and on aspects that influence production such as soil quality, irrigation facilities and topography. The natural yield potential and the actual productivity should be taken into consideration. If there is no need to refer to market values (for example, matters of compensation do not arise), relative values could be determined. Such assessments without reference to market values may be useful where land markets for agricultural land are weak. The valuation of non-agricultural land may also have to be included. The people who will carry out the valuation will need to be identified, for example, professional valuers, a committee of farmers or some combination of valuers and farmers. It may be necessary to involve experts, neutral parties and members of the local management committee to achieve transparency. Rules for handling objections to the valuation of parcels will have to be devised.
- 4.27 **How will changes that are made during the project to ownership and valuation be handled?** Transactions may occur during the period between the finalisation of the inventory of ownership and the completion of the reallocation of land. People acquiring land in the consolidation area should accept the consequences of the project as if they had been a party to the original agreement. Procedures must be defined to ensure that change in ownership and other rights are considered in the reallocation and payment of costs.
- 4.28 Will any limitations or restrictions be placed on values to land and improvements during the implementation stage? Some countries do not allow owners and tenants to take action to change property values without authorisation after a decision has been taken to proceed with the project. Improvements done without authorisation may not be taken into account when reallocating land.
- 4.29 **How will the detailed consolidation plan be prepared and approved?** The detailed consolidation plan shows how the land parcels will be re-

allocated, along with the public facilities and other improvements to be constructed. The persons responsible for drafting the plan must be identified. These may be land consolidation specialists from the private sector (e.g. land surveyors, agronomists, land use planners, etc.) or from the lead government agency. Their relationship with the local management team and project manager must be defined.

- 4.30 The process through which farmers and other interested parties will participate in the preparation of the detailed plan must be elaborated. More participatory systems allow for those drafting the plan to meet with farmers and other parties individually and in groups to provide their views. A “bottom-up” approach with a focus on active participation by land owners is especially important in Central and Eastern Europe as a result of the history of top-down planning.
- 4.31 Because of competing requests of farmers and other participants and the constraining effects of local topography, preparation of the detailed consolidation plan may require several iterations to satisfactorily address comments made in reviews. All systems in Western Europe require a public review of the draft consolidation plan. Decisions will have to be made as to the formality of the process: some systems require extensive public notice of the meeting and, at the meeting itself, remarks and objections are documented. Parties may also be given the chance to provide comments in writing within a specified time following the meeting. A revised draft plan must be prepared following review of the comments. The iterative process thus enables objections raised by participants to be incorporated in the reallocation design.
- 4.32 Rules will have to be established for approval of a plan once consensus appears to be reached. Will it be necessary for participants to vote on the plan and, if so, how many participants will have to agree to the plan for consent to be granted? A decision will have to be made on what action can be taken by a person who objects to the plan. Can the decision be appealed to the courts? Appeals to the court have the potential for causing the failure of the pilot project. If a scheme is based on voluntary participation there is

little or no need to enforce the plan upon a dissenting minority. Mediation and facilitation skills may be crucial in ensuring that agreements are reached and an important aspect of a pilot project will be to enable project personnel to acquire these skills.

- 4.33 Most systems provide that the plan becomes final after its approval by the competent authority after objections, if any, have been resolved. The competent authority, usually the lead agency, will have to be identified.
- 4.34 **How will the consolidation project be implemented?** The people who will undertake the work must be identified along with the process for selecting them. Will surveying of re-allocated parcels be done by the private sector or by the state? Similarly who will undertake the construction of public facilities and other improvements? Will the work be put out to tender and, if so, how will the selection be made?
- 4.35 **How will the change to property rights occur?** The project will result in a major change to the legal status of parcels and rights. Because existing parcels will disappear and new ones will be created, there will not necessarily be a simple transfer of rights from one owner to another. Procedures must be devised for making the new situation legally effective, e.g. all changes can be made legally effective in one ruling. The legal records to be given to each owner on completion must be identified.

#### **PUTTING THE REQUIREMENTS IN PLACE**

- 4.36 Along with defining the “rules of the game”, a number of steps will have to be taken in order to get the game started. Support for the initiative must be obtained, organizational links must be established, enabling legislation for the project must be passed, project costs and sources of funding must be identified, and people must be provided with the necessary skills. These steps are summarised in Box 9 and are further described below.
- 4.37 **Defining the land consolidation strategy.** A land consolidation pilot project should be seen as part of the implementation of a land consolidation strategy

## BOX 9

**PUTTING REQUIREMENTS IN PLACE**

Actions which need to be undertaken include:

- Defining the land consolidation strategy.
- Identifying and managing the risks associated with the pilot project.
- Getting support for the project.
- Establishing the organizational links.
- Providing enabling legislation for the project.
- Getting the right mix of human resource skills.
- Getting appropriate technical resources.
- Preparing draft manuals.
- Defining, costing and managing the project.
- Learning from others.

from the start. Preparation of a land consolidation strategy will provide the context for the pilot project, allowing people to see it not as an isolated event but as part of a coordinated response to problems of rural development.

- 4.38 **Identifying and managing the risks associated with the pilot project.** A pilot project, by its very nature of trying something new, brings potential risks. A land consolidation pilot project can be especially risky because it restructures land tenure arrangements, and land rights are a particularly sensitive matter to owners and governments. A poorly designed project can negatively affect the livelihoods of the poor, and can cause environmental damage. The risk of such effects occurring must be avoided. Even a well-designed project can have negative effects if it is poorly implemented. If land consolidation is to be used as an effective instrument in rural development, it is crucial that land consolidation pilot projects are successful. Negative results and bad publicity could prevent further consolidation efforts from taking place in the future. *Risk avoidance* is an important part of the risk management strategy. In a pilot project there is no point in trying to impose land consolidation on people who do not want it, or in trying to involve other central government agencies in a project against

their will. Assessments such as a SWOT analysis carried out at the start will help to identify particular risks and the ways to *reduce the severity and frequency of risks* which cannot be avoided. Once the project starts, good project management is essential to prevent risks from arising.

4.39 **Getting support for the project.** Widespread support for the project will be required in order to make it a reality. Support must be won from a number of actors.

- Strong political support at the national level is essential because of financing and legislative needs. Support of local politicians in project sites is required in order to attract local resources to the project. The message of the importance of land consolidation in rural development must be conveyed, with appropriate explanations as to why land consolidation solves problems and brings benefits.
- Support of line ministries is important if they are to contribute to land consolidation projects. Explanations must be provided as to how land consolidation can improve their projects.
- Support of farmers and other stakeholders is crucial since a project will result in the reorganization of their property rights. Explanations must be provided as to how the project will benefit them and their community.

In each case, carefully tailored messages will need to be prepared and disseminated in workshops, brochures, etc.

4.40 **Establishing the organizational links.** Linkages between the various agencies will need to be established in accordance with the assigned roles and responsibilities. Horizontal links will be needed between central government agencies, e.g. through an inter-ministerial council. Vertical linkages will be needed to bring together central government, local government and community organizations. Central to establishing these linkages is how the various rules associated with roles and responsibilities will be framed. Establishing a Steering Committee can be a good idea as part of the management of the project.

- 4.41 **Providing enabling legislation for the project.** For many countries, current legislation may be sufficient to carry out a pilot project. In other countries, existing land consolidation laws may be ineffective and some elementary changes may be required to address their deficiencies. In yet other countries, legislation may be needed to allow consolidation to proceed. A legal analysis of the proposed rules of implementation should identify whether new legislation is needed for the pilot area. A considerable amount of legislation may affect the proposed consolidation process and the relevant laws should be reviewed. Box 10 provides examples of legislation that might have an influence on the pilot project. The analysis may result in a reframing of some rules in order to provide a more effective approach to the project.
- 4.42 The analysis may show that no specific land consolidation legislation is required to carry out a pilot project. If new legislation is needed, the appropriate form must be identified (e.g., Presidential Decree or Government regulations). A Land Consolidation Act should not be prepared for pilot projects, and instead, the experiences of the pilot project should inform the subsequent preparation of a comprehensive law for administering a land consolidation programme. Enabling legislation for the pilot project, and any subsequent legislation for an ongoing programme, should not diminish the nature of rights that people hold.
- 4.43 **Getting the right mix of human resource skills.** The skills needed to design, implement and monitor the project should be identified and appropriate training provided. Skills in facilitation and negotiation are increasingly important as the many competing interests of stakeholders will have to be resolved if the project is to be successful. Training may have to be provided for people in central government agencies, local governments, communities and the private sector.
- 4.44 **Getting appropriate technical resources.** Technical resources that reduce the time and costs of the project should be acquired. Advantage should be taken of remote sensing, geographic information systems, satellite positioning systems and the semi-automated preparation of land consolidation plans.

BOX 10

**LEGISLATION THAT MAY AFFECT THE PILOT PROJECT**

Constitution  
Civil code  
Law on regulation of local self-governance  
Law on state fees  
Tax code  
Land code  
Laws on privatisation on land (restitution)  
Law on the land reserve and land fund  
Law on state land management  
Law on municipal ownership of land  
Law on agricultural land ownership  
Law on mortgage  
Law on leasing  
Law on registration and cadastre  
Family law (inheritance, divorce, co-ownership)  
Environmental protection law  
Law on notaries  
Law on compensation  
Dispute resolution legislation  
Banking legislation related to interest rates and collateral requirements  
Law on cooperatives  
Regulations on establishing market prices

- 4.45 **Preparing draft manuals.** Draft manuals for various procedures (legal inventory, valuation, appeals, reallocation, final certification of rights, etc.) should be prepared to guide activities during implementation. These manuals should be revised to reflect the experiences of the pilot, making them more useful for subsequent projects.
- 4.46 **Defining, costing and managing the project.** In conjunction with the identification of the various rules needed to establish the pilot project and the

interaction between various government agencies and local organizations, the scope of all activities will have to be defined and costed. These activities would include:

- Building support, i.e. the costs of communication programmes to get the support of key stakeholders (workshops, brochures, etc.)
- Preparation and enactment of enabling legislation.
- Training of people.
- Technology.
- The consolidation project itself including costs of public facilities and other improvements, land improvements, technical costs of reallocation, administrative costs, etc.

- 4.47 Funding for the project must be identified and steps taken to secure contributions from the central and local governments, participants and donors.
- 4.48 Finally, attention should be paid to managing the design and implementation of all activities to ensure that quality, budget and time schedule are maintained. Mechanisms to monitor and evaluate the project should be put in place. For a number of countries, the project management experience gained in recent land registration projects will be helpful.
- 4.49 **Learning from others.** Throughout the process, the experiences of others should be evaluated and incorporated in the process. The experiences of Western European countries will be very useful. The experiences of other Central and Eastern European countries will also be extremely important because each transition country will have to devise solutions with a realistic view of the resources available for addressing its particular land fragmentation patterns and needs for rural development. Partnerships and other arrangements to share information should be developed between those responsible for land consolidation in the various countries.

## 5. Additional steps to facilitate land consolidation

- 5.1 Pilot projects are essential to gain experience necessary for the design of a comprehensive programme but they will result in the benefits of land consolidation being applied to only a few communities in the initial phase. Rural residents living outside the project sites will continue to face the same problems during the project life unless the state provides a better environment for supporting private, voluntary initiatives to consolidate parcels and enlarge holdings. These initiatives will not bring benefits of the magnitude found in the pilot projects but they may significantly improve the lives of many people. Some examples of possible state support are described below. Most measures will require legislative changes. This chapter therefore looks at how appropriate expertise can be built into project design and implementation, and at what skills and experience are required by people to deal with these issues.
- 5.2 **Providing information for the land market.** A weakness in the emerging land markets is that information on available land and its quality is often difficult to obtain. The state could promote the role of an intermediary, either by acting as a clearing-house itself or by supporting private sector initiatives. Prospective buyers could go to the intermediary to request what parcels might be available in certain areas, and for information on those parcels. People who had their land listed with the intermediary could indicate where they would like to receive land in exchange.
- 5.3 **Improving access to subsidies and loans.** In most countries in the region mortgages are seldom used to purchase land because banks usually do not take agricultural land as collateral. State assistance for those wishing to purchase land for consolidation might be considered. One option is to encourage lending by providing state guarantees for mortgages on land that meets consolidation requirements. Another option is providing direct

government loans for those who want to consolidate. Despite restitution and privatisation, marketable title does not exist for a number of parcels because the land is now held jointly by the heirs of original beneficiaries, or is divided informally among them. Loans could be provided to people who would like to buy out other heirs. Subsidies could also serve to make the sale of land more attractive. One option is subsidies to pensioners who sell their land to others for the purpose of consolidation.

- 5.4 **Reducing fees and taxes.** Transfers could be made more attractive by reducing fees and providing tax benefits. Registration fees and transfer taxes could be waived for transfers that are undertaken to consolidate parcels and holdings. Tax advantages could be granted to owners against expenses of consolidation and related improvement to the land. Tax advantages could also be provided to those who sell their land to others for consolidation purposes.
- 5.5 **Using land reserves.** Land funds and other reserves could be used to allow farmers to enlarge their holdings. Exchange of ownership rights could occur from one district to another, and land reserves could be used by owners to exchange their land for parcels closer to where they live.
- 5.6 **Using leasing to consolidate operations.** Leasing is the most commonly used approach to increasing the size of farming operations. The preparation of simple leasing agreements may help to protect owners and lessees. Where leasing is extensive because of absent or otherwise uninvolved owners, these agreements could allow subleasing or assignments to enable renting farmers to re-allocate lease obligations among themselves to create more rational operations. A protection clause could allow owners to invalidate sub-leases that were not in compliance with the original lease contracts.
- 5.7 **Completing land reforms.** Although great progress in restitution and privatisation has been made throughout the region, there are a number of cases in which the process is not yet complete. One impact of the delay in completion is that land reserves cannot be used effectively to support

exchanges as they may have to be used for restitution purposes. In some areas it is not even clear what land belongs to the state. Many owners have not yet received their titles for various reasons. Ownership changes resulting from the land reforms should be clarified as soon as possible.

- 5.8 **Encouraging inheritance by a single heir.** How land is inherited upon the death of the owner is critical to the issue of fragmentation and consolidation. The problem of fragmentation upon inheritance is not as potentially severe a problem in Central and Eastern Europe as it is in those regions which have high population growth rates. The problem does exist, however, largely because beneficiaries of land restitution and privatisation were often elderly and their holdings are now held jointly by their heirs or subdivided among them. Some countries have introduced restrictions on the number of heirs who can inherit land but this has seldom proved effective as people generally find a way around the restriction. It may be possible to provide ways to make transfer to a single heir simpler. For example, parts of Germany allow a farmer to decide if the farm will be passed to one heir or whether succession will occur under the usual provisions of inheritance. The state provides a mechanism to allow inheritance by a single heir but the farmer decides whether to use it.

## 6. Preparing for an ongoing programme

- 6.1 Pilot projects and other initiatives will provide valuable information as to what should be incorporated in a long-term programme of land consolidation. Continuous monitoring during pilot projects and good reporting on lessons learned is essential for the preparation of long-term programmes. The experiences and results of the various activities should be reviewed and evaluated in order to provide insights in the following areas.
- 6.2 **Administration of the consolidation programme.** The appropriate structure for administering the programme will have to be designed or redesigned. A clear assignment of roles and responsibilities is essential, including identification of roles of those responsible for policy and for execution, and the sharing of responsibilities between the private and public sectors. The provision of “one-stop-shop” facilities can simplify matters for citizens. The danger of encouraging corruption by concentrating too much power in one organization must be dealt with. The relationship between the agency designated as the land consolidation agency and other central government agencies and local governments must be defined.
- 6.3 **Financial management.** For the smooth financing of consolidation projects, medium and long-term working and financial plans will have to be developed within national budgets and administration. Cost restrictions for individual projects have to be specified.
- 6.4 **Initiation, design and implementation of land consolidation projects.** Procedures developed for the pilot projects will have to be adapted to address the conditions of projects carried out under a long-term programme. Consideration should be given to specifying or designing the following:
- The process for initiating projects. More parties may have the right to initiate the process and they will have to be identified, e.g. the land

consolidation agency, a group of farmers, professional associations, local governments, line ministries, etc. The extent to which the process is voluntary or compulsory will have to be determined.

- Essential components of the scope of project activities in order to be considered eligible under the programme.
- Procedures for acquiring state land reserves for the project.
- Mechanisms for including participation of local stakeholders through some form of local management committee (e.g. number of members, composition and responsibilities) and through direct involvement (e.g. public assemblies, public notice, etc.)
- Mechanisms for bringing relevant technical expertise into the project design and implementation.
- Procedures for identifying rights within the project site, for valuation of parcels, and for re-allocation.
- Procedures for making rights to newly created parcels legally effective and for terminating various types of rights because of changes introduced by consolidation.
- Systems for appeal and treatment of disputes.
- Procedures for compensation and cost-sharing.

6.5 **Land consolidation legislation.** Elements such as those described above will have to be addressed in special legislation in order to provide a legal basis for the long-term programme.

## 7. Final comments

- 7.1 Comprehensive land consolidation has been instrumental in promoting rural development in Western Europe. It has the potential to make similar significant contributions towards improving the quality of rural life in Central and Eastern Europe. Transition countries will be able to benefit considerably from concepts and techniques developed in Western Europe but they will have to devise new approaches and solutions to address the particular conditions of fragmentation they have; the social, cultural, economic, legal, administrative and political environment in which they operate; and the financial and other resources that they are able to mobilise.
- 7.2 Pilot projects are an important step towards introducing a comprehensive land consolidation programme within a rural development strategy. Such projects allow the designers of the land consolidation programme to identify the administrative, legal and operational arrangements and procedures that best suit the local conditions. The experience of these projects will allow for informed decisions about the permanent structures needed for the long-term programme. Experiences with other initiatives to promote consolidation outside the project sites will also serve to inform these fundamental decisions.
- 7.3 Because the pilot projects will be the vehicle for getting experience needed to solve problems, the problems within the pilot project sites should not be insurmountable. Pilot sites should be representative of the types of tenure conditions found elsewhere but care should be taken to ensure that unnecessary obstacles, such as unique local opposition to the project, does not cause the pilot to fail. Considerable support will have to be mobilised from a number of sectors of society even before a pilot project can be launched. Successful pilots will be the way to extend that support across the country.