



Food and Agriculture
Organization of the
United Nations

ISSN 2664-1607

Legal guide on land consolidation

Based on regulatory practices in Europe

FAO LEGAL GUIDE 3

Legal guide on land consolidation

Based on regulatory practices in Europe

Tomas Veršinskas

Margret Vidar

Morten Hartvigsen

Kristina Mitic Arsova

Frank van Holst

Maxim Gorgan

for the Development Law Service, FAO

Required citation:

Veršinskas, T., Vidar, M., Hartvigsen, M., Mitic Arsova, K., van Holst, F. and Gorgan, M. 2020. *Legal guide on land consolidation: Based on regulatory practices in Europe*. FAO Legal Guide, No. 3. Rome. <https://doi.org/10.4060/ca9520en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISSN 2664-1607 (print)
eISSN 2664-1615 (online)
ISBN 978-92-5-132858-3

© FAO, 2020



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original [Language] edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

CONTENTS

Foreword	ix
Acknowledgements	x
Acronyms	xii
1. Introduction	3
1.1 FAO and other international support to land consolidation in Europe and Central Asia	3
1.2 Contribution of land consolidation in achieving the Sustainable Development Goals	5
1.3 Tenure guidelines	6
1.4 Objectives of this guide	8
1.5 Scope of this guide	8
1.6 Target audience	10
1.7 Methodology	10
1.8 Outline and use of the guide in practice	11
2. Overview of land consolidation	15
2.1 General presentation of land consolidation	15
2.1.1 Notions and definitions of key terms	15
2.1.2 Land consolidation approaches	18
2.1.3 Phases of land consolidation projects	20
2.2 Overview of land consolidation regulatory practices in Europe	22
2.2.1 Denmark	22
2.2.2 Finland	24
2.2.3 Germany	25
2.2.4 Lithuania	26
2.2.5 The Netherlands	27
2.2.6 Serbia	30
2.2.7 Spain (Galicia)	31
2.2.8 Turkey	33
2.3 Key features of land consolidation law	34
2.3.1 Human rights and legitimate tenure rights	35
2.3.2 Integration with the strategic and spatial planning framework	36
2.3.3 Integration with different branches of national law	38
2.3.4 Form of the regulatory framework for land consolidation	39
2.4 Funding of land consolidation	42
3. Objectives and principles of land consolidation	47
3.1 Objectives of land consolidation	47
3.2 Principles of land consolidation	50
3.2.1 Respect for and protection of legitimate tenure rights	51
3.2.2 The “at least as well off” principle	52

3.2.3	Sustainability	53
3.2.4	Consultation and participation	53
3.2.5	Transparency	54
3.2.6	Gender equality	56
4.	Land consolidation institutions and stakeholders	61
4.1	Public and semi-public entities	61
4.1.1	Lead agency	63
4.1.2	Local government	64
4.1.3	Land Registry	64
4.1.4	Other public bodies involved in land consolidation	64
4.2	Private service providers	66
4.2.1	Land consolidation planners	67
4.2.2	Other service providers	68
4.3	Right holders	69
4.3.1	Landowners	69
4.3.2	Heirs of deceased landowners	71
4.3.3	Unknown owners	71
4.3.4	Holders of lease rights	72
4.3.5	Other right holders	72
4.4	Other stakeholders	73
4.5	Public meetings of stakeholders and elected collective bodies	75
4.5.1	Public meetings	75
4.5.2	Committee of Stakeholders	80
5.	Feasibility phase	85
5.1	Decision to start a feasibility PHASE	86
5.2	Feasibility study	88
6.	Re-allotment phase	97
6.1	Decision to launch the re-allotment phase	99
6.1.1	Definition of the project area	99
6.1.2	Adjustment of the project area	99
6.1.3	Temporary notation and land use limitations	100
6.2	Re-allotment planning consultations and negotiations	101
6.3	Facilitation of the recognition and registration of legitimate ownership rights	103
6.4	Valuation of land	108
6.4.1	Purpose of land valuation	108
6.4.2	Roles and responsibilities for land valuation	109
6.4.3	Method of land valuation	110
6.4.4	Approval of the conducted land valuation	114
6.5	Re-allotment planning	115
6.5.1	Re-allotment of land parcels	116
6.5.2	Third party rights in the re-allotment planning process	122
6.5.3	Combining re-allotment planning with improvement of rural infrastructure	124
6.5.4	Environmental Impact Assessment	126

6.6	The Land Consolidation Plan	128
6.6.1	Components of the Land Consolidation Plan	128
6.6.2	Approval and adoption of the Land Consolidation Plan	129
6.6.3	Legal effect of the Land Consolidation Plan	131
7.	Registration and implementation phase	137
7.1	Cadastral surveying	137
7.2	Registration of parcels and transfer of possession	138
7.3	Financial settlements	139
7.4	Implementation of infrastructure and other works	142
8.	Monitoring and evaluation	147
8.1	Monitoring of land consolidation projects and programmes	147
8.2	Project evaluation including socio-economic impact assessments	148
8.3	Programme evaluation	150
9.	Legal remedies	155
10.	Combining land consolidation with land banking	161
11.	Global perspectives for land consolidation	167
	References	171

KEY RECOMMENDATIONS, FIGURES AND BOXES – LEGAL WORDING EXAMPLES

Key recommendations

Key recommendations 2.1: Key features of land consolidation law	41
Key recommendations 2.2: Funding of land consolidation	44
Key recommendations 3.1: Objectives of land consolidation	50
Key recommendations 3.2: Principles of land consolidation	58
Key recommendations 4.1: Public and semi-public entities	66
Key recommendations 4.2: Private service providers	68
Key recommendations 4.3: Right holders and other land consolidation stakeholders	75
Key recommendations 4.4: Public meetings of stakeholders and elected collective bodies	82
Key recommendations 5.1: Decision to start a feasibility phase	88
Key recommendations 5.2: Feasibility study	93
Key recommendations 6.1: Decision to launch the re-allotment phase	101
Key recommendations 6.2: Re-allotment planning consultations and negotiations	103
Key recommendations 6.3: Facilitation of the recognition and registration of legitimate ownership rights	108
Key recommendations 6.4: Valuation of land	115
Key recommendations 6.5: Re-allotment planning	127
Key recommendations 6.6: The Land Consolidation Plan	133
Key recommendations 7.1: Cadastral surveying	138
Key recommendations 7.2: Registration of parcels and transfer of possession	139
Key recommendations 7.3: Financial settlements	142
Key recommendations 7.4: Implementation of infrastructure and other works	144
Key recommendations 8.1: Monitoring and evaluation	151
Key recommendations 9.1: Legal remedies	157
Key recommendations 10.1: Combining land consolidation with land banking	163

Figures

Figure 1.1: Land consolidation types considered in this guide: voluntary, majority-based and mandatory land consolidation	9
Figure 2.1: Illustration of a multi-purpose land consolidation in Germany	20
Figure 2.2: Three generic land consolidation phases in land consolidation projects	21
Figure 4.1: Example of the distribution of roles and responsibilities in the land consolidation process	62
Figure 5.1: Map of the country-wide feasibility of land consolidation with an objective of agricultural development in North Macedonia	86
Figure 5.2: Land Ownership Map from FAO land consolidation pilot project in Dračevo, Bosnia and Herzegovina	89
Figure 5.3: Land Mobility Map from FAO land consolidation pilot project in Dračevo, Bosnia and Herzegovina	91
Figure 6.1: The re-allotment planning process in voluntary land consolidation projects	98
Figure 6.2: The re-allotment planning process in majority-based land consolidation projects	98
Figure 6.3: Possible solutions to specific legal or registration problems	106
Figure 6.4: Land valuation map prepared for the FAO land consolidation pilot project in Dračevo village, Bosnia and Herzegovina	111
Figure 6.5: Land Valuation Map of Olst-Wesepe land consolidation project in the Netherlands	113
Figure 6.6: Land ownership for five selected landowners in a land consolidation pilot project area in Shorsulu village, Azerbaijan, showing land parcels before (left) and after (right) the project	118

Figure 6.7: Consent form for landowners participating in voluntary land consolidation in Denmark	120
Figure 6.8: Re-allotment planning map for a majority-based land consolidation project in Egri village, North Macedonia, showing parcels before (left) and after (right) the project	121
Figure 11.1: Land parcel map before and after the land consolidation pilot project in Tegyi Gone village, Myanmar	168

Boxes – Legal wording examples

Box 3.1: Objectives of land consolidation in Denmark	49
Box 3.2: Land consolidation in large-scale infrastructure in Finland	49
Box 3.3: The “at least as well off” principle in Serbia	53
Box 3.4: Land consolidation transparency in Lithuania	55
Box 4.1: Coordination and representation of institutions and stakeholders in Spain (Galicia)	65
Box 4.2: Formalization of ownership rights and inclusion of parcels with unknown owners into land consolidation projects in Denmark	70
Box 4.3: Involvement of professional organizations in land consolidation projects in Germany	74
Box 4.4: Members of the Board of Owners in Spain (Galicia)	77
Box 4.5: Cadastral survey meeting in Finland	78
Box 4.6: Responsibilities of the Body of Participants in Germany	79
Box 4.7: Landowner committee in Denmark	80
Box 4.8: Landowner representatives in Finland	81
Box 5.1: Identification of the right holders based on official records in the Netherlands	89
Box 5.2: Feasibility report in Finland	90
Box 6.1: Claims related to land rights in Germany	105
Box 6.2: Persons carrying out valuation in Germany	110
Box 6.3: Mortgages in the Netherlands	122
Box 6.4: Establishment of servitudes in Finland	123
Box 6.5: Abolition of rights and substitution of real estate rights in Germany	123
Box 6.6: Planning of local infrastructure in Germany	125
Box 6.7: The Land Consolidation Plan as an official proof of land rights in Germany	132
Box 8.1: Requirement to perform expected impact assessment in the Netherlands (prior to 2007)	148
Box 9.1: Issues that may be subject to judicial review in Finland	156

FOREWORD

Land consolidation is a highly effective land management tool that allows for the improvement of the structure of agricultural holdings and farms, which increases their economic and social efficiency and brings benefits both to right holders as well as to society in general. Since land consolidation gives mobility to land ownership and other land rights, it may also facilitate the allocation of new areas with specific purposes other than agriculture, such as for public infrastructure or nature protection and restoration. Land consolidation instruments necessitate a thoroughly elaborated legal regulation that is integrated into the national legal framework.

The Food and Agriculture Organization of the United Nations (FAO) has been involved in land consolidation since the 1950s, with a renewed focus on Eastern Europe and Central Asia over the last two decades, to help countries deal with land fragmentation following the land reforms of the 1990s. FAO has facilitated analysis of the necessity and conditions for land consolidation, assessing the institutional, legal and policy frameworks and undertaken pilot projects to facilitate the process. It has also supported legislative reforms to create an enabling legal environment for cost effective and efficient implementation, in ways that ensure respect for legitimate tenure rights.

In May 2012, the Committee on World Food Security (CFS) endorsed the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT). Since their adoption, the VGGT have served as a reference for improving the governance of tenure, based on international good practice. The VGGT promote tenure security, the recording of legitimate tenure rights and the enjoyment of these rights by the right holders. The VGGT provide a specific section on land consolidation and other readjustment approaches (Section 13), which requires the states to ensure that participants of the land consolidation projects are “at least as well off” after the land consolidation compared to before (Paragraph 13.1).

This publication aims to provide detailed guidance on legislative issues regarding land consolidation in ways that align with the VGGT and international human rights law. It focuses on land consolidation in rural areas and is based on FAO experience as well as on regional good land consolidation legislative practices in Europe, primarily on analysis of the regulatory practices in Denmark, Finland, Germany, Lithuania, the Netherlands, Serbia, Spain (Galicia) and Turkey. It also uses as a source of information, some of the land consolidation regulatory practices in other European countries.

This legal guide mainly targets countries that have not yet developed a specific legal framework for land consolidation, and countries where land consolidation instruments have a short history, or are in the initial phase of development. It also encourages the exchange of good practices between countries with ongoing national land consolidation programmes. Countries with developed land consolidation legal frameworks can also use this guide to strengthen or streamline such frameworks. Thus, the guide may be useful to any country wishing to introduce or reform its land consolidation legislation, independent of general level of development or wealth.

This legal guide aims primarily to support countries that have not yet established a legal framework for land consolidation and those in the early stages of such development. However, it can also be useful to reform and strengthen legal frameworks in countries with land consolidation experience, independent of their level of development or wealth.

ACKNOWLEDGEMENTS

This legal guide has been prepared by a core team of experts. The lead author is Tomas Veršinskas, Institute of Financial Law (*VšĮ Finansų teisės institutas*), and contributions have been made by Margret Vidar, Morten Hartvigsen, Maxim Gorgan and Kristina Mitic Arsova of the Food and Agriculture Organization of the United Nations (FAO) and Frank van Holst, Netherlands Enterprise Agency (*Rijksdienst voor Ondernemend Nederland [RVO]*). The guide has been jointly directed and supervised by Margret Vidar, FAO Legal Officer, FAO headquarters and Morten Hartvigsen, Land Tenure Officer, FAO Regional Office for Europe and Central Asia (REU).

In addition to the experts of the core project team, contributions related to the legal frameworks of specific jurisdictions were made by key persons from all of the countries analysed: Margarida Ambar (Portugal), Miguel Ángel Pérez Dubois (Spain), Thomas Gollwitzer (Germany), Fatma Tüz Zehra Gülsever (Turkey), Nenad Gvozdenovic (Serbia), Niels Otto Haldrup (Denmark), Kalle Konttinen (Finland), Henk Leenen (the Netherlands), Anka Liseč (Slovenia), Maartje Lof (the Netherlands), Francisco José Ónega López (Spain), Marije Louwsma (the Netherlands), Zlatica Muchova (Slovakia), Per Kåre Sky (Norway) and Gintarė Tumulavičienė (Lithuania).

The key recommendations of the legal guide were presented and discussed at the 10th International LANDNET¹ Workshop in Skopje, North Macedonia, in June 2018. Approximately 140 workshop participants from 30 countries contributed with their proposals to this legal guide. The workshop was organized jointly by FAO and the Working Party on Land Administration (WPLA) of the United Nations Economic Commission for Europe (UNECE), in cooperation with the *Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH* (GIZ) and the Ministry of Agriculture, Forestry and Water Economy of North Macedonia. The final conclusions of the legal guide were presented and discussed at the 12th International LANDNET Workshop in Spain (Santiago de Compostela, Galicia) in November 2019, organized jointly by FAO, the International Federation of Surveyors (FIG) and the *Axencia Galega de Desenvolvemento Rural*, AGADER in cooperation with GIZ.

The guide was reviewed by a group of international experts, including the aforementioned key persons from Denmark, Finland, Germany, Lithuania, the Netherlands, Norway, Portugal, Serbia, Slovakia, Slovenia, Spain and Turkey, as well as Georg Bardeau, Michael Becker, Andrew Cartwright, Vilma Daugalienė, Cristina Zolle Fernández, Johan Heinen, Samir Isayev, Obid Islomov, Amin Ismayilov, Louisa Jansen, Naomi Kenney, Jonathan Lindsay, Henk Moen, Giedrius Pašakarnis, Jan Spijkerboer and Nerijus Strikulyš. Andrew Cartwright also supported the technical editing of the guide.

A special acknowledgement goes to David Palmer and Joachim Thomas, who provided valuable recommendations during the entire process of the drafting of the guide.

FAO is grateful to GIZ, FIG and UNECE WPLA for their continued institutional support in the preparation of this legal guide as well as to RVO and the Netherlands' Cadastre, Land Registry and Mapping Agency for organizing a study visit in June 2019.

¹ LANDNET is a European-wide informal technical network of land tenure professionals from different countries and different organizations under FAO Regional Office for Europe and Central Asia guidance. The main objectives of LANDNET is to stimulate proper and timely responses to (changing) needs of society regarding land use and land tenure in rural areas and to ensure dissemination and exchange of experiences on technical topics such as land consolidation, land banking and land market development.

The preparation and publication of this legal guide are the result of close collaboration between the FAO Regional Office for Europe and Central Asia (REU) and the Development Law Service of the FAO Legal Office (LEGN), supported by LANDNET and in collaboration with *VšĮ Finansų teisės institutas* in Lithuania and Fagricom in North Macedonia. This legal guide was edited by Anastasia Clafferty and layout was provided by Jessica Marasovic.

ACRONYMS

AGADER	<i>Axencia Galega de Desenvolvemento Rural</i> (Galician Agency of Rural Development)
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CEE	Central and Eastern Europe
CFS	Committee on World Food Security
CIS	Commonwealth of Independent States
DLG	<i>Dienst Landelijk Gebied</i> (former Dutch Government Service for Land and Water Management)
EAFRD	European Agricultural Fund for Rural Development
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
FAO	Food and Agriculture Organization of the United Nations
FIG	International Federation of Surveyors
GIS	Geographic Information System
GIZ	<i>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</i>
Kadaster	Cadastral, Land Registry and Mapping Agency (the Netherlands)
LEGN	Development Law Service of the FAO Legal Office
REU	FAO Regional Office for Europe and Central Asia
RVO	<i>Rijksdienst voor Ondernemend Nederland</i> (Netherlands Enterprise Agency)
SDG	Sustainable Development Goal
UN	United Nations
UNECE	United Nations Economic Commission for Europe
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security
WPLA	Working Party on Land Administration

INTRODUCTION



1. INTRODUCTION

The Food and Agriculture Organization of the United Nations (FAO) supports the introduction and development of land consolidation in its member countries with a variety of instruments. The authors have prepared the following definition, which is used in this guide as well as for other FAO purposes:

Land consolidation is a legally regulated procedure led by a public authority and used to adjust the property structure in rural areas through a comprehensive reallocation of parcels, coordinated between landowners and users in order to reduce land fragmentation, facilitate farm enlargement and/or achieve other public objectives, including nature restoration and construction of infrastructure.

Land consolidation should be highly participatory, gender sensitive and ensure that all participating landowners are at least as well off after the procedure as compared with before. Land consolidation is a constantly evolving land management instrument, since it is closely linked to a number of dynamic fields, such as economy, democracy, policies, technologies and environment. As a result, land consolidation procedures continue to be relevant over time, as demonstrated by countries that have been applying and adapting land consolidation for decades and even centuries. FAO promotes land consolidation, which is in line with the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)*. Land consolidation is one of the tools that may effectively contribute to achieving the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). It must be respectful of human rights and follow certain principles to ensure, amongst other things, the protection of legitimate tenure rights and be respectful of the environment.

1.1 FAO AND OTHER INTERNATIONAL SUPPORT TO LAND CONSOLIDATION IN EUROPE AND CENTRAL ASIA

Shortly after FAO was founded in 1945, the Organization began supporting Member Countries that addressed the structural problems in agriculture with land fragmentation and small holding and farm sizes, through the development of land consolidation instruments (Binns, 1950). During the 1950s and 1960s, FAO provided technical support for the development of national land consolidation programmes in European countries such as Cyprus, Greece, Spain and Turkey, as well as in countries in the Near East and Asia (Meliczek, 1973). Seminars with experts from Member Countries were organized by the established Working Party on Consolidation of Holdings. In 1955, based on the first decade of activities of the organization, FAO concluded that "Excessive fragmentation or uneconomically small holdings may prevent the farmer from using his time to best advantage or adopting modern means of production, e.g. mechanization" (FAO, 1955). During the second half of the 1950s, a study was conducted on best practices in land consolidation in Europe (Jacoby, 1959).

In the late 1990s, land fragmentation and land consolidation reappeared on the agenda, this time in the context of Central and Eastern Europe, where land reforms from the beginning of the transition in 1990 in most countries, had led to excessive land fragmentation and small farm sizes. FAO began to document and address problems in this area (Palmer, Munro-Faure and Rembold, 2004). Since the early 1990s, most governments throughout Central and Eastern Europe have recognized the need to address the structural problems hampering the development of agriculture and rural development. This has led to the introduction of land

consolidation instruments. FAO has played a leading role in supporting the introduction of land consolidation and in the development of national land consolidation programmes.

The Munich Symposium in 2002 was a milestone in the process and the first workshop of the 20 regional workshops held thus far from 2002 to 2019 on land consolidation, land banking, land market development and related topics.² Three declarations were made by the participants of these workshops: the 2002 *Munich Statement (The Munich Statement on land consolidation as a tool for rural development in CEE/CIS countries)*; the 2004 *Tonder Statement (The Tonder Statement on land banking and Land Funds: Elements for Land Consolidation, Land Management and Rural Development)*; and the 2016 *Apeldoorn Declaration (Apeldoorn Declaration on Land Consolidation and Land Readjustment for Sustainable Development)*. Since 2002, FAO has supported Member Countries in Europe and Central Asia with the preparation of national land consolidation programmes through: i) the preparation of technical guidelines and publications; ii) field projects in currently 11 Member Countries; and iii) organizing the mentioned series of regional workshops and establishment of an informal network of land tenure professionals (Hartvigsen, 2019). This network became known as LANDNET in 2010.

During the FAO Regional Conference in 2018 it was confirmed that supporting smallholders and family farms is among the four priorities for FAO in Europe and Central Asia. In 2014, FAO established in the region the Regional Initiative on Empowering Smallholders and Family Farms for Improved Rural Livelihood and Poverty Reduction. The FAO Regional Land Consolidation Programme is an integrated part of the FAO Regional Initiative. The FAO Development Law Service supports the FAO Regional Office on legislative aspects of FAO's work in the region and is an integral part of the land consolidation efforts.



Pilot area for land consolidation in Egri, North Macedonia (September 2017). © FAO.

² Proceedings from FAO LANDNET workshops from 2002 are available at: <http://www.fao.org/europe/resources/land-tenure-workshops/en/>

In addition to the support provided by FAO, other international organizations such as the UNECE Working Party on Land Administration (WPLA), the World Bank and FIG Commission 7 and 8, as well as bilateral support, has strongly contributed to introduce and build up national land consolidation programmes in CEE countries. This bilateral support has mainly come from countries such as Denmark, Germany (GIZ), the Netherlands (DLG, Kadaster and RVO) and Sweden, as well as the European Union.

1.2 CONTRIBUTION OF LAND CONSOLIDATION IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS

The 2030 *Agenda for Sustainable Development* was adopted by all United Nations (UN) Member States in 2015, with 17 Sustainable Development Goals (SDGs) and 169 associated targets.³ This policy framework requires careful consideration in order to ensure that all development initiatives related to land tenure contribute to achieving the SDGs in the best possible way. Land consolidation policy and legislation should be both programmatic and integrated in order to achieve the SDGs.

The implementation of land consolidation at the country level can contribute to several SDGs and targets (Hartvigsen *et al.*, 2019b). In principle, the wider the objective of the land consolidation instrument, the more it can potentially contribute. Land consolidation can make a significant difference to solving issues such as: structural problems caused by excessive land fragmentation and small farm sizes which hamper agricultural and rural development. This can lead to low levels of production and incomes which, in combination with aging and shrinking population, can easily result in neglect and land abandonment.

By addressing some of the root causes, land consolidation instruments will strongly contribute to achieving the ambitious SDG target 2.3 of doubling “the agricultural productivity and the incomes of small-scale food producers” by 2030.

Another key and perhaps even more ambitious SDG target is 1.4: by 2030 “ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources as well as access to basic services, ownership and control over land and other forms of property (...)”. One critical outcome of land consolidation projects is formalized and protected land rights, which will directly contribute to target 1.4.

Land consolidation should thus also contribute to SDG 5, which seeks to promote greater gender equality. Target 5.A urges signatories of the SDGs to “undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property (...)”. The legal indicators for this target include issues of recognition of joint ownership⁴ of property acquired during marriage of spouses or partners in cohabitation (a number of countries recognize partnerships other than marriage, including same sex ones) (FAO, 2018). One way to achieve this through land consolidation is to ensure that the resulting property rights are registered in the name of both spouses or partners.

Land consolidation with a multi-purpose objective, e.g. agricultural development combined with infrastructure improvement and environmental management, also has a strong potential

³ For further information see the UN website: <https://www.un.org/sustainabledevelopment/development-agenda/>

⁴ The ownership of the property acquired during marital union depends on the default matrimonial regime of each country and this is only where the national regulation allows joint ownership of such assets.

to contribute to achieving SDG target 15.1, namely to ensure by 2020 the “conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems (...)” and SDG target 15.3: to “combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods (...)” by 2030.

Besides the aforementioned SDG targets, some other targets are also relevant to land consolidation, like targets 1.2, 1.b, 1.4, 2.3, 2A, 2.4, 5.5, 5A, 8.3, 13.1, 15.1 and 15.3 (Van Holst, Hartvigsen and Ónega López, 2018).

1.3 TENURE GUIDELINES

The VGGT were endorsed in May 2012 by the Committee on World Food Security (CFS) comprising all UN and FAO Member Countries (as well as participants from civil society, the private sector and observers from intergovernmental organizations). Since their endorsement, they have served as a reference for the improvement of the governance of all kinds of tenure issues, including promoting land consolidation that is based on international good practice. The VGGT should be taken closely into account when developing a national legal framework for land consolidation.

The objective of the VGGT is “to serve as a reference and to provide guidance to improve the governance of tenure of land, fisheries and forests with the overarching goal of achieving food security for all and to support the progressive realization of the right to adequate food in the context of national food security”. The intention of the VGGT is to “contribute to the global and national efforts towards the eradication of hunger and poverty, based on the principles of sustainable development and with the recognition of the centrality of land to development by promoting secure tenure rights and equitable access to land, fisheries and forests”.

The VGGT have established five guiding principles of responsible tenure governance for states, that are highly relevant for land consolidation (Paragraph 3.1; plus a number of principles directly addressed to non-state actors in Paragraph 3.2). Land Consolidation Law should be drafted in accordance with these principles. The first general principle establishes that “States should (...) recognize and respect all legitimate tenure right holders and their rights. They should take reasonable measures to identify, record and respect legitimate tenure right holders and their rights, whether formally recorded or not; to refrain from infringement of tenure rights of others; and to meet the duties associated with tenure rights”. Thus, land consolidation should involve not only registered landowners, but also other legitimate right holders, such as unregistered rightful owners, unregistered leaseholders, etc. According to the VGGT, the responsibility to determine exactly what counts as legitimate rights lies with states, and the categories of rights that are considered legitimate should be defined through widely publicized rules.

Section 13 of the VGGT is dedicated to land consolidation and other readjustment approaches and promotes the use of such instruments, where appropriate “... to improve the layout and use of...” the parcels or holdings. The VGGT also recommend that land consolidation be included in environmental and infrastructure projects. The importance of land banking and its combination with the land readjustment approaches is also stressed. Furthermore, the use of land consolidation to improve small family farms and forests should be taken into account. All of the above should be used in a strategic manner, while ensuring the necessary safeguards.

In addition, the need for the improvement of smallholder family farms and forests is recommended in Paragraph 13.4 where it states: “Where fragmentation of smallholder family farms and forests into many parcels increases production costs, States may consider land consolidation and land banks to improve the structure of those farms and forests. States should refrain from using land consolidation where fragmentation provides benefits, such as risk reduction or crop diversification. Land consolidation projects to restructure farms should be integrated with support programmes for farmers, such as the rehabilitation of irrigation systems and local roads, restoration of nature, re-cultivation of contaminated land etc. (...)”.

One of the key principles of the VGGT related to land consolidation is a so called “at least as well off” principle. Paragraph 13.1 of the VGGT provides that “States (...) should ensure that participants are at least as well off after the schemes compared with before. These approaches should be used to coordinate the preferences of multiple owners and users in a single legitimate readjustment” (Section 3.2.2).

The use of land consolidation mechanisms may be undermined if proper safeguards ensuring its efficiency and respect of the legitimate tenure rights are missing. Paragraph 13.6 of the VGGT states that “States should establish appropriate safeguards in projects using readjustment approaches. Any individuals, communities or people likely to be affected by a project should be contacted and provided with sufficient information in applicable languages. Technical and legal support should be provided. Participatory and gender-sensitive approaches should be used (...). Environmental safeguards should be established to prevent or minimize degradation and loss of biodiversity and reward changes that foster good land management, best practices and reclamation”.

In order to ensure the efficiency and impact of land consolidation as well as to facilitate its implementation, the VGGT suggest to use it in combination with land banking, which for example, would increase land mobility in project areas.⁵ The VGGT state in Paragraph 13.3 that “Where appropriate, States may consider the establishment of land banks as a part of land consolidation programmes to acquire and temporarily hold land parcels until they are allocated to beneficiaries”.

The VGGT also promote land consolidation and land banking for other purposes. In Paragraph 13.3, it states “Where appropriate, states may consider encouraging and facilitating land consolidation and land banks in environmental protection and infrastructure projects to facilitate the acquisition of private land for such public projects, and to provide affected owners, farmers and small-scale food producers with land in compensation that will allow them to continue, and even increase, production”.

Land consolidation should be used strategically and adapted to the local situation, as stated in Paragraph 13.5: “States should establish strategies for readjustment approaches that fit particular local requirements. Such strategies should be socially, economically and environmentally sustainable, and gender sensitive. Strategies should identify the principles and objectives of the readjustment approaches; the beneficiaries; and the development of capacity and knowledge in the public sector, the private sector, organizations of farmers and small-scale producers, of fishers, and of forest users, and academia. Laws should establish clear and cost-effective procedures for the reorganization of parcels or holdings and their uses”. Therefore, the preparation and adoption of national land consolidation strategies are supported by the VGGT. It should be noted

⁵ Land mobility describes the potential of the transfer of land rights (sale, exchange, purchase or lease of land) in a land consolidation project.

that such strategies should have time limits and undergo periodical revision, as indicated in Section 2.3.2.

1.4 OBJECTIVES OF THIS GUIDE

The primary objective of this guide is to facilitate the creation and/or further development of legal frameworks for land consolidation in Europe and Central Asia, through the promotion of good European land consolidation regulatory practices. In addition to the target audiences in Europe and Central Asia, this guide could also provide practical information and inspiration for countries in other regions and countries of the world facing similar problems of fragmented agricultural land structures. The guide also aims to support the implementation of the VGGT by providing more detailed practical guidance in the field of land consolidation than what is currently available.

While this guide encourages the exchange of good practices between countries with ongoing national land consolidation programmes, it mainly targets countries that have not yet developed a specific legal framework for land consolidation, and countries where land consolidation instruments have a short history, are in the initial phase of development or a new legal framework is needed due to the new challenges, like climate change adaptation in agriculture and nature protection measures in rural areas. As regards those countries with developed land consolidation legal frameworks, this guide can be used to strengthen or streamline such frameworks. Thus, the guide may be useful to any country wishing to introduce or reform its land consolidation legislation, independent of general level of development or wealth.

However, it is not the intention of the guide to provide universal legislative solutions, but rather to present key features of land consolidation and examine the respective regulatory options. The guide provides recommendations for national legal frameworks, *which need to be adapted to local conditions* during the formulation of land consolidation regulation at country level.

1.5 SCOPE OF THIS GUIDE

This guide considers different forms of land consolidation in rural areas. However, it specifically focuses on the regulated voluntary and majority-based land consolidation, facilitated by land professionals. It also considers most of the elements of mandatory land consolidation (sometimes also referred to as statutory or compulsory land consolidation), where the landowners have no right to vote on the Land Consolidation Plan (for the definition of the Land Consolidation Plan see Section 2.1.1), even if they are consulted by the relevant authority implementing the project. FAO does not recommend such approaches, where the landowners have no voting power regarding the Land Consolidation Plan. However, many elements of mandatory land consolidation are relevant for voluntary and majority-based approaches, thus, the relevant practice of mandatory land consolidation in certain countries will also be considered in this guide.

Land consolidation should not be confused with other land management measures, although it may be applied in combination with such instruments. Land consolidation presupposes the existence of a *specific legal regime* applicable to the entire process which is *facilitated by land professionals*. This fact distinguishes land consolidation from bilateral voluntary sale and

purchase or land exchanges performed under normal land market conditions and following general legal mechanisms. It should be noted that government-led land consolidation should be seen as serving the public interest, benefiting all involved farmers, landowners, as well as the wider community.

Another instrument impacting land tenure rights is the expropriation of land, permitted under a legal instrument that is distinct from land consolidation. When land consolidation is used, the expropriation may still be applied when it is necessary for public works or other purposes in the public interest. In this case, the two mechanisms may be used in combination. Yet, it should be emphasized that land consolidation aims to attain the land restructuring solution best to all the landowners and land users within the project area, including wide consultations with the project stakeholders, while expropriation is a fully mandatory instrument, involving in most cases, the monetary compensation rather than land and having no overall land restructuring objective within the project area.

Therefore, the guide does not cover other forms of land restructuring such as voluntary land exchanges with no facilitation by land professionals or land expropriation. Also, the regulations specifying penalties and taxation measures for abandoned land, establishing smallest permitted parcel size or prohibition to fragment parcels, market regulations and other measures, are all distinct from land consolidation and are not covered by this guide.

Figure 1.1 illustrates the main land consolidation regulatory practices which are considered in this guide (distinguished in accordance with the key differences in applied procedures). This figure considers only the key features and does not provide detailed characteristics of each of the approaches. For the purposes of contextualization besides land consolidation, the figure also depicts other instruments previously mentioned, which impact land tenure rights.

Figure 1.1: Land consolidation types considered in this guide: voluntary, majority-based and mandatory land consolidation

VOLUNTARY LAND EXCHANGES	VOLUNTARY	MAJORITY-BASED	MANDATORY	EXPROPRIATION
Regulated or unregulated	Regulated	Regulated	Regulated	Imposed by state
Not facilitated by land professionals	Decisions are taken voluntarily	Land consolidation plan approved by a qualified majority	Land consolidation plan adopted by competent public body	No voting
Land market transactions	Facilitated by land professionals	Facilitated by land professionals	Facilitated by land professionals	Compensation in money

The recommendations provided in this guide generally refer to the level of primary legislation. However, some aspects of the issues covered could be regulated in secondary legislation, such as regulations, decrees, resolutions, bylaws or other.

1.6 TARGET AUDIENCE

This guide is primarily for decision-makers and professionals working with agricultural land administration and management. It can be used by those who are already working with land consolidation at the national and/or international level, as well as those who may eventually work on land consolidation in countries where this instrument has yet to be introduced. This guide could also be a useful tool for scholars specializing in law, land management and other relevant fields.

Policy-makers can use this guide for developing national legislative frameworks for land consolidation. The FAO experience with supporting land consolidation programmes in Member Countries in Europe and Central Asia has shown that decision-makers introducing land consolidation regulatory frameworks or preparing land consolidation strategies, often need a comprehensive document as a guide. Such a document would cover the spectrum of land consolidation issues, in particular, those based on good practices from other countries (Hartvigsen, 2019).

The development of the capacities of professionals working with land management and administration issues, and/or land consolidation in particular, is a key aspect that contributes to the success of land consolidation. Lawyers, land surveyors, agronomists, valuers, spatial planners, administrative staff, and other professionals, could use this guide to gain a better understanding of the land consolidation instrument and practices from other countries. Such information could be used directly for their work as well as influencing legislative processes related to land consolidation.

This guide illustrates good European regulatory practices and can support the protection of legitimate tenure rights in different countries. The guide illustrates how these rights could or should be protected. It can be used in academic courses for lawyers and professionals working on land consolidation issues, such as land surveyors and valuers.

Civil society organizations representing farmers, smallholders, women, minorities, environmental organizations, academia, and other stakeholders could also benefit from this guide, because it provides key tools for the protection of group and/or public interests in land consolidation. They could use this guide to showcase good international practices.

1.7 METHODOLOGY

This guide is based on the analysis of the regulatory frameworks in eight European countries, namely, Denmark, Finland, Germany, Lithuania, the Netherlands, Serbia, Spain (Galicia) and Turkey. In addition, it includes certain aspects of regulatory practices from other European countries. Although an effort has been made to identify good regional practices on the matter, this guide should not be considered exhaustive or covering all European countries.

The countries were selected taking into account the following criteria: i) long land consolidation traditions; ii) specific approaches (reflecting the diversity of land consolidation practices in

Europe); iii) relevance for FAO Member Countries in Europe and Central Asia; iv) importance for countries, sharing comparable historical background (Balkan countries, Baltic countries, etc.); and v) availability of the research tools available regarding a specific country.

In each country, contacts with key persons, mostly LANDNET members, were established. Initially, the selected key experts provided basic information on the regulatory framework in their home countries including: i) list of legal acts regulating land consolidation; ii) hierarchy of such legal acts; iii) sources, where the aforementioned legal acts could be found; iv) English translations of legal acts (if available); and v) additional information and comments on the matter.

Subsequently, the authors of this guide, in cooperation with key persons from each country, analysed the legal frameworks and prepared summary files for each jurisdiction. The study involved desk research and extensive consultations with the key persons. The objective of drafting the summary files was to ensure comparability across the eight selected countries, with each file following the same standardized structure.

The guide was drafted based on the information from the summary files. The key recommendations were presented for comment and discussion at the 10th International LANDNET Workshop/Regional Consultation on Land Consolidation Legislation in Skopje, North Macedonia, on 19-21 June 2018. All comments and proposals were considered by the core group of authors, who integrated the respective information into the guide.

The final draft version of the guide was reviewed by a total of 33 external reviewers, whose comments and recommendations were collected in writing and through online meetings. Subsequently, the guide was finalized by the core group of authors taking into consideration the review comments.

1.8 OUTLINE AND USE OF THE GUIDE IN PRACTICE

As this guide is based on the analysis of legislation in various European countries with different legal systems and traditions, the applicability of the recommendations in a concrete country should be evaluated and adapted to suit that particular country's legal system and the evolutionary stage of land consolidation in it. It is also important that the evolutionary stage of land consolidation is taken into account. Adopting the most advanced models cannot guarantee success, as different countries have different land management issues and priorities. While in some countries land fragmentation and agricultural development is the main priority, in others, environmental and other issues, such as infrastructure development, might be the key drivers. The resources available (financial, human and others) are fundamental for land consolidation. The more advanced models may have significant cost implications (e.g. drainage and irrigation, road rehabilitation, and village renewal) which are not affordable in many countries and which also lack the expertise for running major projects.

The text in this guide is structured so that each land consolidation issue is first presented in more general terms. This general presentation is then followed by the most relevant country practices on that issue and subsequently, examples of legislative wording are provided in text boxes. Additionally, at the end of each chapter or section, key recommendations on the matter are also presented in boxes. The index of all legislative wording boxes, as well as key recommendations boxes, can be found at the beginning of the guide.

The main structure of this guide follows the typical phases of a land consolidation project (see Figure 2.2): i) feasibility phase; ii) re-allotment phase; and iii) registration and implementation phase. Often Land Consolidation Laws follow a similar logical structure. The guide contains 11 thematic chapters, the first two chapters being introductory. Chapter 1 presents the document, while Chapter 2 overviews the key features of land consolidation. Chapter 3 presents the objectives and principles of land consolidation. Chapter 4 deals with the relevant institutions, as well as with other stakeholders in land consolidation processes. Chapter 5 is dedicated to the question of feasibility, which is taken into consideration at the beginning of each project and determines whether it can be implemented or not. The re-allotment phase is covered by Chapter 6, which deals with the variety of issues considered when the new parcel layout is developed. Chapter 7 is dedicated to the actual implementation and the registration of the new legal situation. It also deals with the financial settlements resulting from the respective changes in the land and other property structures. Chapter 8 is dedicated to the monitoring and evaluation of land consolidation programmes and projects, while Chapter 9 covers legal remedies. Chapter 10 is dedicated to the combination of land consolidation and land banking instruments. Chapter 11 concludes the guide with an overview of the global perspectives for land consolidation.



Presentation of the Draft Legal Guide in Santiago de Compostela, Galicia, Spain (2019). © FAO.

OVERVIEW OF LAND CONSOLIDATION



2. OVERVIEW OF LAND CONSOLIDATION

There is no single universal definition or approach to land consolidation; different countries apply different models and follow different objectives. However, a comparison of national regulatory frameworks allows for the identification of key trends and practices.

The key legal aspects of land consolidation regulation can be discerned from the various substantive chapters. They include objectives and principles, institutional responsibilities, rights of landowners and long-term leaseholders, key elements of the process and procedures to be followed including legal remedies, as well as monitoring and evaluation. The guide recommends keeping the primary legislation brief and issue regulations or other secondary legislation (i.e. legal acts adopted by the government, ministries, agencies, etc.) to ensure clarity and accessibility of procedures. This can be accompanied by technical operational manuals to guide the professionals working on land consolidation projects.

This Chapter presents the definitions of key terms. It also provides an overview of the main approaches, including an overview of European regulatory land consolidation practices. In addition, this Chapter presents the key issues regarding the integration of land consolidation into the national legal framework.

2.1 GENERAL PRESENTATION OF LAND CONSOLIDATION

Land consolidation, when correctly implemented, is a land management instrument designed to develop efficient land tenure structures and eliminate inefficiencies that have emerged out of historical, political, economic, and environmental changes. The fact that land consolidation programmes have been in place for decades or even centuries offers ample evidence of its potential for rural prosperity. In fact, this has encouraged other countries to introduce reforms based on good regional or global practices.

However, the meaning of the term “land consolidation” can vary from country to country. This guide provides various definitions, classifications and processes that can inform national policy-makers and experts working on land consolidation legislation. FAO defines land consolidation as mentioned in Chapter 1.

2.1.1 Notions and definitions of key terms

The diversity of regulatory frameworks and differing interpretations (translation) of key terms constitute a challenge for information exchange. Therefore, to establish a basis for such exchange, it is necessary to present the notions and provide respective definitions. Since the FAO definition of “land consolidation” is presented at the beginning of Chapter 1, this Section will focus on the definitions of other related terms.

Land consolidation project area

The implementation of land consolidation is project based, in other words, it is not applied to the entire territory of a country or region simultaneously. A competent public institution identifies areas where land consolidation would be the most necessary and efficient. In some cases, it is an *ex-officio* decision by the institution, while in other cases, the decision is based on a request from landowners or other individuals or entities. Following legally-defined

procedures, the precise area is identified and publicly declared as a land consolidation project area. This does not necessarily imply that all parcels within its perimeter are included in, or will be affected by, the land consolidation project. There are some cases where parcels are excluded from the land consolidation process for a variety of reasons. This will be discussed later in this guide. Therefore, for this specific guide, a “land consolidation project area” is defined as follows:

Land consolidation project area means all those land parcels which are included in an officially approved project territory and which are thereby subject to land consolidation procedures during the course of the project.

Land Consolidation Plan

The Land Consolidation Plan is the central set of documents in the land consolidation process. Different terms may be used to describe the Land Consolidation Plan, such as Re-allotment Plan, Re-Parcelling Plan, etc. These terms may not necessarily be synonyms in practice. However, in this guide the term of “Land Consolidation Plan” shall be understood as a synonym to the term “Re-allotment Plan”, often used in international practice. Where the wording of legal acts from a specific country expressly uses the term “Land Development Plan” or some other term, such term will also be used in reference to the specific national legal act.

The Land Consolidation Plan or Re-allotment Plan is “the outcome of the planning process” and displays “the new layout of land parcels and connected ownership after the land consolidation project” (Hartvigsen, 2015a, p. 210). It is typically reviewed by the public, approved by the landowners and adopted by the competent public institution. It serves as the basis for the establishment of a new legal situation, superseding that which existed before. The term “Land Consolidation Plan” is therefore defined as follows:

A Land Consolidation Plan is a set of interrelated documents defining the re-allotment for the land consolidation project area, approved by either all (in case of voluntary land consolidation) or a legally defined qualified majority (in case of majority-based land consolidation) of landowners and adopted by the competent public institution. The Land Consolidation Plan serves as single basis for the registration of re-allotted property rights.

Project stakeholders

The implementation of a land consolidation project can impact the rights of the landowners and other right holders, like long-term leaseholders, mortgagees and holders of the servitudes. It may also affect interests represented by formal or informal entities, persons and groups, such as professional, environmental, women’s organizations and others. Even if the land consolidation project does not change the rights and obligations of such entities and groups, they may be interested in participating in the project to represent their own or other persons’ respective interests, as well as to provide their input to the project. In this guide, the aforementioned right holders, entities and groups are referred to as land consolidation “project stakeholders”. Although their rights and interests in the land consolidation process may differ, they will likely be involved in the process to attain the best results of the project. For the purposes of this guide the “project stakeholders” are defined as follows:

Project stakeholders mean persons and entities, representing certain public or private interests, whose legitimate rights and/or obligations might be affected by the implementation of the land consolidation project.

Right holders

Right holders in land consolidation projects are physical or legal persons who hold tenure rights within the project area. These tenure rights, including ownership, lease rights, mortgages and servitudes, can be affected by land consolidation, and may or may not be fully formalized (see legitimate tenure rights below). The land consolidation process should consider all such rights and provide solutions to the formalization of non-formalized but legitimate property claims. Taking into account the impact that land consolidation projects have on landowners, they are granted specific rights during the project, including voting rights in public meetings and appropriate representation through elected bodies. In this guide, “right holders” is defined as follows:

Right holders mean persons and entities who hold legitimate tenure rights, related to the parcels included in the land consolidation project area.

Legitimate tenure rights

The VGGT promote respect for and recognition of all legitimate tenure rights. Legitimacy in that sense refers both to rights that are recognized by law and those that enjoy social legitimacy, even if they are not recognized by law. States are encouraged to recognize all legitimate rights by law. Land consolidation processes cannot provide legal recognition but must deal only with rights that are already recognized by law (legally legitimate). In this guide, legitimate tenure rights are those rights that are recognized by law but may or may not be registered. Therefore, in this guide, the term “legitimate tenure rights” has a narrower meaning than in the VGGT and is defined as follows:

Legitimate tenure rights are those tenure rights that enjoy protection of the law whether they are formally recorded or not.

Lead agency

Typically, countries assign a specific institution or institutions the responsibility for the formation of the land consolidation policy, management of the land consolidation programme and actual implementation of the land consolidation projects. Depending on the approach adopted by a specific country, the lead agency or lead agencies may act on national, regional or even local levels. Also, some of the aforementioned functions may be conferred to other institutions, as discussed in Section 4.1. For the purposes of this guide the “lead agency” shall be understood as follows:

Lead agency means a public institution, which is responsible for the formation of the land consolidation policy in the country, management of the land consolidation programme and actual implementation of the land consolidation projects.

Land bank (fund)

While the term “land bank” does not directly derive from the process of land consolidation and is only an accessory instrument, it is often fundamental to the success of land consolidation. Land consolidation is implemented in a more efficient way if the state has a certain reserve of land that it can make available for land consolidation projects. This increases potential possibilities for re-allotment of the land in the land consolidation project area. The formation and management of such state-owned land reserves may be performed by a public institution,

state-owned enterprise or other types of state, regional or municipal legal entities which have a respective flexibility to act within the land market – like the rights related to the implementation of transactions with the land (buying, selling, exchanging, leasing-out, etc.), adapted budgeting rules (necessity for the revolving budgeting), etc. land banks and land banking, as well as their integration with land consolidation, are discussed in more detail in Chapter 10. Besides their use in land consolidation, land banks may be used for other different purposes, like buying-out the land in advance when market conditions are favourable in the areas of prospective public infrastructure projects, this way avoiding the need for later expropriation. For the purposes of this guide, the term “land bank” shall be understood as follows:

A land bank is a public institution, performing the intermediate buying, selling or leasing of land in order to increase land mobility, to facilitate the rural land market in general, and to pursue public policy targets related to sustainable rural land use in particular.

Other terms and definitions related to land consolidation will be provided in the respective chapters of this guide. If no definition is provided, it is understood that the term is well-known and accepted in professional practice.

2.1.2 Land consolidation approaches

The typology of land consolidation varies according to whether participants take part of their own volition or whether there are elements of obligation. A second typical classification is based on the number of objectives of the land consolidation.

If each landowner within the land consolidation project area freely decides whether and under which conditions to consolidate his/her land, and based on this, the lead agency or other competent public body adopts the Land Consolidation Plan, such land consolidation is considered *voluntary*. In such case, there is no need for voting on the Land Consolidation Plan, since all landowners, upon the proposal of the re-allotment planner, have decided on the conditions of re-allotment of their parcels. If the landowners within the land consolidation project area are obliged to participate in the project based on the decision of the lead agency or other competent public body, and the Land Consolidation Plan is approved by a legally defined qualified majority of landowners, such land consolidation is considered a *majority-based land consolidation*. The term “majority-based” land consolidation allows it to be contrasted from land consolidation projects initiated by the authorities (state, regional or local), where there is no voting by the landowners on the Land Consolidation Plan.⁶

The analysis of different country cases has demonstrated that different land consolidation approaches – voluntary, majority-based and mandatory, may be used to achieve the desired land management results. However, the approach of land consolidation chosen should correspond to the situation of the specific country. For example, in countries with a post-socialist background, the application of mandatory land consolidation could cause more opposition as compared to Western Europe, where there is a long record of trust in the system. It should also be noted that some countries provide only for one land consolidation model whereas other countries may apply different approaches depending on the situation in the project area.

Even if both voluntary and majority-based approaches have proved their efficiency, it is recommended to introduce land consolidation in the country on a voluntary basis, on the grounds that it is more respectful of the land tenure rights of all landowners and right holders. However, there can be situations where a majority-based approach is a more suitable

⁶ For different types of land consolidation see Thomas, J. 2006.

solution. For example, when there is a pressing need for an improvement of agricultural infrastructure, the voluntary approach could be very difficult to implement. A majority-based approach may be more suitable when a project has the strong support of the large majority of landowners or where there is a need for a comprehensive reorganization of the territory in order to support critical rural infrastructure works, such as rehabilitation or construction of irrigation and drainage systems. The complete reorganization of a field area is possible under the voluntary approach, but it requires universal support. The majority-based approach may be preferred where unanimity is lacking but support is overwhelming. In countries that have both voluntary and majority-based land consolidation, the decision about which approach to use in specific projects should be made after a thorough feasibility study, including interviews with all landowners and land users. In the case of majority-based land consolidation, legislation should provide for proper safeguards, such as the requirement that the Land Consolidation Plan be approved by a qualified majority of the participating landowners, the requirement that this group represents a qualified majority of the territory associated with the project area, the due respect for all legitimate tenure rights, the presence of effective administrative and judicial remedies, the mechanisms to ensure the appropriate transparency of the process, and to ensure the right for all project stakeholders to be heard. Every project should be able to demonstrate a clear public interest which justifies the need for a majority-based approach.

Both voluntary and majority-based approaches should be implemented on the basis of the specific legal framework for land consolidation. Consequently, the voluntary approach should not be considered as a simple parcel exchange and/or sale/purchase based on the general civil law mechanisms. The legal framework for land consolidation should provide for specific mechanisms, for example, facilitation by land professionals of the re-allotment planning, adoption of the Plan, simplified rules for subsequent land registration, and appropriate safeguards for all project stakeholders.

As mentioned briefly, certain countries apply an additional procedure, a so-called *mandatory land consolidation*, where landowners have no right to vote on the Land Consolidation Plan. In such cases, the Land Consolidation Plan is adopted by a competent public entity. However, mandatory land consolidation would normally include consultations with affected landowners and other stakeholders, including the right to request the launching of the land consolidation project. This guide does not endorse or recommend land consolidation decision-making where landowners (all or majority of them) have no say in the re-allotment of their properties. However, as all three approaches have important similarities, it is necessary to consider mandatory land consolidation in this guide as well.

Land consolidation projects aiming to improve agricultural development are considered *single-purpose*, whilst those combining several objectives, for example, agricultural development with infrastructure upgrade, and/or environmental objectives, are considered *multi-purpose*. In addition, it should be remembered that land consolidation may be driven by other projects, such as highway, railway, airport construction, flood mitigation, nature restoration and rural development.

The practice in countries with long-standing land consolidation traditions shows that it serves more than agricultural development needs. In many countries in Central and Eastern Europe, when land consolidation was re-introduced, it was primarily seen as an instrument of agricultural development. However, this is changing and a shift towards multi-purpose land consolidation can be observed. FAO supports the multi-purpose approach to land consolidation, being a considerably more efficient land management tool compared to the single-purpose approach.

Figure 2.1: Illustration of a multi-purpose land consolidation in Germany



Source: Based on A. Peter, T. Busch, District Government of Arnsberg, Germany.

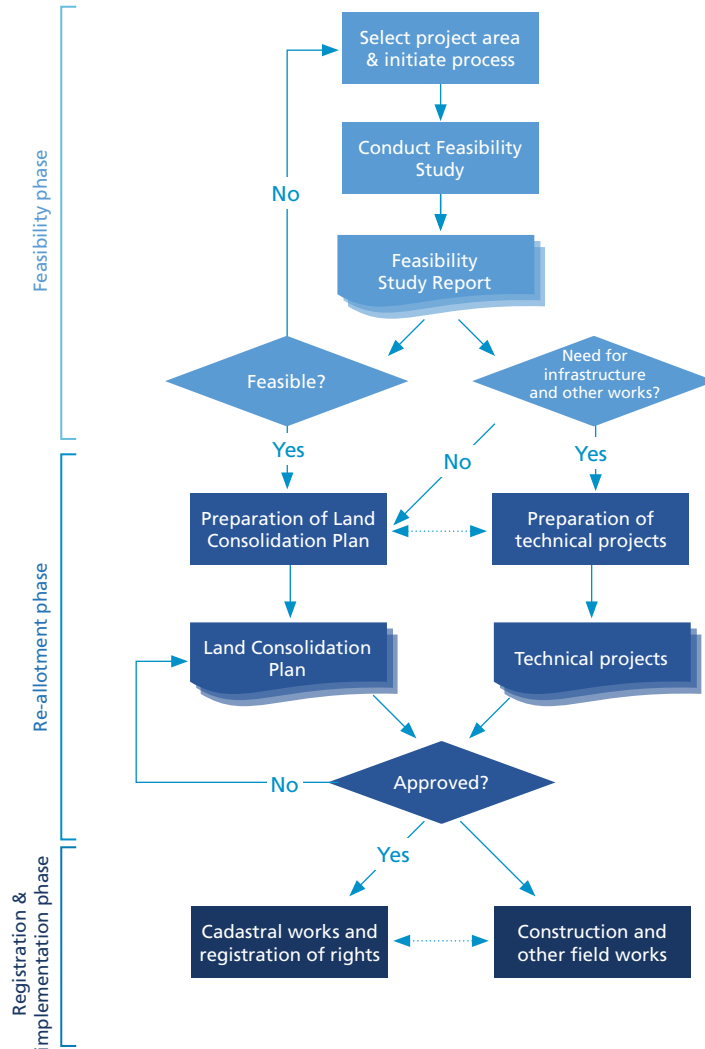
2.1.3 Phases of land consolidation projects

Based on national and international practice, the following three key phases of land consolidation projects have been identified:

1. Feasibility phase.
2. Re-allotment phase.
3. Registration and implementation phase.

The core structure of this guide follows these three phases which are illustrated in Figure 2.2. These generic phases mirror a typical process of implementation of land consolidation projects, which usually last 2–5 years in total, depending on the size of the project and infrastructure works included.

Figure 2.2. Three generic land consolidation phases in land consolidation projects



The right to apply for a project does not automatically mean that one will be launched. Country analysis shows that a variety of landowners, right holders, stakeholders, and private and public entities may submit an application for a land consolidation project. The lead agency then decides whether to launch the feasibility phase of a project or not. This is true for both voluntary and majority-based land consolidation.

Typically, feasibility studies are carried out by the lead agency, with strong involvement of the landowners and other project stakeholders. The correspondence of the proposed project with the defined land consolidation objectives is first verified, preliminary financial needs are evaluated, and an initial assessment is undertaken of any negative impacts on nature and the environment. The practice varies according to the depth of the feasibility study. However, it is a simple and comparatively inexpensive tool (compared with the costs of the full project implementation) for clarifying whether the project is feasible or not.

The feasibility study is the basis for decision on whether to launch the re-allotment phase. During the re-allotment phase, the work initiated during the feasibility phase continues, for example, the planner continues to interview landowners, taking note of their preferences regarding the re-allotment of land, and prepares the plan. Typically, the Land Consolidation Plan is publicly reviewed and amended several times. After approval by the landowners, it is adopted by the lead agency or another competent public body, like a Land Consolidation Commission, as it is in Denmark (see Section 2.2.1.). At this point, the registration and implementation phase can begin.

The implementation of the Land Consolidation Plan typically includes the cadastral surveying, demarcation of new parcel boundaries, registration of properties, financial settlements and compensations, as well as construction works (if included).

One of the distinctive features of an operational land consolidation programme is the presence of a legal instrument, which permits the registration of newly formed properties with a single administrative or judicial act. This should provide an adequate basis for the registration of properties, without any need for separate agreements between project participants or the use of other forms of multiple documents, which may bring about significant delay to the process. On this matter, country practices vary.

2.2 OVERVIEW OF LAND CONSOLIDATION REGULATORY PRACTICES IN EUROPE

Land consolidation has a long tradition in Europe. In Western Europe there has been a continuum of land consolidation whilst in Central and Eastern Europe, its evolution has often been interrupted. In Denmark, Finland, Germany and the Netherlands, land consolidation has been a feature of land management for decades or even during the last hundred years. By contrast, in Lithuania or Serbia, the history of land consolidation is more complex. Furthermore, the approach to land consolidation varies in different countries.

It is advisable to read the key information presented in the country sections below on land consolidation. These sections not only give an overview of land consolidation processes for each selected country but also allow for a better understanding of the information that is presented in the chapters and sections that follow. The fact that different country practices are presented here and other parts of the guide, does not mean that they are all endorsed by FAO. Some of the information is presented purely for illustration purposes, while this guide seeks to be clear about the practices that are considered as recommendable.

More detailed information on the land consolidation regulatory framework in some of the analysed countries can be found in FAOLEX (www.fao.org/faolex/en).

2.2.1 Denmark

Land consolidation in Denmark can be traced back to the 1780s when the so-called “enclosure movement” (Hartvigsen, 2014a, p. 52) dismantled the common use of agricultural land among villagers and introduced individual family farms.

The first “modern” Land Consolidation Law was adopted in 1924 (Hartvigsen, 2015b). The current law dedicated specifically to land consolidation is the *Law on Land Consolidation and Public Purchase and Sale of Real Property for Agricultural Purposes (No. 31 of 2017)*.

Land consolidation in Denmark is usually implemented on a voluntary basis, however, if it is implemented together with infrastructure projects where the state or municipality have the option to expropriate private land rights, then private land rights can be expropriated in cases where the affected right holders do not agree with the proposed voluntary land consolidation.

The main objectives of land consolidation in Denmark are: better commercial exploitation of agricultural properties by reducing land fragmentation and increasing the sizes of agricultural holdings and farms; contribution to the implementation of projects for preservation and improvement of natural and environmental values; contribution to rural development by improving structural conditions and reducing land fragmentation; taking into account nature and environment and landscape values.

Land consolidation projects in Denmark can be divided into project-driven (such as highway construction) projects, nature restoration projects and private owner-driven projects.⁷

State-funding of projects “with the traditional objective of agricultural development” continued until 2006, after which, these projects usually initiated by a group of local farmers were no longer supported. However, since 2018, land consolidation for agricultural development has again received support but with a relatively limited programme budget. Furthermore, multi-purpose land consolidation projects have been piloted during 2016-2020 by a private philanthropic association Realdania,⁸ and the Ministry of Environment and Food launched a new support scheme in 2020 for multi-purpose land consolidation, encouraging an integrated approach to agricultural development, nature restoration and improvement of the recreational values in rural areas.

The main institution responsible for land consolidation is the Ministry of Environment and Food. The specific agency responsible is the Danish Agricultural Agency under the Ministry of Environment and Food. The Minister establishes the rules for the two permanent regional Land Consolidation Commissions (one for Eastern and one for Western parts of the country) and the Ministry provides secretarial assistance to the Commissions.

Each Land Consolidation Commission consists of one chairperson, two vice-chairpeople and nine other members. The chairperson and vice-chairpeople of the Land Consolidation Commission are judges appointed by the relevant Chief Justice. The nine other members are made up of: three valuation experts appointed by a proposal from the Minister of Economic and Business Affairs; three agriculture experts appointed by a proposal from the Danish Agriculture and Food Council; and three members appointed by a proposal from the Association of Municipalities in Denmark. These experts constitute a “pool” of experts, whereas for the adoption of each land consolidation judgement, the Commission is composed of the chairperson or one vice-chairperson, one valuation expert, one agriculture expert and one member appointed upon the proposal from the Association of Municipalities. The chairperson decides whether he/she or one of the vice-chairpersons shall hold the position of chairperson in the specific case. It is the chairperson or vice-chairperson, who appoints the three other members. The Commission is competent to take decisions when the chairperson or vice-chairperson, the valuation expert and either the agriculture expert or the member appointed on a proposal from the Association of Municipalities, are present. In the event of a tie, the chairperson’s or vice-chairperson’s vote is decisive.

⁷ For more information see the website of the Danish Agricultural Agency, <http://lbst.dk/landbrug/arealer-og-ejendomme/jordfordeling/#c6320>.

⁸ See www.realdania.org.

Once all the participating landowners individually consent to the proposals made by the land consolidation planner regarding the re-allotment of their properties, the Land Consolidation Plan is submitted to the Commission in a public meeting. The Commission adopts the Plan by adopting a judgement. On this basis, the secretariat performs the registration and implementation of the Plan, which includes demarcation of new boundaries, surveying of new parcels, and registration of new property rights in the land registry. All works after the judgement are purely technical and therefore, any permission required by other legislations, for example, the permission to establish a new access to a public road, must be obtained before judgement.

The Danish Agricultural Agency works in close cooperation with the Nature Agency in cases of land consolidation projects in the framework of nature restoration. The Danish Agricultural Agency is responsible for land consolidation in such projects. The planning and facilitation of negotiations between the right holders and preparation of the Land Consolidation Plan can either be carried out by the Danish Agricultural Agency or by contracted private companies (both consulting companies and surveying companies). The work related to the registration and implementation of the Land Consolidation Plan is always conducted by private surveying companies, as they have a monopoly (license) to perform the cadastral work and surveying.

2.2.2 Finland

Finland has a long history of land consolidation and, arguably, the last two decades have been the most dynamic in its development (Konttinen, 2016). Land consolidation is mainly applied in agricultural areas although there are also cases of consolidation of forest land. According to the *Land Rearrangement Strategy of the Ministry of Agriculture and Forestry for 2015–2020*, in 2014 there were 55 land consolidation projects underway, covering about 76 000 hectares. The vast majority involved *arable land* and only three projects were dedicated to the consolidation of forest land (Ministry of Agriculture and Forestry, 2015).

There is no separate law for land consolidation in Finland. The main legal act regulating land consolidation is the *Real Estate Formation Act*, where Chapter 9 covers land consolidation and Chapter 12 is applicable to land re-allotment in urban areas. Two other key acts are the *Highways Act* and the *Railway Act*, regulating, amongst other things, the use of land consolidation in highway and railway construction. Besides these legal acts, there are also strategic documents (not legal acts) that play a role in implementing land consolidation, for example, the aforementioned *Land Rearrangement Strategy of the Ministry of Agriculture and Forestry for 2015–2020* (and previously for 2008–2013).

All activities related to land consolidation are conducted by the National Land Survey under the Ministry of Agriculture and Forestry. Implementation of land consolidation projects is carried out by the surveyor of the National Land Survey, and two trustees elected by the council of the municipality in which the land consolidation is carried out. Whilst the National Land Survey has a unilateral right to initiate land consolidation projects, the usual practice is that landowners request the launching of a project. Even a request from one landowner is sufficient basis for starting initial procedures. Although not a legal requirement, a land consolidation project is in practice only launched if supported by the majority of landowners. The land of those who do not support the project is usually excluded from the project. If deemed necessary, the surveyor of the National Land Survey and the two trustees can decide to include such parcels in the project without the consent of their owners (Hiironen & Niukkanen, 2014).

The process starts with the preparation phase, which includes, amongst other things, a feasibility study. If the results confirm the feasibility of the project, then the inventory and planning phase may be launched. Collection of preferences of the landowners concerning the re-allotment of parcels is carried out during individual interviews and public meetings. No voting on the Plan is carried out by the landowners. The Plan is adopted by the decision of the surveyor of the National Land Survey and the two trustees. Subsequently the Land Consolidation Plan is implemented (see Hiironen & Niukkanen, 2014).

Besides public meetings organized by the surveyor of the National Land Survey, the landowners have a right to represent their interests in the project via the Advisory Board of Landowners, composed of three to eight representatives elected in a public meeting. The Advisory Board of Landowners decides what general works (like construction of local roads) should be performed and the chairperson of the Board signs contracts with companies, implementing the works. The activities of the Board are supervised by the cadastral surveyor.

2.2.3 Germany

Germany has a well-established land consolidation tradition. The evolution of land consolidation was interrupted in the Eastern part of Germany for several decades and was not reintroduced until after the reunification of the country in 1990. Until 2006, the responsibility for land consolidation legislation in Germany was vested in the Federal Government, after which it was transferred to the German Federal States (Länder).

The key legal act regulating land consolidation in Germany is the *Land Consolidation Act (LCA)*, originally adopted in 1953 (substantially amended in 1976), which is still used by all the Federal States as a legal basis for land consolidation. In order to implement the LCA, each state has adopted their own implementing regulations. For example, in Bavaria, in addition to the LCA, further regulations such as the *Bavarian Land Consolidation Implementation Law (LCIL)*, the *Bavarian Financing Guidelines for Rural Development* and the *Bavarian Village Renewal Guidelines* (Gollwitzer, 2018) are applied in connection with land consolidation.

In Section 1 of the LCA, the objectives of land consolidation are broadly defined. Accordingly, land consolidation is performed “with a view to improving the production and working conditions in agriculture and forestry as well as promoting the general use and development of land”. In Section 37, the Act defines more detailed objectives, for example, to “meet modern managerial requirements” and obtain “units of a more favourable location, shape and size”, and the provision of “ways, roads, water bodies and other common facilities”. In addition, it includes measures for “soil-conserving, soil-improving and landscaping”, for “improving the basic conditions of the farming enterprises, reducing the amount of work and facilitating farm management”, for “village renewal”, clarification of the legal situation, etc. The objectives of modern land consolidation in Germany have shifted “from merely agricultural development and infrastructure projects to nature protection”. Land consolidation today is predominantly a tool for integrated rural development, aimed at the simultaneous improvement of economic, ecological and social conditions (Hartvigsen, 2015b).

As for the institutional infrastructure, the LCA provides for three levels of land consolidation authorities – the supreme land consolidation authority, the higher land consolidation authority, and the lower land consolidation authority – see Section 2 of the LCA. The states define the role of each authority. For example, in Bavaria, the Ministry of Food, Agriculture and Forestry is the supreme authority, while seven Offices of Rural Development play the role of local land consolidation authorities (Gollwitzer, 2018). The LCA stipulates the formation of a Body of

Participants, which has the function of a public legal body.⁹ In Bavaria, unlike in most other states, the Body of Participants is the lower land consolidation authority and has extensive rights and functions, such as planning and reshaping the land consolidation area (Sects. 18, 37, LCA; Art. 2, LCIL), creating the common and public facilities within the land consolidation area (Sect. 39, LCA) as well as conducting the valuation procedure (Sects. 27, 33, LCA; Art. 8, LCIL). The members of the Body of Participants are mainly landowners within the project area. The Body of Participants elects a Board that will conduct its affairs. Other bodies, such as the Associations of the Bodies of Participants may also be created; they are involved in the land consolidation process regarding, for example, treasury management for all Bodies of Participants in the respective governmental district.

The LCA provides for possibilities to implement land consolidation via five different procedures: i) standard land consolidation; ii) voluntary land exchange; iii) land consolidation to implement large scale public projects; iv) simplified land consolidation; and (v) accelerated land consolidation. In practice, mainly the three first types of land consolidation (i to iii) are implemented (Gollwitzer, 2018).

The standard land consolidation procedure is most common and it “has the most far-reaching planning approach” (Thomas, 2004, p. 3). Projects are launched following the decision of the higher-level land consolidation authority. Although the preferences of the participants are collected during a mandatory consultation there is no voting to approve the Land Consolidation Plan. The adoption of the Plan is based on the decision of the higher-level land consolidation authority. Also, no voting on the Land Consolidation Plan takes place for the other types of land consolidation procedures listed above (Hartvigsen, 2015b).

Regarding the voluntary land exchange procedure (Sect. 103a, LCA), it “is the simplest and fastest procedure. Parcels of two (as a minimum) or more owners are exchanged and merged. The (...) owners concerned have to file and to agree to all measures and decisions which are necessary to implement the exchange” (Thomas, 2004, p. 3).

2.2.4 Lithuania

Land consolidation is not new to Lithuania (Aleknavičius, 2012; Basalykas, 2014) even though its evolution was interrupted for several decades until the restoration of independence. The first two land consolidation pilot projects were launched in 2000 and 2002, aiming to subsequently develop the land consolidation regulatory framework. The regulatory framework was introduced in 2004. Land consolidation is currently regulated by Chapter IX of the *Law on Land (No. I-446 of 1994)* and relevant secondary legal acts, such as the *Government Resolution No. 697 on the Approval of Rules for Drafting and Implementation of Land Consolidation Projects* dated 27 June 2005.

In Lithuania, 14 land consolidation projects (total area of 4827 hectares) were implemented from 2005 to 2008 and 39 projects (total area of 44 000 hectares) were implemented from 2007 to 2013. For the current period 2014-2020, 8 projects are being funded and implemented.¹⁰ The 8 recent land consolidation projects are the first to include small public infrastructure improvements in the project areas, like public spaces, beaches, benches, fireplaces, walking paths, playgrounds, street lamps, cemetery infrastructure. Land consolidation is mainly financed

⁹ According to Section 10 of the LCA “Participants” are the “landowners and persons holding the hereditary right in the land”. All other right holders are “participants of secondary order”.

¹⁰ For further information see the National Land Service at <http://www.nzt.lt/go.php/lit/Zemes-konsolidacija>.

with European Union funds through the Rural Development Programme and co-financed by the state budget (Daugaliene, 2007).

The key objectives of land consolidation are provided in Article 2 Paragraph 9 of the *Law on Land (Lithuania, No. I-446 of 1994)*. The aforementioned Article defines land consolidation as a part of land management, when the boundaries of the land parcels in a defined rural area are re-allotted in an integrated way by merging these parcels in order to form rationally-managed agricultural holdings, improve their structure, create the required rural infrastructure and to attain other objectives and tasks of agricultural and rural development as well as those of environmental policy.

The land consolidation policy is formed by the Ministry of Agriculture, while the implementation of the policy is the responsibility of the National Land Service under the Ministry of Agriculture. The National Land Service is responsible for the supervision of the drafting, publication and approval of Land Consolidation Plans and for their conformity to legal acts. The state enterprise, State Land Fund, organizes the development of the Plans and their implementation. The actual works related to the re-allotment planning are tendered out to individuals and entities possessing the legally defined qualifications.

In Lithuania, no parcels may be included in the land consolidation project without the consent of the landowners. However, if the landowner participating in the project wishes to withdraw from it at a later stage, he/she must compensate the damages resulting from such withdrawal. The State Land Fund analyses the feasibility of the project, if it receives applications from at least 5 owners or trustees (in case of municipal or state-owned land) of at least 5 land parcels located in the same or neighbouring cadastral areas. The project area must cover at least 100 hectares.

Interviews with the landowners are carried out and public meetings are organized within the framework of the legal procedure. During the meetings, participants are informed about the project and express their preferences, raise objections, etc. In the third public meeting, the participating landowners vote on the proposed Land Consolidation Plan. The Plan is approved and other decisions of the public meetings are adopted only if a qualified majority of 75 percent of all landowners participating in the project vote in favour. If the Plan is approved by the landowners' vote then the State Land Fund adopts the decision to re-allocate land parcels according to that Plan and submits all relevant documents to the National Land Service. The Service approves the cadastral documents of each newly formed land parcel, after which, it adopts the decision to re-allocate the respective parcels. All project participants (or their representatives) conclude a notarized Land Consolidation Agreement, which is then registered in the Land Registry. Finally, the solutions provided for in the Land Consolidation Plan are implemented.

2.2.5 The Netherlands

The contribution of land consolidation towards the agricultural and economic development of the Netherlands originates from the last decades of the nineteenth century. In the years following the First World War, a growing awareness among private landowners about land consolidation coincided with a political determination to develop the Netherlands economically. Land consolidation was seen as an important instrument that could support agricultural modernization. As a result, the very first *Law on Land Consolidation* was adopted in 1924. This Law has been revised in 1938, 1954, 1985 and 2006, adjusting it to the changing circumstances

and preferences in society and gradually transforming the instrument into a powerful driver for rural development.

In brief, with the revisions made in 1938, more favourable state financing mechanisms of land consolidation projects were introduced, along with the establishment of a Government Service for Land and Water Management within the Ministry of Agriculture and a Central Land Consolidation Commission to support project preparation and implementation. In 1954, the rights of long-term leaseholders were recognized and a system of deduction (see Section 7.3) for infrastructure was introduced, creating the possibility for greater infrastructural interventions, not only related to agriculture. It is important to note that according to the Law of 1954, farmers did not receive any compensation for the deductions.

With the introduction of the *Land Development Law of 1985*, the term “land development” replaced “land consolidation”. The Law of 1985, which was introduced in response to public pressure, saw the legal establishment of multi-purpose land consolidation. With this, the objectives of land consolidation changed from being purely agricultural to a multi-purpose instrument for the implementation of comprehensive spatial policy in rural areas (infrastructure, water management, nature, landscape, outdoor recreation). It included an integrated planning and implementation approach towards land development. The principle goal was shifted towards improvement of rural areas in accordance with spatial plans and the newly introduced instrument of land development was used for areas that had agricultural as well as non-agricultural land use. An important consequence was that public authorities and organizations defending general interests became legitimate stakeholders in the process, ensuring that general interests could outweigh purely agricultural interests.

The 1985 Law envisaged four instruments for land development:

1. Traditional model of land consolidation - with agricultural goals being the lead objective and with a process of approval of the Land Development Plan by the landowners/land users through voting (yet, there is no voting for the Re-allotment Plan).
2. Land redevelopment - in which multiple targets are served in the project area. Improvements related to agriculture are not the principle objective, but rather the improvement of nature, landscape or outdoor recreation and the consolidation (re-allotment of the parcels) could be a part of the Plan. Redevelopment plans may or may not include land consolidation, or implement it only in restricted areas. In the case where land re-allotment is included, then no voting will take place. The project decision-making is reserved exclusively to the provincial government as private interests are considered subordinate to public interest. Expropriation in the interests of land development is also allowed.
3. Land adaptation - an instrument used for large infrastructure projects of national or regional importance where the infrastructural project itself is not a part of the land development area, but rather the land adaptation instrument is used to mitigate the adverse effects of infrastructural projects, e.g. the fragmentation of parcels and farms. The approval of a Land Adaptation Plan is given by the provincial government in consent with the governmental service in charge of the implementation of the infrastructure project.

4. Voluntary land consolidation or land consolidation by agreement - based on a private initiative, with at least three landowners involved, with fully subsidized costs, such as costs of the notary and cadastre, and exempt from property transfer tax.

Nevertheless, the basic system of land consolidation under the *Land Consolidation Law of 1954* did not essentially change until 2007. Currently, land development starts with the preparation of a draft Land Development Plan containing all the measures, infrastructure, or other interventions to be carried out in the project area. This is then approved by the provincial government after the participation and appeal procedures for the involved landowners. Up to March 2015, the Government Service for Land and Water management (DLG) was the lead agency responsible for the preparation and implementation of land consolidation projects, while the Cadastre, Land Register and Mapping Agency (Kadaster) was responsible for the land re-allotment process within the projects. Since 2015, the 12 provincial administrations have operational responsibility. The re-allotment planning is now undertaken by experts from Kadaster under the overall supervision of the Land Development Committee, which coordinates the implementation at local level. The Committee consists of representatives of various interest-groups like farmers, nature-preservation organizations, water management authorities, and municipalities. The valuation of the property is conducted in advance and is used as a basis for the process of re-allotment. An assessment of the benefits for landowners after the implementation of the Plan is also conducted, which is then used to calculate financial compensations. The deductions in area required for the infrastructural improvements are also compensated.

Since the entry into force of the *Law on Development of Rural Areas* (1 January 2007), the above approach has been taken to a higher level with the so-called “area development” or “area-specific” approach. This is an integrated approach to spatial policy and implementation at the regional level, which means combining urban and rural interests and public and private efforts. The Law contains new and simplified regulations for land development (land consolidation disappeared as a separate instrument), giving more freedom to the provinces to make decisions on how to implement national and regional policies for the rural areas. It also introduced significant changes in the voting principles, deregulation of the land valuation and simplification of the public reviews through the combination of several phases into one. Within a broader process of codification of acts concerning land use, residential areas, infrastructure, environment, spatial planning, nature and water, the current *Law on Development of Rural Areas* will be incorporated into a single *Environment and Planning Act* by 2022.

In the period from 1924 to 2004, nearly 1.4 million hectares in approximately 480 projects were affected through the instruments of land consolidation and land development. Taking into account that most FAO Members, where FAO supports the introduction or the development of land consolidation, are only considering introducing this instrument now or are at an early stage of its development, and yet the regulatory framework of the *Law on Development of Rural Areas* represents a more sophisticated approach to land management, this guide will mainly focus on the regulatory experiences that the Netherlands had accumulated before the entry into force of the *Law on Development of Rural Areas* in 2007.¹¹

¹¹ This section benefitted partially from: Leenen, 2014; Meijer & Emmens, 2016; and van den Noort, 1987.

2.2.6 Serbia

Serbia has a long and complex history of land consolidation. The first law on land consolidation applicable to areas of Serbia was the *Urbar Law on Land Consolidation*. This Law entered into force in 1836 under the territory of the Austro-Hungarian Empire. The so-called “Urbar Commasations” in the region of Vojvodina began in the 1850s and 1860s, under the above Law, and continued to the beginning of the twentieth century. The first projects were carried out in Backa (Stari Stopar and Sivac), then in Banat (Margita and Vatin). The main purpose was for the abolition of feudal relations, the implementation of divisions and the consolidation of the land. The need for land consolidation in central Serbia is considered in the Knjaz Milos Commander’s *Order to the Governing Council* for the first time, and in 1901, a land consolidation programme called “Grouping of rural property on the basis of exchange” was officially launched. In 1908, the Hungarian Parliament adopted the *Law on Consolidation* in Banat and Backa.

After 1945, land consolidation was considered a capitalist measure that strengthened private property and was therefore unacceptable for Yugoslavia. However, in order to prevent further fragmentation of land and to support more intensive land cultivation, land consolidation was increasingly applied alongside the process of land collectivization. Recognizing the increasing economic and social interest in resolving problems arising from land fragmentation, Serbia in 1974 introduced the *aw on Arrondation and Consolidation of Argicultural and Forest Land*, regulating land consolidation. Under this Law, land consolidation works were carried out throughout the country. Up until 1990, land consolidation was carried out in 710 cadastral municipalities, across an area of 1 445 720 hectares, representing 25 percent of total agricultural land in Serbia. Hydro-technical melioration for the disposal of excess water was simultaneously carried out in a considerable portion of the land consolidation areas, and the accompanying drainage canal network was increased for about 60 percent of the area. The rural road network increased by about 26 percent overall and the number of cadastral plots was reduced from 2 085 649 to just 727 017. Land consolidation halted in 1990 with the breakdown of the Socialist Federal Republic of Yugoslavia. Between 1992 and 2007, the Republic Geodetic Authority and the Photogrammetric Institute completed works in 20 municipalities on previously commenced projects.

In 2006, Parliament introduced the *Law on Agricultural Land*. The Law brought about significant changes to the regulation of land consolidation and utilization of state-owned agricultural land.

Today, the objectives of land consolidation in Serbia are primarily related to agricultural development and large-scale infrastructure projects. The justification for implementation of land consolidation are the following: i) excessive fragmentation and irregular shape of cadastral parcels which hinder the rational use of agricultural land; ii) construction of drainage and irrigation systems; iii) construction of a network of field roads; iv) reduction of additional fragmentation of land parcels and/or the disturbance of field roads network, drainage and irrigation systems, due to construction of infrastructure and large-scale facilities; and v) watercourses regulation and extension of the construction area and the need to undertake erosion control activities and measures. In Serbia, municipalities play an exceptionally important role in the land consolidation process. The Ministry of Agriculture, Forestry and Water Management, the Provincial Secretariat for Agriculture, the Directorate for Agricultural Land and the State Geodetic Authority, constitute the centralized part of the institutional infrastructure. The municipal authorities are responsible for determining the land consolidation area, adopting the Land Consolidation Programme per each project, establishing

a Land Consolidation Commission, adopting the objectives of each land consolidation project, and selecting the service providers for the works related to land consolidation.

Since 2008, 39 land consolidation projects have been initiated, of which, 27 have been in the territory of Autonomous Province of Vojvodina and 12 in Central Serbia. The area covered amounts to approximately 125 000 hectares. Out of this figure, around 86 percent is located in the territory of Vojvodina, with the remaining 14 percent being in the territory of Central Serbia.

During the period from 2013 to 2016, the German-funded project “Strengthening Municipal Land Management”, co-funded by the European Commission and implemented by the *Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH* (GIZ), has supported the Serbian Ministry of Agriculture in piloting and implementing land consolidation projects in 7 pilot municipalities, based on the existing legal framework. Experiences and lessons learnt were taken on-board to draft the improved secondary legislation based on the *Law on Agricultural Land*, for implementing land consolidation (Becker, 2017).

The analysis on the regulatory and institutional framework for land consolidation conducted in 2018 by the National Alliance for Local Economic Development in Serbia, identified several deficiencies hampering implementation of the land consolidation projects (Vasiljevic *et al.*, 2018), including: i) insufficient level of detail in legal provisions regulating land consolidation; ii) obsolescence of bylaws regulating particular segments of land consolidation; iii) reluctance or inability of the participants to financially contribute to the land consolidation projects, reflected in a lack of monitoring of procedures, long period of decision-making upon appeals, insufficient training of municipal land consolidation commission members and limited capacities of surveying organizations; iv) delays in approving funds by the competent authorities, leading to inability to contract works in line with the land consolidation programme; and v) excessive steps in the real estate cadastre registration phase, which takes much more time than necessary.

Out of 43 launched land consolidation projects since 2006, only five cases have been finalized by the registration of property rights in the real estate cadastre up until 2019, whilst the rest are awaiting juridical proceedings over unsolved property issues dating from before the land consolidation project. After their resolution, the Land Consolidation Plans can be registered.¹²

2.2.7 Spain (Galicia)

In Spain, the concept of readjustment of land parcels aiming for the creation of larger and better shaped parcels was provided for in different laws adopted during the 19th Century. However, the first law specifically dedicated to land consolidation was adopted in the twentieth century, in 1952. Following this Law, an institution named the Land Consolidation Service was created. In 1973, the *Law on Agrarian Reform and Development* was adopted, which also constituted a major legal act governing land consolidation.

After the creation of the Autonomous Communities in 1978 in Spain, land consolidation became an object of regulation of each Autonomous Community and the previously existing Spanish institutional framework on the matter was abolished. Each Autonomous Community developed their own legislation and institutions (if they considered it necessary) to regulate and manage land consolidation. The first Galician *Law on Land Consolidation (LEY 10/1985)* was adopted in 1985 and modified in 2001. Later in 2015, a new *Law on the Improvement of*

¹² This section benefitted by: Avramovic, 2004; Marinkovic, Trifkovic and Nestorovic, 2013; Trifkovic, Ninkov and Marinkovic, 2013.

Agrarian Land Structures of Galicia (LEY 4/2015) was approved, which broadened the scope of the agricultural land restructuring instruments that were previously governed by the 1985 Law. The 2015 Law aims to improve agrarian land structures, but not necessarily to increase the size of land parcels or to require land consolidation as such. It reflects a more integrated multi-purpose approach to land and rural development.

The 2015 Law provides, amongst other things, for the improvement of structural, technical and economic conditions of agricultural holdings, for mitigating effects of climate change, and for increasing the sustainability, competitiveness and integral development of rural areas.

There are five procedures aimed at improving agrarian land structures: i) public land restructuring; ii) restructuring of ownership of agrarian properties by private individuals; iii) restructuring of ownership through exchanges; iv) special processes in case of large public works and mining operations; and v) intensive actions in rural areas. Furthermore, the Law of 2015 allows for a simplified legal regime in cases of small projects for restructuring by private individuals and owners of agrarian properties.

The main institution responsible for land restructuring is the Regional Ministry of Rural Affairs of the Government of Galicia. The Ministry acts by way of its Directorates in accordance with their fields of competency, while the respective Directorates act through the services responsible for land restructuring.

Several entities are involved in the implementation of restructuring projects. For example, in the key procedure, which is public land restructuring, bodies such as the Technical Advisory Committee for land restructuring, the Board of Owners, the local Zone Board and the auxiliary work group, all take part. An additional body is established in the case of restructuring ownership of agrarian properties by private individuals. Such individuals must establish a grouping with legal personality, whose purpose is the land restructuring of all of the parcels included in the project area, with the explicit commitment to accept the restructuring as it is carried out.

The right to request the initiation of restructuring projects varies depending on relevant procedures. The feasibility study for a public land restructuring project may be requested by local municipalities, by at least 70 percent of the holders of agricultural holdings in the area of the eventual project or it may be launched *ex officio* by the Regional Ministry of Rural Affairs. In the case of restructuring ownership of agrarian properties by private individuals, the aforementioned grouping of landowners must submit the project request to the Regional Ministry of Rural Affairs. Minimum requirements are established regarding the number of participating landowners, the eventual project areas, and other aspects. In the case of restructuring through exchanges, it is sufficient for two owners to participate in the process and submit a respective request. As regards large public works and mining operations, the initiative is taken by the body implementing the project. However, the consent of at least 70 percent of the holders of agricultural holdings in the area must be obtained in order to launch a project. As for the intensive action in rural areas, this may only be requested by public institutions, such as municipalities, or *ex officio* by the Regional Ministry of Rural Affairs.

In the public land restructuring projects, there is no voting procedure for landholders to adopt or reject the proposed restructuring, as restructuring is decided by the respective authorities. However, the initial decision to launch the procedure is based on a feasibility study. The feasibility study is made public and all relevant stakeholders have a right to provide additional information. In order to restructure the ownership of agrarian properties by private individuals,

all members of the aforementioned legal body representing landholders must agree to the proposed solutions in order to submit the restructuring proposal. The authorities may request an amendment of the proposal and subsequently approve or reject it. In the case of special processes, projects of large public works and mining operations or in the case of intensive action in rural areas, there is no voting by landholders. However, in the special process projects, landowners disadvantaged by the restructuring procedure may choose to receive financial compensation or an equivalent land parcel.

2.2.8 Turkey

In Turkey, modern land consolidation “began in 1961 and was in the initial stages supported by FAO, and until 2002, 450 000 hectares were consolidated and from 2002 to 2013 an additional 4.5 million hectares were consolidated” (FAO 2015). Since 2002, land consolidation has been a priority area for the Government. During the period 2014-2023, it planned to consolidate approximately 14 million hectares (FAO, 2015). Currently, Turkey has the largest national land consolidation programme in Europe and Central Asia.

Land consolidation is regulated by the *Law No. 7 139* of 19 April 2018. The key state agency responsible for the implementation of the land consolidation programme in the country is the General Directorate of State Hydraulic Works (DSI) under the Ministry of Agriculture and Forestry.

According to *Law No. 7 139* (Article 7), legal entities such as villages, municipalities, cooperatives, unions or public institutions wishing to make land consolidation and (or) on-farm development services, may submit a request for the land consolidation project to the DSI.

Since the scaling up of the land consolidation programme in 2008, land consolidation has become an important tool for farm development. It is combined with the improvement of the agricultural infrastructure with priority being given to irrigated areas or areas that are planned for irrigation. In most cases, the aim of land consolidation projects is to increase the size of farm holdings, to develop road infrastructure (field roads, village roads, village access roads, touristic roads, etc.), to solve irrigation and drainage problems, and to provide in-field land development services such as levelling and stone collection.

Land consolidation projects may be initiated by either the DSI, institutions responsible for the construction of railways or highways, or by other agencies and institutions, in the case where land consolidation is applicable during the implementation of their respective projects. The project can also be requested by the mayor of a town or the head of a village, by local agricultural cooperatives, as well as by landowners. Most land consolidation projects are requested by public authorities. All projects can only be launched if a legally defined number of landowners within the preliminary project area vote in favour. However, if the landowners do not give consent for the implementation of the land consolidation project in the area, the relevant state agencies (DSI or others), based on public interest, may initiate the adoption of the presidential decision to launch a mandatory land consolidation project. Once the decision regarding the mandatory land consolidation project is published in the Official Gazette, the respective state agency may launch the land consolidation project without the consent of the landowners. The process of implementation of the two forms of land consolidation is the same and only the initiation phase differs.

Before the launching of the project a feasibility study is carried out and, on this basis, the decision is adopted to launch or discontinue the project. The re-allotment planning and

implementation works can be performed either by the public authorities or by the private service providers.

During the re-allotment planning phase, the landowners are interviewed, and their preferences are noted. The meetings of landowners are organized for information purposes only and for gathering proposals, if any, from the participants. There is no voting or decision-making during these meetings. No representative body is elected to represent the landowners in the land consolidation process. The proposed Land Consolidation Plan undergoes public review up to three times, at which point, the landowners are allowed to object to the proposed solutions. No voting is required for the final Land Consolidation Plan. In the final stage, the Land Consolidation Plan is approved by the Head of the DSI or other public entity implementing the project. Subsequently, the newly formed parcels are registered and the implementation works carried out.

2.3 KEY FEATURES OF LAND CONSOLIDATION LAW

Land consolidation regulations are closely related to the key aspects of each legal system, such as ownership rights, land registration, valuation, mortgages, tenancy, state land management and others. It is also related to the overall political and economic development in the country. Context plays an essential role in integrating the land consolidation instrument into the national legal framework. As mentioned in the introduction of the guide, this is a dynamic and continuously evolving process, depending on the evolutionary stage of the specific country as well as the international environment.

Countries with varying traditions and systems have integrated land consolidation into their national law, which demonstrates that this depends more on political will than on legal techniques. Thus, while drafting the national Land Consolidation Law, the key question is *how* rather than *if* land consolidation can be integrated into a national legal system.

The introduction of the legal framework should be transparent and involve a wide range of public and private stakeholders. The legislation would optimally be drafted in simple and comprehensive terms, avoiding over-regulation and be accompanied by appropriate secondary legal acts providing for detailed implementation.

Land consolidation relates to different branches of law, from human rights law and constitutional law to civil and administrative law. It should also be underlined, that the national regulatory framework for land consolidation should be harmonized with the general international and supra-national legal acts such as the *Universal Declaration of Human Rights*, the *Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)*,¹³ specifically stipulating the equal treatment of women and men in land and agrarian reforms,¹⁴ and the *European Convention for the Protection of Human Rights and Fundamental Freedoms and its Protocols*. Furthermore, it is advisable for land consolidation regulatory framework to consider the harmonization with the specific supra-national and international legal acts. For example, land consolidation could be used to attain the objectives defined under certain European Council Directives, specifically, the *EU Water Framework Directive of 2000*, the

¹³ For specific information on the rights of rural women, please consult Article 14 of the Convention, at: <http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm#article14>

¹⁴ To learn more about the latest recommendations on women's access to land by the Convention Committee, please consult the concluding observations of the fifth periodic report of Azerbaijan, at: <https://digitallibrary.un.org/record/791518?ln=en>

EU Nitrate Directive of 1991, the EU Habitats Directive of 1992 and the EU Birds Directive of 2009.

2.3.1 Human rights and legitimate tenure rights

The Land Consolidation Law should conform to human rights and the very nature of the instrument presupposes improvements in land tenure. The fundamental rights of all those involved must be fully ensured. Therefore, while drafting Land Consolidation Laws, Articles 1 and 2 of the *Universal Declaration of Human Rights* should be taken into account, namely that “all human beings are born free and equal in dignity and rights” and that “everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.” Furthermore, Articles 7 and 8 provide that “all are equal before the law and are entitled without any discrimination to equal protection of the law” and “everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.”

Private property is also protected in Article 17, which states “everyone has the right to own property alone as well as in association with others” and “no one shall be arbitrarily deprived of his property”. The right to work and to freely choose one’s employment is also a protected human right and is found in Article 23; it states “everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment”. The right to an adequate standard of living, including food and housing, found in Article 25, is also particularly relevant to agricultural projects and farmers.

Myriad international and regional instruments ensure that these rights are legally binding for states in Europe and beyond.

As a consequence, a land consolidation regulatory framework must ensure, amongst other things, the non-discrimination of the stakeholders, the respect of their properties, and other relevant rights.

Gender equality is one of the key issues that may arise in land consolidation practices. Equal access to land for women and respect for their rights with regards to land tenure are not fully ensured across the globe. Not all societies are equally respectful of the property rights of both genders, even if legal acts do not provide for direct discrimination. As a result, legal mechanisms promoting gender equality should be introduced in land consolidation and should address not only land tenure but also contribute to the general advancement of gender equality in the respective country. Ensuring gender equality is one of the key principles in land consolidation, which is discussed in more detail in Section 3.2.6.

One of the principles of the VGGT relates to gender equality and aims to “ensure the equal right of women and men to the enjoyment of all human rights, while acknowledging the differences between women and men and taking specific measures aimed at accelerating de facto equality when necessary. States should ensure that women and girls have equal tenure rights and access to land, fisheries and forests, independent of their civil and marital status” (VGGT, Paragraph 3.B.4).

Respect for legitimate tenure rights requires ascertaining the legitimacy of rights beyond registries and cadastres. The VGGT do not define legitimate tenure rights but recommend that states institute processes to make such determinations (Paragraph 4.4) for rights not currently

recognized by law, with a view to legalizing them. The concept of legitimacy includes on the one hand, formal legality, but extends in addition to rights that are considered socially legitimate, for instance through long term customary usage (FAO, 2016). This is of particular relevance for land consolidation, as the process provides an opportunity to formalize and register legitimate, but non-formalized, rights of participants. On this issue, the process should be keenly gender-sensitive, for example, recognizing the acquisition of land rights through long-term use by both partners in a relationship, married or otherwise, or taking into account instances where informal land transactions have taken place without the consent or knowledge of the spouse.

The VGGT urge states to “provide legal recognition for legitimate tenure rights not currently protected by law” (Paragraph 4.4). This alludes to the fact that there may be tenure rights that are socially legitimate or “extra-legal”. This is a different issue from formalization of legally recognized but unregistered or non-formalized rights. A Land Consolidation Law would normally not go as far as according legal recognition to such socially legitimate rights, as it has to take account of what rights are capable of being registered (FAO, 2017a) or formalized. Its scope is to provide certain exceptions to other laws, including registration laws, specifically for the purpose of more efficient procedures for land consolidation. Therefore, the reforms needed would go well beyond the scope of land consolidation. If there were such rights at stake in a proposed project area, it might be preferable not to undertake land consolidation there.

2.3.2 Integration with the strategic and spatial planning framework

A strategic approach is essential for ensuring overall efficiency and consistency of land consolidation in a given country and the adoption of a national land consolidation strategy is one of the key instruments supported by FAO. Land consolidation should also be integrated into relevant national development strategies such as the development of agriculture and environmental strategies.

The development of national land consolidation strategies is strongly recommended by FAO as a way of integrating the practice into the overall land policy of the country. Development of national land consolidation strategies has been supported by FAO in several countries in Central and Eastern Europe (Hartvigsen, 2019), for instance (in order of sequence of support), in Serbia, Lithuania, Albania, Moldova and Azerbaijan. Besides other aspects, the strategy development is important to clarify target groups and the type and scale of land consolidation to aim at in the country. However, a number of countries with a long history of land consolidation do not have such strategies, thus, even if recommended by FAO, there is no single standard that such strategies should be adopted. For example, there is no separate land consolidation strategy in Denmark or Spain (Galicia) and such a strategy has only recently been adopted in Finland. Country practice demonstrates that there is no universally accepted approach with regards to either the form or content of a land consolidation strategy.

The land consolidation policy should be reflected in a legal act or in a strategic document or in both. There is no universally accepted approach to the level of a legal act or document that establishes the land consolidation strategy. In Lithuania, approval is brought about by a Government Resolution (*No. 81 of 2008*), whereas in Finland, the strategy has no status as a legal act and is approved only at the ministerial level. As a result, the specificity of local situations in each country should be evaluated to determine at what level the strategy should be adopted. At the same time, the need for periodic reviews and/or amendments should not be overlooked, and this will usually require a respective administrative effort.



Pepper harvesting in Egri FAO land consolidation pilot project area, North Macedonia (September 2017).
© FAO.

Land consolidation strategies should have time limits and undergo periodical revision. In practice, certain countries adopt strategies for 5 years, such as Finland (strategies for 2008-2013 and 2015-2020) and Lithuania (strategy for 2008-2013 – not updated but still applicable). However, it is recommended that the strategy should be adopted for a longer period of 10 to 15 years, otherwise the risk is that a new strategy will not be adopted or reviewed when the term expires. In this case, land consolidation would continue without any proper strategic background, which could negatively impact its efficiency in the country.

The first land consolidation strategy in the country should “pave the way” for the introduction of a Land Consolidation Law and the accompanying regulatory framework. It should define the key objectives of land consolidation and establish the monitoring instruments and evaluation criteria whereby success of the land consolidation in the country could be measured. The objectives should coincide with higher strategic objectives concerning general social and economic development, rural development, land management, environmental objectives, etc. The strategy should also establish how the objectives of land consolidation should be attained. It may provide the criteria to identify priority areas for implementation, focusing on areas where land consolidation could best contribute towards strategic objectives. The strategy should further indicate the main methods and tools as well as the respective financing sources. In addition, it could identify key supporting instruments, such as the use of state and municipal land in land consolidation projects, land banking, the promotion of voluntary parcel exchanges, etc.

Land consolidation instruments should also be harmonized as well as be integrated into other strategic documents including the ones related to general national development, agricultural development, rural development, environmental protection and restoration, climate change adaptation and mitigation, and spatial planning policy documents.

In Turkey, which has one of the largest national land consolidation programmes in the world, land consolidation is part of the National Development Plans (latest one: 2019-2023) and in the

National Rural Development Strategy (adopted in 2014). In Denmark, Lithuania, Spain (Galicia) and others, land consolidation is supported by the Rural Development Programmes.

At a project level, the Land Consolidation Plan must comply with the respective spatial planning documents, for example, in the case of land-use changes resulting from a land consolidation project. On one hand, the Plan should take into account spatial planning documents, on the other hand, the implementation of the land consolidation project may cause changes in other spatial planning documents. The implementation of the land consolidation projects may stimulate in parallel the process of the territorial planning.

2.3.3 Integration with different branches of national law

Typically, land consolidation is regulated by a specific Land Consolidation Law, a respective chapter in a more generic law such as a land code or land law, and in the implementing secondary legal acts. The land consolidation instrument strongly depends on other legal acts regulating other areas, such as state property, land market transactions, land valuation, protected areas, spatial planning, environment, taxation, property and other land rights, and family and inheritance issues. It is not enough for the Land Consolidation Law to be well drafted; its integration into the entire legal framework, including amendment of other relevant legal acts, should be part of the process. At the same time, it should be kept in mind that land consolidation necessarily creates exceptions to normal procedures to allow for smooth and coordinated implementation of projects. Thus, land consolidation should not follow standard procedures for change in boundaries or ownership of land parcels.

In many countries, the Constitution establishes the guiding principles for the legal framework and must be taken into consideration. The situation will naturally depend on the legal regulatory environment of each particular country. However, in order to avoid eventual legal difficulties, its conformity with the Constitution should be considered beforehand. The identification of clear constitutional foundations for land consolidation legislation would avoid subsequent legal difficulties when applying this instrument.

One example of the constitutional dimension to land consolidation can be seen in the case of a majority-based land consolidation approach. In this case, constitutional issues may arise where participants are obliged to participate even without their consent. Legal issues of constitutional order could be raised, for instance, regarding the protection of private property or the freedom to perform business activities. Furthermore, the issue of *public interest* in land consolidation, as well as the necessity for strong safeguards, could be invoked and the public interest nature of land consolidation challenged.

The general importance of land consolidation should be translated into a legal category. For example, the respective legal acts could state, as found in Turkish laws, that the implementation of land consolidation projects is in the category of *public interest*. From a legal point of view, this would lay a strong foundation for land consolidation. This aspect is of particular interest, as it legitimates majority-based land consolidation whilst reiterating the need for appropriate safeguards.

Land consolidation regulation is closely related to property and family law, including where national legislation provides for domestic partnerships and other forms of relationships in addition to marriage, including same sex partnerships and marriages. In such cases, both partners may have legitimate tenure rights deriving from that partnership. These issues are gender issues but are distinct from discrimination against women. As properties change in

land consolidation projects, naturally the issues related to transfer and/or exchange must be integrated into the general land and other property regulations. Also issues concerning rights such as mortgages, usufructs, servitudes, property seizure and others must be either considered in the Land Consolidation Law or the respective harmonization on the matter should be ensured between the Land Consolidation Law and other legal acts regulating the aforementioned aspects. Land consolidation also has implications for co-ownership, joint-ownership, inheritance and other issues in this category. As land tenure is closely related to the law of obligations, the implications for contractual rights, such as a lease, purchase rights and other situations must be taken into account. It is essential that issues of property rights and contractual obligations affected by land consolidation are connected to administrative law. In most countries the land consolidation process is based on administrative procedures and an administrative body adopts the Land Consolidation Plan, which impacts the aforementioned rights and obligations.

For legal interpretation purposes, Land Consolidation Laws or Chapters would normally be considered *lex specialis* and as such have precedence over more general provisions in other laws. In fact, they should provide for specific regimes with their own procedures applying to land consolidation only.

The introduction of land consolidation might also require amending the existing administrative institutional framework. It might be necessary to establish separate administrative entities or other types of public bodies, for example, institutions performing functions such as land banking. Such changes could involve not only national but also regional or municipal levels.

The land consolidation process must be integrated with the mechanisms of efficient administrative and judicial review. It may even be necessary to adopt certain administrative and judicial review mechanisms to the specificity of land consolidation, as described in Section 6.3 and Chapter 9 of this guide.

2.3.4 Form of the regulatory framework for land consolidation

The analysis conducted in the selected countries demonstrates that there is no common formula for the regulation of land consolidation. While some countries (for example, Denmark and Germany) have adopted laws specifically dedicated to land consolidation, in other countries provisions governing land consolidation have been integrated into laws with wider scope of application, such as the *Law on Land (No. I-446, 1994)* in Lithuania, the *Real Estate Formation Act* in Finland, the *Law on the Improvement of Agrarian Land Structures of Galicia* in Spain, or the *Law on Agricultural Land* in Serbia. It is also quite feasible that several laws are dealing with land consolidation in different projects (for example, this is the case of the *Real Estate Formation Act* and the *Highways Act* in Finland). In addition, land consolidation regulations may be provided at the national or subnational level for legal acts (as is practised in Germany or Spain). The Netherlands has introduced a rather unique approach that is, the integration of the numerous legal acts and hundreds of regulations for land use, residential areas, infrastructure, the environment, spatial planning, and nature and water, into a single Environment and Planning Act. Thereby, the land development legislation that includes the regulation of the land consolidation instrument will become part of the Environment and Planning Act by 2022.

Although country practice varies, the practical experience preparing for national land consolidation programmes clearly advocates for the adoption of a separate law (or separate chapter in a broader law), dedicated exclusively to land consolidation. The concentration of

land consolidation related provisions in one law provides for a better understanding of the concept for project participants and other stakeholders.

Moreover, the introduction of a separate Land Consolidation Law would facilitate the eventual amendments of the Law. Changing a land law or another law of a broader scope rather than a specific law for land consolidation could generate a need for additional legislative efforts and therefore lead to potential political resistance. Thus, when dealing with land consolidation regulation, this guide refers to Land Consolidation Law as a single legislative act, even if, in practice countries may adopt other forms of regulation of land consolidation.



Participants at the Legal Guide consultation workshop in Skopje, North Macedonia (2018). © FAO.

✓ **Key recommendations 2.1:** Key features of land consolidation law

1. The Land Consolidation Law should be respectful of the fundamental human rights established in international, supra-national and/or national legal acts and documents.
2. The Land Consolidation Law should be developed in a way that it best possible contributes to achieving the 2030 Agenda and the Sustainable Development Goals (SDGs).
3. The Land Consolidation Law should be developed fully in line with the principles of the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)* as well as following the specific guidance on land consolidation in the VGGT.
4. The Land Consolidation Law should provide for proper safeguards, guaranteeing that the legitimate rights of all land consolidation stakeholders are taken into account and respected.
5. The Land Consolidation Law should be drafted in an optimally simple and comprehensive balanced way, avoiding over-regulation. It should be accompanied by the implementing regulations (secondary legal acts) as well as technical documents (such as guidelines, instructions, operations manuals, formats and standards) dealing with separate aspects of land consolidation.
6. A land consolidation regulatory framework should be construed based on a strategic approach aligned with overall national and international policy objectives. It is recommended to adopt a separate National Land Consolidation Strategy, which would define strategic objectives of land consolidation during a defined time period.
7. The introduction of a land consolidation instrument in the country should also be accompanied by the respective changes in legal acts, regulating areas closely related to the land consolidation process, such as land market transactions, land valuation, protected areas, spatial planning, environment, taxation, ownership and other real rights, family and inheritance issues, etc.
8. The Land Consolidation Law should stipulate the approach to land consolidation applicable in the country (voluntary, majority-based or both).
9. If applicable in the respective legal system, the Land Consolidation Law should provide for a public interest status to the land consolidation instrument. This is of particular importance in the case of majority-based land consolidation.
10. The process of introduction of land consolidation in the country and the drafting of the Land Consolidation Law should include broad consultations with potential land consolidation stakeholders, such as civil society organizations representing the interests of landowners, farmers, rural population, nature, environment, etc.

2.4 FUNDING OF LAND CONSOLIDATION

Approaches to funding of land consolidation vary from country to country and depend on factors like the aimed objectives and the level of economic development in the country.¹⁵ However, since land consolidation is a public purpose instrument, in most of the analysed countries public funding plays a fundamental role. Without public funding land consolidation would not be able to attain the wider objectives discussed in Section 3.1 and make the desired impact on the overall land ownership and use structure within the country. Land consolidation should be undertaken for the public good and defined as a public purpose activity, in the sense of benefiting all participants and their community. In addition, absence of public funding would exclude many landowners from participation in land consolidation projects, and public funding would help to ensure interest from those landowners who do not stand to benefit as much, for instance if their land is not very fragmented. No-cost participation is a great incentive (alongside the expected improvements of the farms structures, etc.) for the landowners to support the project.

Privately funded parcel exchanges fall outside of the scope of this guide. Furthermore, privately funded land consolidation may be problematic as it might lead to financially weaker parties losing out due to lack of safeguards and other reasons.

State budget funding plays a key role here and should be adapted to the specificity of the land consolidation project, which typically lasts for 2–5 years. Therefore, land consolidation programme budgeting should not be based on annual planning but have a longer-term budget horizon. Land consolidation budgeting rules should also be flexible enough to allow for adjustments in project budgets, since often, it is impossible to define exact project costs beforehand and the project area and number of participating landowners may change during the implementation of the project. Also, to ensure efficient use of funding, countries should define prioritization criteria, which would allow for the selection of potential project areas best matching the defined overall objectives of the country's land consolidation programme. The lead agency should issue a call for proposals/applications and then select those projects for the feasibility phase (see Chapter 5) that best match the defined selection criteria. Besides direct funding from state budget, another important factor is whether there is already existing land owned by the state in the project area or whether there is land purchased in the project area by the land bank (see Chapter 10).

Many European Union Member States like Denmark, Germany, and Lithuania fund their land consolidation programmes, at least partly, from the European Agricultural Fund for Rural Development (EAFRD) via their national Rural Development Programmes. Land consolidation activities, especially for the first-time introduction (piloting), can also be funded (or co-funded) by resource partners and international development organizations or by foreign governments under the Government to Government initiative.

If the land consolidation project is an integral part of a large-scale area-demanding project (e.g. highway, railway, airport or nature restoration), entities responsible for such projects should be expected to contribute to or cover all costs of the land consolidation project. The solution could be to fully fund integrated projects from a variety of sources to ensure the simultaneous attainment of multiple objectives, so-called multi-purpose land consolidation (see Section 3.1).

¹⁵ For more information on funding of land consolidation, see FAO, 2008.

Such an approach also creates cooperation and synergy among multiple stakeholders and the state shares the burden with other actors.

In some countries, landowners must also contribute at least a minor portion towards the land consolidation project costs. In the Netherlands, the costs, which are not financed or subsidized by government, province, municipality or other public body, are paid for by the landowners involved in the re-allotment process – as long as it concerns land consolidation costs (Leenen, 2014). The contribution of the participants is determined by the benefits of the re-allotment process to each landowner. For example, in the Netherlands' Olst-Wesepe land consolidation project (Figure 6.5 in Section 6.4.3), landowners pay around 15 percent of costs directly related to the re-allotment process and work. Costs for improving water management and recreational facilities are fully paid by public institutions. On average, landowners in the Olst-Wesepe project paid around EUR 125 per hectare. The contribution would be less if little benefit is gained by the re-allotment and more if concentration of parcels for an individual landowner is strong. The average cost per hectare is relatively low when compared to the estimated average benefits of around EUR 200 per hectare per year and an average land price of EUR 47 500 per hectare.

In other countries, for example in Turkey, landowners make no financial contributions and pay no fees related to the project implementation. However, in projects with incorporated infrastructure measures, landowners may be obliged to contribute in land for the construction of new or improved roads, drainage, or irrigation. The maximum amount, which can be deducted (without compensation) in Turkey is up to 10 percent of the value of the land. All project works and infrastructure are fully covered by the state budget.

In many FAO programme countries, financial participation of the landowners would not be feasible due to their economic situation and land consolidation should be envisaged as part of a necessary public investment in agricultural and rural development. A requirement to cover even a minor portion of the project costs could also reduce the number of landowners willing to participate in the project or to approve the Land Consolidation Plan. Such exclusion of landowners would also diminish land mobility in project areas and negatively impact the overall outcome of the projects. Therefore, financial participation in covering land consolidation project costs should be required from the landowners only if the necessary socio-economic preconditions exist in that country.

✓ **Key recommendations 2.2:**
Funding of land consolidation

1. Legal acts regulating the funding of the national land consolidation programme should ensure that funds are programmed for at least 2-5 years ahead, so that the launched projects can be fully implemented.
2. Legal acts regulating the funding of land consolidation projects should require that potential projects are selected based on priorities directly linked with the overall objectives of the national land consolidation programme.
3. Unless the socio-economic conditions of a country permit otherwise, all the costs of land consolidation projects are recommended to be covered from public sources, in order to ensure that landowners are able and interested to participate in the project.
4. If a land consolidation project is an integral part of a large-scale area-demanding project, like for example a highway, the entity responsible for such a project should be required to also cover the costs of the land consolidation.
5. In multi-purpose land consolidation, different project components could be funded from different funding sources, including from the state budget, entities responsible for the implementation of infrastructure projects, etc.
6. Legal acts regulating the funding of land consolidation projects, should allow for eventual project budget adjustments.

OBJECTIVES AND PRINCIPLES OF LAND CONSOLIDATION



3. OBJECTIVES AND PRINCIPLES OF LAND CONSOLIDATION

The objectives and principles of land consolidation are the foundation for the regulatory framework. Therefore, it is essential that they are clearly laid out in the relevant legal acts. For example, if land consolidation is regulated by a separate Land Consolidation Law, the objectives should be clearly established, preferably in the very first part of the Law, as is the case in Denmark. The German *Land Consolidation Act* determines the overall purpose of land consolidation at the very beginning of the Act (Section 1) and later concretizes the tasks of land consolidation (Section 37).

In some countries, land consolidation is connected to a wider range of objectives such as promoting rural development. In the Netherlands or Spain (Galicia), land consolidation is only one of the instruments for achieving integrated rural development, land development or environmental goals. As a result, the objectives of land consolidation are not distinguished separately but integrated into a larger set of objectives. For example, in the Netherlands in Article 16 of the *Law on Development of Rural Areas*, it is generally provided for that the land development aims to improve the layout of the rural area in accordance with the functions of that area, as indicated in the context of spatial planning.

As regards the principles, in most cases they are not separately defined but branch off from the legal language and provisions established in the relevant legal acts. They may also come from international sources such as the VGGT, for example. It is recommended that objectives and principles be expressed in legal terms in the Land Consolidation Law.

3.1 OBJECTIVES OF LAND CONSOLIDATION

Clearly identified objectives are essential in order to allow this instrument to contribute to a wider range of strategic goals of each country and to ensure consistent and efficient application in practice. Land consolidation objectives will vary from country to country and therefore, should be formulated in a way to ensure a flexible and multi-purpose approach in order to avoid the need for frequent amendments. For a long period of time agricultural development was the key objective of land consolidation, being a means for combatting land fragmentation and improving the economic efficiency of farms as was the case in Denmark, Finland, Germany and the Netherlands, for example. Today, it is generally accepted that land consolidation is a multi-purpose instrument that integrates agricultural development with infrastructure development, environmental and other objectives. It is no longer a single-purpose instrument solely for agricultural development. In the Western part of Europe, the major shift to multi-purpose land consolidation began in the 1980s (Hartvigsen, 2015b).

FAO strongly promotes multi-purpose land consolidation and the introduction of the respective definition of land consolidation objectives in the national Land Consolidation Law. A multi-purpose approach should, on one hand, ensure the most beneficial use of the land consolidation instruments so that a diversity of goals could be achieved. On the other hand, a multi-purpose approach should be considered to ensure balance between different objectives, which will vary from project to project depending on local and public needs. Agricultural objectives should be harmonized with objectives in other sectors such as environmental and social objectives. For example, it should contribute to proper zoning of agricultural functions

from more intensive to extensive and creating zones where agricultural land is primarily managed for preserving biodiversity. Moreover, the declaration of the objectives should be aligned with their implementing tools, otherwise they risk remaining simply on paper.

Several types of land consolidation objectives can be identified from country practice. The land consolidation instrument could be used to support the following objectives:

- agricultural development exclusively through the re-allotment of land parcels;
- agricultural development where re-allotment of land parcels is integrated with improvement of the local agricultural infrastructure;
- implementation of large-scale infrastructure projects;
- nature restoration and/or environmental protection (including water management); and
- fully integrated local rural development, village renewal, creation of the outdoor recreation areas, etc.

It should be noted that the aforementioned objectives usually are combined within specific land consolidation projects. For example, land consolidation projects primarily targeting agricultural development may include nature-oriented goals as well.

Studies on land consolidation in Europe noted in 1959 that “in general, the purpose of land consolidation is to strengthen the factors of production and to improve the living standards of the people on the farm” (Jacoby, 1959, p. 20). In other words, land consolidation in Western Europe not only focused on the simple re-allotment of parcels, but also on the elimination of land fragmentation, land reclamation and soil improvement (including improvement of soil structure, changes in land use and improvement of water management), improvement of the farm size pattern and the pattern of settlement (Jacoby, 1959, p. 20). At that time the integration of agricultural and rural development objectives in land consolidation could already be seen in Germany, where “apart from eliminating land fragmentation, particular attention has been devoted to the construction of *good roads*, to water supplies and to other communal projects” (Jacoby, 1959, p. 106).

In the analysed countries, findings show that land consolidation projects most often include objectives related to local infrastructure, for example, improvement of road networks, drainage, irrigation and water supply. Also, other aspects of rural development are taken into consideration such as the installation of public recreational areas, the creation of tourist routes, and landscape restoration. Land consolidation may also contribute to the achievement of other goals of rural development, such as providing access to land for young farmers and small family farms.

Environmental objectives have become increasingly important in Western European countries. On one hand, environmental objectives may be part of a land consolidation project, while on the other, land consolidation may be an additional tool for implementing nature restoration projects, like it is in Denmark (see Section 2.2.1.). Practice of countries like the Netherlands also shows that land consolidation may be used successfully in implementing environmental objectives, defined not only in national legal acts but also in European Union acts, such as those mentioned previously, the *EU Water Framework Directive of 2000*, the *EU Nitrate Directive of 1991*, the *EU Habitats Directive of 1992* and the *EU Birds Directive of 2009*.

Box 3.1: Objectives of land consolidation in Denmark

Article 1. The objective of the Law is to:

1. ensure better commercial exploitation of agricultural properties by reducing land fragmentation and increasing sizes of agricultural holdings;
2. contribute to the implementation of projects for preservation and improvement of natural and environmental values in the countryside, including the creation or recreation of areas and nature and national parks, implementation of nature restoration projects, nature conservation, afforestation, drinking water protection and international commitments in the fields of nature and the environment, etc.;
3. contribute to rural development by improving the structural conditions and reducing land fragmentation, taking into account nature, environment and landscape values;
4. contribute to land transfer to mitigate the agriculture-related inconveniences by non-agricultural activities in agricultural areas;
5. provide compensation areas for affected agricultural properties in connection with the implementation of the project types mentioned in points 2-4 (...).

Source: Denmark – Law on Land Consolidation and Public Purchase and Sale of Real Property for Agricultural Purposes (No. 31 of 2017). Unofficial translation.

In most of the analysed countries, land consolidation is often used in connection with the construction of large-scale infrastructure projects. The implementation of such projects may demand large areas and be related, for example, to highway, railway, airport construction and other similar “land demanding” projects. In such cases, land consolidation may be an alternative to expropriation, where the active farmers are compensated in land instead of money and consequently, save financial resources needed for the implementation of the project as well as being more acceptable for affected landowners and other right holders too. The key aspect is that such an approach results in better land-use structures and is a more sustainable way of constructing large infrastructure. Furthermore, such an approach allows to preserve or even improve the appropriate working conditions for the farmers and thus support local rural social and economic development.

Box 3.2: Land consolidation in large-scale infrastructure in Finland

Section 67

... If land consolidation is able to remove or decrease the considerable harm caused to the users of real estates by the realization of a public road, railroad, power line or airport, establishment of a nature conservation area or other such project, land consolidation may be applied, if the benefits it brings are significant and its implementation is expedient (project land consolidation).

Source: Finland – Real Estate Formation Act. Unofficial translation by the Ministry of Agriculture and Forestry, Finland.

There is no common practice for the location or at what level the objectives of land consolidation should be identified. For example, in Denmark and Germany the objectives of land consolidation are established by the Law, while in Lithuania the respective objectives are defined in the *Government Resolution No. 81 on the Approval of the National Land Consolidation Strategy*, whereas in Finland, the objectives are identified in the *Land Rearrangement Strategy*, which does not have the status of a legal document and is adopted by the Ministry of Agriculture and Forestry.

In order to give due legal weight to the land consolidation objectives, it is recommended they are established within a law that regulates land consolidation. Detailed land consolidation priorities are not necessary in the Land Consolidation Law as they are periodically updated in policy or strategy documents, or other types of documents that may be subject to review without engaging in long and complex legislative procedures.

✓ **Key recommendations 3.1:**
Objectives of land consolidation

1. The Land Consolidation Law should define broad land consolidation objectives, which should reflect a sustainable multi-purpose approach and be designed for the specific situation in the country. Land consolidation objectives should go beyond the reduction of land fragmentation. Objectives defined in the Land Consolidation Law should regard both agricultural purposes and other relevant public purpose objectives related to public infrastructure, environmental management, and socio-economic development.
2. Detailed land consolidation priorities should not be provided in the Land Consolidation Law but in the implementing operational regulations or other types of documents, which may be subject to periodical review without engagement of complex legislative procedures.
3. The Land Consolidation Law should define that land consolidation contributes to agricultural and rural development via the reduction of land fragmentation and facilitation of the enlargement of holdings, farms and parcels, increasing their economic, social and environmental sustainability.
4. The Land Consolidation Law should provide for the opportunity to apply land consolidation in connection with large-scale public infrastructure (for example, highway or railway), nature restoration, and climate change mitigation and/or adaptation projects.
5. Detailed land consolidation procedures should be provided for in secondary legal acts and ensure the attainment of the objectives of the national land consolidation programme and specific land consolidation projects.

3.2 PRINCIPLES OF LAND CONSOLIDATION

Land consolidation principles should be reflected in the legislation and regulations as a whole, without a separate section or article to list them. However, it is good practice to enumerate the key principles that should guide the actions and can help in the interpretation of the Law.

Land consolidation principles serve as the core structure for all respective regulations, starting with the Land Consolidation Law and ending with the lowest level implementing secondary legal acts. These principles originate in part from national law, but also from international instruments such as the VGGT and others. Based on the country and international experience, several main principles of land consolidation can be identified. The following fundamental principles are considered in this guide:

- respect for and protection of legitimate tenure rights
- the “at least as well off” principle
- sustainability and environmental protection
- consultation and participation
- transparency
- gender equality

3.2.1 Respect for and protection of legitimate tenure rights

Respect for and protection of all legitimate tenure rights is the core of responsible tenure governance. As indicated in Paragraph 3.1 of the VGGT, states should “recognize and respect all legitimate tenure right holders and their rights. They should take reasonable measures to identify, record and respect legitimate tenure right holders and their rights, whether formally recorded or not; to refrain from infringement of tenure rights of others; and to meet the duties associated with tenure rights.” Also, Paragraph 3.2 of the VGGT clearly establishes that “non-state actors including business enterprises have a responsibility to respect human rights and legitimate tenure rights”.

Therefore, land consolidation should not only consider formally registered tenure rights but also those rights that have not been registered or have only been otherwise partially formalized. This does not mean that the land consolidation process can recognize rights that are currently not recognized by law; the rights have to be capable of being registered or formalized.¹⁶ In that sense, there could be socially legitimate tenure rights that do not enjoy legal protection and are thus not capable of being registered. Such rights can normally not be considered in a land consolidation process. However, the land tenure rights of non-registered legitimate owners, heirs, unknown or inaccessible owners, should be recognized and respected. In order to do this, all legitimate owners and right holders must be identified during the preparation for any type of land consolidation process and subsequently engaged in the project. As a result of land consolidation, land ownership certificates are to be delivered to each landowner and co-owner, if any.

In many countries, especially when registration systems are perceived as inaccessible, expensive, or even corrupt, informal transactions take place. Land consolidation provides an opportunity to formalize all such legitimate transactions, so that registries will be up-to-date. People may have documentation to demonstrate the transactions, and their subsequent use of the land can be attested. On the other hand, it should be borne in mind that these informal transactions are carried out without legal safeguards and therefore they may not provide due regard for the rights of co-owners and spouses for example. Over time, informal transactions may erode the legitimate share of female ownership. This could also lead to the conclusion that the new ownership is not fully legitimate. On the other hand, in the interest of formalization, it might be more reasonable to ensure that the spouse of the new owner is registered in the

¹⁶ Note that generally, “informal rights” refer to rights that are not recognized by law and are thus held either illegally or extra-legally. Broader legal reforms are needed to formalize such rights (FAO, 2002, Paras. 3.9 to 3.12).

updated registration process. Therefore, the aforementioned formalization should be a well-balanced process, ensuring that the interest of formalization does not outweigh the interest to safeguard the legitimate tenure rights. It should thus take into account the legitimate tenure rights to the maximum extent possible.

Furthermore, efficient administrative remedies and judicial procedures should be established in order to remedy violated rights of legitimate landholders and other right holders (see Section 6.3 and Chapter 9). This should reflect the general principle of the VGGT, which indicates that “States should (...) provide access to justice to deal with infringements of legitimate tenure rights. They should provide effective and accessible means to everyone, through judicial authorities or other approaches, to resolve disputes over tenure rights; and to provide affordable and prompt enforcement of outcomes. States should provide prompt, just compensation where tenure rights are taken for public purposes” (Paragraph 3.1.4).

3.2.2 The “at least as well off” principle

The “at least as well off” principle is the key principle of land consolidation, expressed in the VGGT (Paragraph 13.1), meaning that the situation of legitimate landowners and other right holders cannot be made worse by the implementation of a land consolidation project. This principle finds its roots not only in the VGGT but from the legal norms and principles of international and national law. For example, it is closely related to the constitutionally guaranteed right to private property. Should this principle be violated, the very nature of the land consolidation instrument would come into question. One of the key aspects of creating trust in this mechanism is the conviction that all participating landowners will not forfeit their property nor have its value diminished without being duly compensated in land or money, which equals their current position or puts them into a better position after the implementation of the land consolidation project.

This principle should not be understood as concerning exclusively land or property values of the landowner before and after the project. The re-allotment process may have livelihood impacts that would not necessarily be reflected through a standard valuation process. Therefore, not only monetary aspects should be taken into account, but also other livelihood and intangible gains or losses.

It is important to note that apart from landowners, this principle also concerns other legitimate holders of rights related to the parcels being consolidated, for example, in the case of lessees of the parcels. Consequently, this principle should be implemented through a variety of specific instruments that are adapted to the various types of right holders. Nevertheless, the “at least as well off” principle does not preclude the landowners from deciding to sell or buy the land during the land consolidation process and to freely negotiate on the sales price.

The “at least as well off” principle should be reflected throughout the entire regulatory system of land consolidation. If this principle is not respected, this may result in violation of legitimate rights and create mistrust of the instrument. This is very important to avoid, for both voluntary and majority-based land consolidation.

Based on the “at least as well off” principle, any landowner or holder of property rights will be able to defend his or her rights, which might have been violated during the land consolidation process.

Box 3.3: The “at least as well off” principle in Serbia

Article 40

Each land owner/user shall be allocated the land from the land consolidation mass of an adequate value, and if possible, of the same cadastral culture and distance from the settlement, as well as the position offering almost the same alternatives in terms of land cultivation as held prior to land consolidation. During the reallocation of land from the land consolidation mass, each land consolidation participant shall be allocated land of a more regular shape and in a smaller number of locations than prior to the land consolidation, in the case where land included in the mass was taken from two or more locations.

Source: Serbia – Law on Agricultural Land (Official Gazette No. 62 of 2006). Unofficial translation.

3.2.3 Sustainability

The application of land consolidation should promote economic, social and environmental sustainability. As already mentioned, one of the key ways to ensure this is to seek an equilibrium between agriculture and other objectives of land consolidation. If only agricultural objectives are targeted, this may have negative effects on other economic, social or environmental goals. This principle clearly originates from international legal acts and documents that define respective goals and principles (SDGs, VGGT, 1992 Rio Conference, etc.) and it would almost certainly find legal grounds in national legal acts. Respect for sustainability should be ensured both at the project and land consolidation programme level.

There is a variety of instruments that can ensure that the principle is respected. The land consolidation should comply with the existing environmental legislation at national, regional (e.g. European Union) and global level. For example, Land Consolidation Laws or laws on Environmental Impact Assessments (EIAs), or Environmental and Social Impact Assessments (ESIAs), may require assessing of the impact on the environment in the feasibility phase. They may also require an environmental screening and a full EIA once the Land Consolidation Plan has been drafted and before its adoption and implementation. They may also require an Economic and Social Assessment of the land consolidation projects. Both screening and assessments should be regulated by the specific legal acts. They may originate from supra-national legal acts, for example, the European Union *Directive on the assessment of the effects of certain public and private projects on the environment of 1985* or similar national legislation.

Economic and social sustainability should also be ensured through the “at least as well off” principle, through the consultations, the participatory approach, and using of a cost-benefit analysis in the feasibility study.

It should also be stressed that land consolidation can also serve as an instrument to attain environmental objectives. This has been proven by country practice in Western Europe, especially in Belgium, Denmark, Germany and the Netherlands, where land consolidation projects are used for creating nature protection areas, the reduction of emissions into water basins (e.g. nitrogen and phosphorus), and nature restoration.

3.2.4 Consultation and participation

The land consolidation process presupposes the involvement of many stakeholders. Success depends on their involvement and satisfaction. Stakeholders’ involvement is a two-fold process,

where, on one hand, it helps to improve the quality and smoother implementation of the land consolidation project and, on the other hand, it better guarantees that all relevant voices are heard and rights are considered. It is therefore essential to ensure that the stakeholders are actively and meaningfully participating in the process and that their voice is heard, as opposed to receiving an “order from above”. This approach is also reflected in the VGGT (Paragraph 3B.6). Land consolidation projects concern not only right holders but also other persons and entities, such as communities, municipalities, and farmers’ organizations. It is therefore important to ensure inclusiveness in project consultation and participation, so that different rights and interests are safeguarded and not left behind.

Therefore, each person and entity should have access to information related to the land consolidation process and be able to provide their proposals and objections related to the specific land consolidation project. Procedures for how, where, and when opinions and preferences are collected from the stakeholders must be defined. For example, public meetings should be organized during the land consolidation project, where all interested parties can be heard. There should also be individual interviews with the landowners and users. This not only ensures due recognition of the legal rights, which may be impacted by the implementation of the land consolidation project, but it also contributes to the efficiency of the work of the land consolidation planners whose aim is to design an optimally balanced “win-win” solution for all participants.

Practice shows that one of the measures increasing the interest of the landowners in participating in land consolidation projects is peer-to-peer learning. Organizing field trips for landowners and land users to areas where land consolidation projects are already being implemented, increases the involvement of the landowners/ users in land consolidation projects in their own area. This applies both for visits within and outside the country. Aside from listening to different stakeholders, effective instruments should be introduced that prevent bias or the violation of rights. For instance, the secondary legal acts implementing the Land Consolidation Law should establish the requirement for minutes of public meetings, which should at minimum, be made available for project participants and controlling institutions (e.g. audits). The secondary legal acts should also establish how relevant documents and decisions should be published and disseminated. The establishment of effective administrative and judicial remedies should guarantee that the rights of all stakeholders are taken into account and, as a result, increase their trust in the process.

Another important aspect that may contribute to the success of a project is flexibility towards the needs of stakeholders. For example, the case of Finland shows that even having all the necessary powers to impose land consolidation and its solutions on the stakeholders, the Finnish National Land Survey still prefers that the initiative for the projects comes from the stakeholders themselves. The Service consults with the municipalities on the respective matters and hears the opinions of landowners both willing and unwilling to participate in the project. Such an approach creates a positive attitude towards the instrument, a greater willingness to participate in the process, and a broader support to accept the outcomes of the land consolidation project.

3.2.5 Transparency

Transparency is another key principle of land consolidation and must be ensured throughout the entire process (VGGT, Paragraph 3B.8). Country practice shows that one of the best tools for ensuring transparency is to make project-related information available on the internet. In

most of the countries that have a land consolidation programme, such internet systems are being used.

Besides Internet tools, transparency should also be ensured through local newspapers and paper announcements in public places in the respective municipalities, communities and villages.

A Land Consolidation Law should define how the information related to the land consolidation projects should be made public. For example, Article 43 of the Portuguese *Law No. 111/2015 Establishing the Legal Regime of Land Re-structuring*, requires the publishing of authorizations given to elaborate land consolidation projects, as well as all the related decisions of general interest, at least in one national daily newspaper and in a regional newspaper in the area where the project is implemented. Also, it is required to post respective physical notices in the project area itself.

Above all, direct individual or organized public meetings with the stakeholders remain the key instrument for involving them and for ensuring transparency in the process, as land consolidation projects presuppose the establishment of trust in the instrument, even when the initial awareness may be low. As mentioned, the expression of preferences, interests and positions should be protocolled and defined. Key public information on the land consolidation project should be made available online, and in another form, respecting all regulations related to data protection and the privacy of project participants.

Other means for ensuring transparency, as previously mentioned, is through publishing the respective information in local and/or national newspapers and/or the Official Gazette of the state, for e.g. important information related to the launching and finalization of the project. The information should also be made in a form applicable to public announcements, in order to produce a respective legal effect of informing land consolidation project stakeholders, who could not be reached directly.

It should also be noted that not only the application of the transparency principle is fundamental to the success of land consolidation, but inversely, in the countries with opaque land markets, land consolidation may contribute to the increase of transparency in their land markets. Thus, a transparent land market is not a prerequisite for the implementation of a land consolidation programme in a given country. Land consolidation projects may be implemented in order to increase transparency in the land market of that country.

Box 3.4: Land consolidation transparency in Lithuania

Point 23, Paragraph 2

The State Land Fund, no later than 10 days before the first meeting, is to publish information on the decision taken that it is expedient to prepare the project, along with information about the organization of the first meeting, on the ŽPDRIS website, the website of the State Land Fund, on the bulletin boards of the territorial unit of the National Land Service and the subdistrict where the territory is planned, and in a local newspaper (no later than the next working day after the publication of this announcement in the newspaper, a staff member of the State Land Fund is to upload a digital copy of this publication on the ŽPDRIS website).

Source: Lithuania - Government Resolution (No. 697 of 2005). Unofficial translation.

3.2.6 Gender equality

The Land Consolidation Law and other relevant legal acts should ensure gender equality in the process and contribute to the promotion of general gender equality in the country (see also VGGT, Paragraph 3B.4). In many cases, even when gender equality is provided for in legal acts, the reality is different and various forms of informal discrimination may take place. Land Consolidation Law and other legal acts governing land consolidation should be written in a manner that promotes gender equality effectively.

Another important instrument to promote gender equality is the regulation of the status of unregistered joint owners/co-owners of marital property in the land consolidation project. The legitimate joint owner (spouse), who is not visible in the land register, should be properly identified in the early stages of the project and involved in the decision-making process. The legislation should either grant a right to vote or prescribe another form of consent for the Land Consolidation Plan for the said legitimate owners. The legislation should also promote joint registration of spouses during the process of registration of the Land Consolidation Plan in Land Registry, or require mandatory registration of the joint owners of property acquired during the marital union and as part of the land consolidation project.

For example, in the Danish law on marriage, even if one of the spouses is not a registered owner in the land registry, his/her rights are protected and they both need to sign an agreement if the property that is sold is important for the livelihood of the family. Consequently, spouses are fully protected whether they are registered or not. In other countries these types of provisions are unequally implemented and often to the detriment of women (FAO and GIZ, 2019). FAO generally promotes explicit registration of the rights of both owners as this provides increased security.

Land consolidation projects could also encourage joint registration of land as a means of increasing tenure security for both spouses. This should be provided for either in the Land Consolidation Law or in the laws on registration. Moreover, land consolidation and other relevant legislation should protect women against discriminatory customs related to land and promote the participation of women in the land consolidation process.

In addition to the instruments indicated above, the introduction of a minimum percentage of representatives of both genders could be proposed for in the representative bodies of the landowners and in other entities related to the land consolidation project.

Depending on the local situation, it is recommended to apply a variety of measures contributing to gender equality in land consolidation, as indicated in the 2013 FAO publication, *Governing Land for Women and Men – A Technical Guide to Support the Achievement of Responsible Gender-Equitable Governance of Land Tenure*. For example, one of the measures proposed is the establishment of “fair and transparent compensation schemes that do not discriminate against women and that involve payments to both spouses and all landowners.”

FAO is the custodian of SDG indicator 5.a.2, which measures progress in ensuring gender equality in law. Its methodology describes how to assess the six proxies for the indicator, which are:

- Proxy A: Is the joint registration of land compulsory or encouraged through economic incentives?

- Proxy B: Does the legal and policy framework require spousal consent for land transactions?
- Proxy C: Does the legal and policy framework support women's and girls' equal inheritance rights?
- Proxy D: Does the legal and policy framework provide for the allocation of financial resources to increase women's ownership and control over land?
- Proxy E: In legal systems that recognize customary land tenure, does the legal and policy framework explicitly protect the land rights of women?
- Proxy F: Does the legal and policy framework mandate women's participation in land management and administration institutions?

(FAO, 2018).



Discussions on the draft FAO Land Consolidation Plan in Egri, North Macedonia (2017). © FAO.

✓ **Key recommendations 3.2:**
Principles of land consolidation

1. Land Consolidation Law should ensure the respect for and protection of all legitimate tenure rights. Land consolidation should not only consider formally registered tenure rights but also those rights that have not been registered or have only been otherwise partially formalized.
2. Land Consolidation Law should provide for and ensure the implementation of the “at least as well off” and other VGGT principles.
3. Land consolidation should contribute to sustainable development. Mechanisms and safeguards, ensuring economic, social and environmental sustainability should be provided for in the Land Consolidation Law and applied in all land consolidation projects.
4. The Land Consolidation Law should provide the opportunity to integrate land consolidation with broader local development needs, by comprehensive local community development planning based on consultations and a participatory and inclusive process.
5. The Land Consolidation Law and the secondary legal acts should ensure and promote gender equality as one of the principles guiding the implementation of land consolidation programmes and projects.
6. Transparency, consultation, and active participation of a wide range of stakeholders should be ensured in the land consolidation process, not limited only to the landowners or formal right holders. Accordingly, communities, farmers’ associations, women’s organizations, local authorities, and others, should be involved in the process in order to achieve the most efficient and balanced land consolidation result.

LAND CONSOLIDATION INSTITUTIONS AND STAKEHOLDERS



4. LAND CONSOLIDATION INSTITUTIONS AND STAKEHOLDERS

The implementation of land consolidation is generally the responsibility of the respective institution(s) responsible for the formation of the land consolidation policy, and overall programme management. Nevertheless, experience shows that the process can involve a wide array of other private and public stakeholders. Country practices vary concerning the institutional framework as well as regarding the list of private and public stakeholders involved in the land consolidation process.

4.1 PUBLIC AND SEMI-PUBLIC ENTITIES

The countries introducing land consolidation need to decide whether it will be regulated on a national or sub-national level. For example, in Germany and Spain, the Federal States and the Autonomous Communities respectively, are authorized to regulate land consolidation, while in other countries the relevant regulatory powers are centralized (e.g. in Denmark, Lithuania, Serbia, Turkey). Decentralization of the regulatory powers related to land consolidation appears relevant only in large countries with a federal or other comparable structure with decentralized regulatory powers. For smaller countries it is recommended to regulate land consolidation at the national level. Having said that, even if land consolidation is regulated at the national level, it may be the case, that its implementation is conferred to the regional (the Netherlands) or municipal (Serbia) levels.

Subsequently, states should decide which institution(s) will be responsible for: i) land consolidation policy formation; ii) management of the land consolidation programme in the country; and iii) actual implementation of the land consolidation projects. In most of the analysed countries these functions are performed by a designated lead agency, which may possess different internal structures to deal with land consolidation.

For example, in Finland, the lead agency is the National Land Survey under the Ministry of Agriculture and Forestry. In Denmark, the lead agency is the Danish Agricultural Agency under the Ministry of Environment and Food. In Spain (Galicia), the lead agency is the Regional Ministry of Rural Affairs, while in the Netherlands, the provincial governments act as lead agencies. There are other examples, such as Lithuania, where the functions inherent to the lead agency (as defined in this guide in Section 2.1.1) are distributed between the national lead agency (the National Land Service under the Ministry of Agriculture) and the State Land Fund, which is in charge of the implementation of land consolidation projects (see Section 2.2.4). Yet, other countries such as Serbia, besides the centralized institutional infrastructure for land consolidation, place most emphasis on the municipal level and therein establish separate Land Consolidation Commissions as local land consolidation authorities, for each land consolidation project (see Section 2.2.6).

Aside from the lead agency, there are other entities involved such as the cadastre agency, local governments, and private service providers. Each of them plays a leading or supporting role in the process and have separate though interlinked functions. Some roles, such as the formal adoption of the Land Consolidation Plan and the formalization of rights, may be assigned to the lead agency, to a special Land Consolidation Commission, or to existing institutions, such as land commissions. Figure 4.1 provides an example of how land consolidation functions could be distributed among different institutions and entities. Of course, every country needs to consider how to distribute its roles.

Figure 4.1: Example of the distribution of roles and responsibilities in the land consolidation process

TASKS		LEAD AGENCY Central office	LEAD AGENCY Branch office	Cadastral	Local Government	Consulting Companies	Land Consolidation Commission	Local Community	Others	
Programme level										
Supervising actors involved		L*	S**							
Prepare /update legislation and guidelines		L							S (e.g. other ministries)	
Programming / budgeting		L								
Coordination with other agencies		L								
Monitoring and Evaluation		L								
Communication programme level		L								
Feasibility phase	Project level									
	Prepare Call for projects		L							
	Promote Call for projects		L	S		S		S		
	Apply for projects			S		L			L/S	
	Selection of projects		L							
	Commissioning of feasibility studies		L							
	Prepare ownership / users maps				S		L		S	
	Interview all owners / users						L		S	
	Prepare land mobility maps				S		L		S	
	Community development planning					S	L	S	S	
	Feasibility report		S				L		S	
	Assessment report		L							
	Re-allotment phase	Establishing local bodies			S		S		L	
Formalization of land rights, dispute resolution		S		S		L				
Commissioning design studies		L								
Prepare valuation / re-allotment planning		L					S	S (e.g. expert institute)		
Land valuation		S				L	S	S (e.g. expert institute)		
Re-allotment planning				S		L	S			
Design infrastructure measures					S	L	S	S (e.g. design company)		
Environmental Impact Screening					S	L				
Registration & implementation phase	Finalise / submit project proposal		S		S	S		L		
	Assessment report		L						S (Ministry of Environment)	
	Approval of Land Consolidation Plan		S				S	L		
	Procurement		L							
	Infrastructure construction works			S		S	S	S	L (Contractor)	
	Demarcation of parcel boundaries			S	S	S	L	S		
	Registration of rights				L	S	S			
Financial settlements		L				S	S			

In addition to providing a definition of entities and their responsibilities in the land consolidation process, a Land Consolidation Law should define mechanisms for managing the cooperation between the different stakeholders, for example, which of them would play leading roles and which would play supporting roles. Also, the institutions responsible for instruments that can be an accessory to land consolidation, such as land banking, should be clearly identified (see Chapter 10).

In the following sections, different types of public entities that play key roles in the land consolidation process are discussed: the lead agency, local governments, the Land Registry, as well as other public and public-private bodies.

4.1.1 Lead agency

The lead agency, as defined in Section 2.1.1, is the key public institution in the land consolidation process in the country. The decision on which institution will act as a lead agency largely depends on the key objectives of land consolidation. While in Denmark, priority is given to environmental objectives, in Turkey irrigation is the key aspect, drainage in Finland and area development in the Netherlands.

The lead agency may act through branch offices that can facilitate land consolidation functions in large countries such as Turkey. Yet, unless the local circumstances clearly demand otherwise, it is recommended that the key resources and know-how are concentrated at the national level with eventual regional branches of the lead agency playing an accessory support role. This would allow for a more strategic approach to implementation and a more efficient integration of land consolidation with accessory instruments such as land banking. In turn, when it comes to interacting and implementing land consolidation with the affected stakeholders, proximity to the land consolidation area is a key success factor, which demands the presence in the area of the lead agency and other stakeholders involved in the implementation of the project (see also Section 4.1.4).

The functions of policy formation and management of the national land consolidation programme should be concentrated within the same institution. This will ensure a better integration of the whole process and concentration of the know-how and resources.

Adjudication of land-related rights and correction of errors can be a vital part of the land consolidation process. In many countries, informal land transactions are widespread, and errors and disputes are frequent. It is recommended that the Land Consolidation Law confers some of the key functions related to the adjudication and formalization of the legitimate ownership to the lead agency or to a specific empowered body, such as the Land Consolidation Commission (see Section 6.3).

The lead agency or the Land Consolidation Commission should also be responsible for ensuring the legality of the Land Consolidation Plan, making sure that legitimate right holders give approval or vote in accordance with the defined procedures, that all relevant co-owners are involved, and that spousal approval is duly obtained, etc. The lead agency or the Land Consolidation Commission should also be responsible for the adoption of the Land Consolidation Plan, as described in Section 6.6.2.

Some part of the implementation functions can be shared or entrusted entirely to private service providers. The Land Consolidation Law should clearly define which of the functions could be tendered out and establish the main requirements for service providers (for more details see Section 4.2).

4.1.2 Local government

Local governments can play different roles in land consolidation projects. They should be consulted about the project and its eventual solutions, and they can disseminate information about the project or provide necessary documentation. Another important role of local governments is to ensure that the land consolidation project aligns with the spatial plan. They might participate in land consolidation projects as landowners, as in many countries local governments own agricultural land. In Lithuania, if state or municipal land is included in a land consolidation project area, then certain requirements for decision-making in public meetings apply. In this case, decisions made during the public meetings are valid not only when favourably voted by 75 percent of all landowners, but also only when they are approved by the State Land Fund, as well as the representatives of the institutions managing state and/or municipal land.

In Serbia, the municipalities play a key role in implementing land consolidation. They are responsible for defining the land consolidation area, they adopt the Land Consolidation Programme (per project), establish a Land Consolidation Commission, adopt the objectives of the land consolidation (per project), and select the service providers for works related to land consolidation, etc.

4.1.3 Land Registry

The institution (or institutions) responsible for land registration and cadastre, hereafter referred to as the Land Registry, is involved in a land consolidation project from the very beginning until the end. It plays a number of important functions in the process. For example, the topographic and cadastre maps are used to investigate the ownership situation and to define the land consolidation project area; extracts from the Land Registry represent the legal basis for the identification of registered landowners and other right holders. Surveying works related to the land consolidation project as well as demarcation of the boundaries of the new parcels have to be based on the geodetic technical frame, maintained by the Land Registry. Furthermore, once the Land Consolidation Plan is adopted by the lead agency or another competent body, respective data in the Land Registry must be updated.

In some countries, like Finland, the institutions responsible for the Land Registry, are also assigned as the lead agency. However, in other countries, like Denmark and Lithuania, the lead agency is a different institution than the one responsible for the Land Registry. Even if country practice varies on the matter, the participation of the Land Registry in the land consolidation process is essential. The functions of the Land Registry related to land consolidation should either be established in the Land Consolidation Law or in specific laws regulating the said institution. Furthermore, the secondary legal acts should establish clear roles and rules of cooperation between the lead agency and the Land Registry.

4.1.4 Other public bodies involved in land consolidation

In some countries, the regulatory framework provides for the establishment of coordination bodies, which include representatives of different stakeholders in the land consolidation project, both public and private. For example in Spain (Galicia), in accordance with Article 16 of the *Law on the improvement of agrarian land structures of Galicia*, four representatives of the Board of the owners (its members are the landowners and other defined right holders within the project area) participate in the Local Board, which involves a wide range of project stakeholders: the head of the provincial service responsible for land restructuring; a lawyer

from the competent council in matters of rural development; a person from the agronomic technical team of the company contracted for implementation of any land restructuring works; the local mayor (or his/her representative); the technical staff member of the provincial service in charge of the area; the technical staff member of the county agrarian office of the respective area; the head (or his/her representative) of the provincial service competent in the field of forests; and a representative of the land bank. In some land restructuring procedures, Spain (Galicia) uses a Technical Advisory Committee for Land Restructuring, as provided for in Box 4.1. All these structures allow for better coordination of the work on the project, while involving both public and private stakeholders of the project.

Box 4.1: Coordination and representation of institutions and stakeholders in Spain (Galicia)

Article 14 (Technical Advisory Committee for Land Restructuring)

(...)

2. The technical advisory committee (...) shall be formed, as ex-officio members, by the head of the territorial jurisdiction of the regional ministry for rural areas in the corresponding province, and by a representative from each of the departments and entities competent in matters of:
 - a) Rural development.
 - b) land bank Management.
 - c) Farming production.
 - d) Forestry.
 - e) Nature conservation.
 - f) Water management.
 - g) Urban planning.
 - h) Cultural heritage.
 - i) Professional agrarian organizations.
 - j) Local administration.

Likewise, and owing to the competencies thereof, a non-voting representative shall be convened from each of the following departments and entities for the meetings of the technical advisory committee:

- a) Highways of the Autonomous Community of Galicia.
- b) State Highways.
- c) Agri-food quality management, protected designations of origin and protected geographical indications.
- d) Energy infrastructures and mines.
- e) Territorial land registry headquarters.
- f) Provincial Council.
- g) Any other department, environmental organization, municipal communal woodland or association for the protection of heritage, and any other entities or persons who, in view of the subject, may have a bearing on the improvement of the agrarian structure to be implemented.

Source: Spain (Galicia) Law on the Improvement of Agrarian Land Structures of Galicia, 2015. Translation by the Regional Ministry of Rural Affairs, Xunta de Galicia, Spain.

✓ **Key recommendations 4.1:**
Public and semi-public entities

1. The Land Consolidation Law should provide the legal basis for the establishment or assignment of a public lead institution (lead agency) for land consolidation. This body should have overall responsibility for the formation of the land consolidation policy, for management of the national land consolidation programme and for ensuring the implementation of concrete land consolidation projects.
2. The Land Consolidation Law and the secondary legal acts should distribute functions and responsibilities in a manner which would ensure the attainment of land consolidation objectives and the respect of land consolidation principles. It is important that these functions and responsibilities do not conflict, overlap and compete.
3. The Land Consolidation Law should authorize the lead agency or a separate decision-making authority (e.g. Land Consolidation Commission) to adopt Land Consolidation Plans through an administrative or judiciary act in land consolidation projects.
4. The Land Consolidation Law should authorize the lead agency or a separate decision-making authority (e.g. Land Consolidation Commission) to lead the process of clarification and solve ownership and land registration related problems in land consolidation projects. This should be integrated into the land consolidation procedures, either through decision-making by the aforementioned bodies or through efficient involvement of judiciary or other relevant institutions into the process.

4.2 PRIVATE SERVICE PROVIDERS

Another aspect to be regulated by the Land Consolidation Law or the secondary legal acts is the sharing of functions between public institutions and private service providers. Although programme management is carried out by the lead agency, some implementation works could be outsourced, for example, feasibility studies, land valuations, drafting of the Land Consolidation Plans and implementing field work related to the registration of the new parcels, such as surveying and demarcation of the new boundaries or improvement of the land, for example, irrigation channels, drainage pipes. This creates flexibility, allowing the lead agency to quickly scale up and down land consolidation activities depending on the funds available for the national programme, and to accelerate single projects, if necessary. For example, in Turkey, where most re-allotment work used to be performed by the respective public institutions, now in most cases, such works are contracted to private service providers.

There could also be cases where the relevant functions are fully reserved for private service providers. For example, in Denmark private surveying companies have a monopoly on cadastral works and preparation for the registration of ownership rights. In other countries, no private service providers are involved in surveying work, for example, in Finland all works are performed by the National Land Survey, with the exception of tendering out construction, landscaping, or other similar works. Thus, the organization of land consolidation is very much determined by how cadastral works are organized.

In order to determine who is entitled to carry out the re-allotment work, there are two considerations. On the one hand, private service providers can facilitate larger scale land consolidation, save institutional resources, and provide quality services. On the other hand, the lead agency needs to have hands-on experience with all stages of the land consolidation process in order to effectively supervise the work of private service providers, as well as take over the work from private service providers in case of budget constraints. Therefore, it is recommended that both the lead agency and private service providers be granted the right to conduct the re-allotment and other related work, such as the feasibility studies. This would allow for flexibility while implementing the land consolidation programme. Should the financing capacities permit, the lead agency may outsource the re-allotment and other related services to private parties, however if financing decreases, the same work could be performed by the lead agency staff.

If specific works related to land consolidation are outsourced, it should be ensured that the respective service provider and/or its staff have all the necessary qualifications to perform the works. Also, the lead agency should control the quality of the works and the respective payments for the works performed.

4.2.1 Land consolidation planners

Land consolidation planners are the key persons responsible for the organization and implementation of activities at the project level. Among other activities, they conduct interviews, and draft and present the different maps to stakeholders, including the Land Consolidation Plans. The secondary legal acts should establish the key qualifications of land consolidation planners and provide the opportunity to outsource work to private service providers. The licensing of private land consolidation planners or their registration by the lead agency could also be considered but country practice varies. In Lithuania, strict requirements are imposed on the persons qualified to draft Land Consolidation Plans, whereas in Denmark, there is no certificate needed or requirement for e.g. regular training. However, when the re-allotment planning is tendered out, the experience of the planner(s) as well as the references of the companies is of utmost importance. In Turkey, the respective private planners must have relevant experience, but they are not required to be licensed. The private service providers must submit documents proving their experience in land consolidation. Moreover, they must employ one Geographic Information System (GIS) expert and one agricultural engineer in order to participate in tenders for land consolidation works. In the Netherlands, the re-allotment planning is done under the overall supervision of the lead agency and in coordination with the Land Development Committee (established per project) supported by the experts at Kadaster.

It is recommended that at least in the initial phase of implementation of land consolidation, certain educational and experience criteria should be established for private planners. During the later stages, in the evolution of land consolidation, the need for such requirements should be reviewed.

Training and capacity development are fundamental to ensure an acceptable standard for the re-allotment services. The preparation and implementation of a training programme for staff of the lead agency, the Land Registry, and private planners is recommended. Although the Land Consolidation Law would not directly refer to capacity building, secondary legal acts should set requirements applicable to the individuals and entities implementing land consolidation related works.

4.2.2 Other service providers

In addition to re-allotment related activities, there are other works that may be required in land consolidation projects, such as the construction of local roads, drainage, irrigation, field levelling, elimination of stones and rocks, and landscaping (see Section 7.4). These are usually tendered out to external service providers and, as a rule, the tendering out of such works begins after the adoption of the Land Consolidation Plan. It is the role of the lead agency to organize tenders and supervise the implementation of the contracts. Some countries, however, have a different approach. For example, in Finland, the cadastral surveyor from the National Land Survey is responsible for the usage of the allocated state budget of the land consolidation project. The Advisory Board of Landowners (see Section 2.2.2) decides on the necessary general works (like the construction of local roads) and the chairperson of the Advisory Board of Landowners signs contracts with the companies. These contracts are subject to public procurement regulations, and all relevant activities of the Advisory Board of Landowners are supervised by the cadastral surveyor responsible for the project.

In Lithuania, the State Land Fund commissions the works by way of public procurement procedures. Contracts are signed between the State Land Fund and the respective counterparts who are implementing the infrastructure works or supervising. In addition, other professionals and companies may be involved in the land consolidation process, such as experts from different fields. In Denmark, local agronomists with specific knowledge of soil quality and the production value of the agricultural land in the project area are involved in the land valuation procedures, whereas in Finland, the cadastral surveyor responsible for the land consolidation project may employ external experts for land valuation purposes.

Another example is provided in Section 18 of the German *Land Consolidation Act of 1953*, by which the Body of Participants (see Section 2.2.3) may commission the appropriate agencies and experts to carry out the construction and maintenance of common facilities and to improve the soil quality.

✓ **Key recommendations 4.2:**
Private service providers

1. The Land Consolidation Law should allow the outsourcing of certain land consolidation tasks to contractors. This can ensure flexibility in case of budget fluctuations and allow the lead agency to control the work of service providers.
2. The lead agency should develop training programmes and materials for all phases of land consolidation projects, certify and/or licence private service providers.
3. Land consolidation planners are expected to have the appropriate knowledge and experience to perform their duties. Education and/or certification as well as professional experience requirements should be established in the secondary legal acts and scrutinized when allocating assignments through tenders.

4.3 RIGHT HOLDERS

A wide range of right holders are affected by the land consolidation projects, however, the range of respective rights that are taken into account varies between different countries.

Following the VGGT, all *legitimate tenure rights* should be taken into consideration during the drafting of a Land Consolidation Law, whether they are formalized or even legally recognized or not (see Sections 2.3.1 and 3.2.1). Given that a Land Consolidation Law is a *lex specialis*, it is normally not the right place to accord legal recognition to socially legitimate rights that do not enjoy legal recognition. Nevertheless, if such rights generally exist in a country, then the right holders should be included in the process of drafting the Land Consolidation Law, and ways should be sought to amend the general legal frameworks so that these rights are also recognized and can be taken into account in land consolidation projects.

Provisions that could be included in the Land Consolidation Law should focus on formalization of rights that are recognized by law, but for one reason or another are not formalized. These include rights such as unregistered ownership rights, unregistered long-term leases, matrimonial rights, inheritance rights, mortgages, etc. They could also regularize cases of adverse possession or irregularities arising from customary tenure arrangements.

The Land Consolidation Law should also provide that the land consolidation process identifies tenure arrangements that may not need registration, such as short-term tenancies, which would normally be allowed to expire and leave future arrangements to old or new owners of the parcels concerned (see Section 6.5.2).

As discussed in Chapters 5 and 6, the land consolidation process should identify all tenure right holders and include them in the process and seek to regularize all non-formalized rights so that registers reflect accurately the factual situation on the ground, ensuring that tenure security is enhanced, including that of women, whose rights are often not registered.

The Land Consolidation Law should provide for the formalization of tenures that are recognized by law and establish administrative processes that are simple, clear and streamlined, while explicitly protecting and promoting women's tenure rights, etc. (see full recommendations in FAO, 2016, pp. 43-44).

4.3.1 Landowners

Formally-registered private and public landowners, including the state (or, in countries where all land belongs to the state, those who hold private user rights) are the basic legal category of right holders that are involved in land consolidation projects in Europe. The legal nature of the landowners may vary from private individual and corporate owners to public entities, the state, municipalities, communities, etc. The types of landowners involved in the land consolidation process may differ from country to country. For example, communities may have the right to possess or manage land and therefore participate in the land consolidation projects as landowners. In Spain (Galicia), where there is a specific form of common ownership, *private common land* belongs to the communities. Private common forest areas are often "managed by the community jointly with the local public administration" and the farmland is "managed frequently by individuals with acquiescence of the community" (Ónega-López, Puppim de Oliveira and Crecente-Maseda, 2010, p. 760-761). This illustrates how different the local conditions may be in individual countries.

Countries introducing land consolidation are often confronted with problems related to landownership without proper registration. This complicates the situation and should be addressed during the land consolidation project (see Section 6.3). The rights of the legitimate landowners should be recognized and formalized. It is very common in many countries introducing land consolidation for land to be used by non-formalized owners, i.e. who have non-formalized rights. The Land Consolidation Law should be careful to both protect such rights and to ensure their formal registration in the new situation.

Identifying all right holders, contacting them, and including them, should be an integral part of land consolidation, with a view to having at the end an updated and correct cadastre, in addition to less fragmented, more economically viable and more sustainable holdings. Different mechanisms can be used for this purpose. For example, in Turkey where the landowner is known but their rights have not been formalized, the right of ownership is often formalized by applying the legal instrument of acquisitive prescription, which allows for acquisition so long as use or occupancy has been for the prescribed legal period.

One common problem is the difficulty in contacting all those who have registered tenure rights. They may have emigrated for example and this creates a major hindrance in the success of the re-allotment process. However, practice shows that with the help of available communication technologies, it is possible to contact registered landowners and involve them in the process, even though they may live elsewhere.¹⁷ Therefore, one potential beneficial side effect of land consolidation projects is that they can be a means to encourage absent landowners to sell land for which they no longer have use for.

In the case of majority-based land consolidation, if the landowners in question are not located after performing due efforts, the Land Consolidation Law could provide for a trustee mechanism to represent their interests. Trustees could be assigned by the lead agency or by the land court, depending on the national legal systems. They would represent the best interests of the inaccessible landowners and ensure that all their legitimate rights are respected and protected.

Box 4.2: Formalization of ownership rights and inclusion of parcels with unknown owners into land consolidation projects in Denmark

Article 6, Paragraph 4

If a landowner has not registered owner's right to the area that is a part of the land consolidation, the Land Consolidation Commission may determine that the landowner be regarded as the proper landowner, when their ownership of the area is plausible. A public announcement must be made for potential beneficiaries according to rules corresponding to the rules of Article 20 of the Land Registration Act. Likewise, the Land Consolidation Commission may decide that an area located in the land consolidation area, for which no one makes a property claim, should be included in the Land Consolidation Plan under the terms set forth herein.

Source: Denmark – Law on Land Consolidation and Public Purchase and Sale of Real Property for Agricultural Purposes (No. 31 of 2017). Unofficial translation.

¹⁷ This was demonstrated during the FAO land consolidation pilot project in Egri area in North Macedonia, where about 80 of 200 landowners were living in foreign countries, such as Australia and Canada.

4.3.2 Heirs of deceased landowners

Country practice shows that non-formalized inheritance (non-accomplished inheritance procedures and cadastral updates or ongoing inheritance disputes) will often hamper the implementation of land consolidation projects. Therefore, the Land Consolidation Law and other relevant laws should provide solutions for dealing with these types of issues. If not addressed in the Land Consolidation Law this could hinder the smooth and timely implementation of the land consolidation project. In Lithuania, for example, since the participation in the land consolidation project is voluntary, until the inheritance procedure is finalized and the heirs are registered as landowners, the consolidation of the inherited parcel cannot be completed. In voluntary land consolidation three main options can then be considered: i) wait until the inheritance procedures are completed; ii) exclude the parcel from the project area; or iii) allow the estate to participate with the agreement of the heirs. If inheritance is contested, this may not be viable. In majority-based land consolidation, in case of absence of the agreement between the non-formalized heirs, trustees could be used.

In order to ensure a successful outcome to the project in mandatory land consolidation in the Netherlands, these issues are solved by registering the new consolidated parcel as property of the "Heirs of [name of deceased]". This type of instrument facilitates completion of the land consolidation project, and registration of the heirs as the landowners upon finalization of the inheritance procedure. Nevertheless, a Land Consolidation Law should promote updating the land registry in the area after completion of the land consolidation project. The national legal framework could therefore create a specific inheritance formalization procedure in case of land consolidation. This would include, amongst other things, the timing of the procedures in the respective courts and/or institutions where the inheritance is formalized, as well as the integration of such procedures within the land consolidation process.

4.3.3 Unknown owners

Another common problem in many countries is parcels with unknown owners, which in some cases are abandoned, while in other cases, the parcels are being used by other persons that do not hold formal property rights. In both cases, the issue should be addressed through formalization, ensuring that the land consolidation process is not hindered, and right holders are protected.

Such formalization can be achieved using specific instruments for formalization, like adverse possession or envisaging procedures for public announcements for the identification of possible ownership right holders, and formalization of user rights if the owner is not determined through the public announcement process. For example, in Denmark, this issue is solved as part of the land consolidation process through a public announcement and subsequent acquisition of the ownership rights by the land user, if the ownership rights are not claimed by another person.

In case land of unknown owners is not utilized, the Land Consolidation Law should provide possibilities through which relevant public institutions can include such parcels in the land consolidation process, ensuring either that the unknown owners' interests are protected in the process or envisaging instruments through which the institutions can establish formal ownership over the land.

In the first option, one of the key issues to consider would be to ensure the due representation of the rights of the unknown owner in the land consolidation project. For this purpose, the

Land Consolidation Law may establish a mechanism of trustees, who would be responsible for the representation of the rights of the unknown owner during the process. The law could provide that the lead agency, Land Consolidation Commission or other relevant public body assigns the aforementioned trustee(s) until the completion of the land consolidation project.

In the second option, the Land Consolidation Law could entrust the right to a public institution such as the lead agency, the land bank or municipality, to fully manage the property for a defined period of time and if the owner is not identified in this period, the institution would have the right to obtain ownership. For example, in Spain (Galicia) the period is 5 years. During this period, the institution managing the parcel could, amongst other things, be granted the right to rent the parcel and negotiate short-term lease contracts. Upon expiration of the said term, if the property rights to the parcel are not claimed, the state would have the right to take over the property and use it, for example, in land banking activities, or to sell at auction.

4.3.4 Holders of lease rights

Leaseholders may be among the key players in land consolidation projects. This is particularly true in the case of long-term formalized leases, which may involve a large part of the agricultural land in the land consolidation project area. Implementation of the project affects the rights of leaseholders, therefore, land consolidation legislation should duly protect their rights and ensure their involvement in the land consolidation process.

The role of the leaseholders varies from country to country but in the majority-based land consolidation procedure in the Netherlands, for example, the long-term leaseholders had (until the entry into force of the *Law on Development of Rural Areas* in 2007) voting rights in the approval process of the Land Development Plan (there was no voting on the Re-allotment Plan). However, the full involvement of leaseholders into the land consolidation process requires a stable and well-functioning land-lease system, with the respective registration of lease agreements in public registers, etc. Since in the countries introducing land consolidation, the land-lease system may still be under development, or absent, they might be asked to follow the landowner and continue leasing their new parcels, or be offered compensation for termination of the lease, paid by the current landowner. This would be an alternative to involving the leaseholders in a re-allotment related decision-making process. In any case, this mechanism would be based on the facilitated land consolidation planner negotiations between the landowners and the leaseholders.

4.3.5 Other right holders

Land consolidation projects may affect other holders of rights, such as mortgagees, holders of usufruct rights, servitudes, etc. The Land Consolidation Law should deal with these various rights and provide for mechanisms that would ensure the respect of those rights or if such rights are terminated and loss is suffered, allocate due compensation. Section 6.5.2 analyses how the aforementioned rights should be protected during the land consolidation project.

Furthermore, decisions taken during the approval and implementation of the land consolidation project may affect the holders of rights for parcels outside the project area. For example, this could occur when the drainage or other type of infrastructure project is implemented within the project area and also extended outside of the area. The persons and entities affected should also be involved in the project, whereby their rights and obligations are recognized.

4.4 OTHER STAKEHOLDERS

In addition to the public institutions involved in the implementation of land consolidation projects and the private right holders in the project area, other entities and persons could be affected by the process. If they have the freedom to express their position and make objections where necessary, they could make a considerable contribution to the quality of the project. Such stakeholders would be granted the right to receive relevant project information, participate in public meetings and express their ideas, be part of respective decision-making bodies. The involvement of a wide range of stakeholders would make the implementation of the land consolidation project more efficient, integrated, inclusive and sustainable.

It is important to involve members of the local community in the project, as the community is at the lowest level of rural organization and may involve people from different ethnic, social, political, economic or other backgrounds, and with different needs. The community may participate through different means, such as through representatives, community-based organizations, community governing bodies (mayor, council, etc.), and others. The land consolidation process must ensure that their voices are heard and that they have an opportunity to make proposals and objections related to the land consolidation project. FAO promotes the integration of land consolidation with broader local development initiatives and often supports the preparation of an integrated Community Development Plan as part of land consolidation pilot projects.

The interests of the community must be taken into account. Not only should land tenure rights of the communities be safeguarded, as indicated in Section 4.3.1, but depending on the situation there may be other rights of the communities in need of recognition and protection, such as the presence of sacred places, access to water resources, etc.

Another role that the local communities could have in land consolidation projects concerns the provision of relevant information, which might be lacking or erroneous in the registries. Local communities may also actively participate in facilitating good communication with landowners as well as distributing relevant land consolidation project information.

Farmers' organizations should also be involved in the land consolidation process by, for instance, representing the interests of the local farmers, which are not necessarily those of the landowners. This may also concern local agricultural co-operatives that could be affected by the re-allotment of land within the project area. Farmer's organizations could also facilitate negotiations between the landowners, land consolidation planner and the tenant farmers. The German *Land Consolidation Act* noted in Box 4.3 illustrates the type of language that can be used on this subject.

Box 4.3: Involvement of professional organizations in land consolidation projects in Germany

Section 2, Paragraph 1

Land consolidation shall be carried out within a given area (land consolidation area) under the direction of the responsible authorities and in cooperation with all landowners concerned, the appropriate public agencies and the Farmers' Association (...). (...)

Section 109

The professional representation of agriculture, forestry or fishery, in so far as they are to be heard or treated as a party concerned in accordance with the provisions of this Act, is the Chamber of Agriculture. (...)

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

It is essential to involve into the process all relevant public agencies and bodies that may be affected by the land consolidation project. For example, the design of the plan of public facilities within a project area may affect planning activities of the relevant public agencies.

Women's organizations at the national, regional or local level should also be involved in the entire land consolidation process to promote overall respect for gender equality and contribute to policy making and drafting of the relevant legislation. These organizations are able to best express the position and needs of women in land management in general, and in land consolidation in particular. Besides their general involvement in the land consolidation process, local women's organizations could be active in specific land consolidation projects.

Indeed, the interests of farmers of different genders could differ and thus cause conflict, or women may be discriminated against in terms of decision-making, even if they are co-owners of the land parcels. Therefore, women's organizations would be an excellent way for detecting inequalities and raising the relevant issues, without subjecting individual women to further pressure in the community or family. This may include both formal and informal women's groups and organizations. Strength in numbers through women's organizations may empower and enable women to assert their rights and interests.

Since land consolidation is an open and transparent process, other stakeholders (e.g. environmental organizations, local opinion leaders) who have an interest in the respective projects could also participate in the public meetings and represent their own or public interests.

✓ **Key recommendations 4.3:** Right holders and other land consolidation stakeholders

1. All legitimate tenure rights should be considered and recognized in the Land Consolidation Law, including legitimate informal rights. The legal framework should provide for mechanisms that allow for formalizing or at least facilitating the formalization of legitimate land tenure rights in the land consolidation project area and ensure that the rights of women as co-owners are fully respected and registered.
2. Land Consolidation Law should not limit project participants to registered landowners and right holders. The rights and interests of other stakeholders, such as local interest groups, farmers' and women's organizations, local governance bodies, specialized organizations and others, should also be identified and such stakeholders should be subsequently involved in the implementation of land consolidation projects.
3. Land Consolidation Law should provide instruments and mechanisms which allow the inclusion of parcels of unknown owners into the land consolidation process as long as their rights and interests are respected.
4. The Land Consolidation Law should provide mechanisms that deal with other land related rights. Based on the context, such rights would either be continued and recognized by the new landowner, follow the initial landowner and be applied to their new parcel, or be terminated as a result of negotiations or natural expiration.

4.5 PUBLIC MEETINGS OF STAKEHOLDERS AND ELECTED COLLECTIVE BODIES

In most of the countries analysed, the stakeholders are invited to participate in public meetings where they can express their positions regarding the land consolidation process, ensure the protection of their respective rights, and elect representative bodies, etc.

4.5.1 Public meetings

In most of the countries analysed, one of the processes where the interests of the land consolidation stakeholders are represented is by way of public meetings or their equivalents. Various titles of public meetings are used in different countries: *initial public meeting* and *judgement meeting* in Denmark, *cadastral survey meeting* in Finland, *meeting of persons participating in the project* in Lithuania, etc.

In most countries the public meetings have two main purposes. First, this is the place for the exchange of information between the different participants of the project (institutions, right holders, service providers, non-governmental organizations, etc.). At the beginning of the process, it is the place where stakeholders receive all necessary information about the project, procedures, timelines, etc. During these meetings stakeholders are offered the opportunity to express their position, preferences and eventual objections. Second, this is at the same time a place where common decisions are made by the landowners and other stakeholders. Usually, the landowners are granted voting rights and make decisions related to the land consolidation project. They also elect their representatives, who subsequently participate more intensively in the implementation of the project (see Section 4.5.2). The number of issues voted on during the

public meetings differ, depending on whether the land consolidation procedure is voluntary or majority-based. For example, in voluntary land consolidation there may be no need for voting on the Land Consolidation Plan (like in Denmark), while in majority-based land consolidation this would be the place for the Land Consolidation Plan to be approved by the landowners and then adopted by the lead agency or Land Consolidation Commission.



Public meeting in Shorsulu land consolidation pilot project, Azerbaijan (August 2019). © FAO

In most of the countries analysed, the public meeting is not organized as a separate legal body and has no legal personality. On the other hand, in Germany, in accordance with Section 16 of the *Land Consolidation Act*, a special Body of Participants is established and has the status of a legal entity. Furthermore, according to the Act, associations of Bodies of Participants may be established in accordance with Section 26 of the Act. Also, in order to ensure their rights, the aforementioned associations may join a Federation (Section 26e). See Section 2.2.3 of this guide for more details.

The scope of stakeholders represented in public meetings varies from country to country. Typically, participation in the meetings is open to the public. However, voting rights are reserved for specific stakeholders as defined in the Land Consolidation Law. In most of the countries, only landowners are directly invited to participate. For example, in Lithuania, direct invitations to attend such meetings are sent only to the landowners in the project area. At the state and/or municipal land level, the trustees of the said land also participate in the meetings. This does not imply that other interested persons are not welcomed to attend and express their position, as the public meetings are open to the public – this is the case in Denmark and Finland.

The public meetings and the whole process of land consolidation should be based on the atmosphere of trust between their organizers and participants. Therefore, if it is feasible, it is recommended that the meetings are organized by the same team of professionals involved in the project from its beginning until the end.

In order to ensure consultation, participation and transparency of the process, it is recommended that a series of public meetings are organized, to involve a wide range of stakeholders who may be impacted by the land consolidation project. This would concern not only landowners, but also private right holders, as well as other stakeholders of the land consolidation project. During the process, their rights and competences may be diversified, however, all of the stakeholders should be heard and possess the proper mechanisms for the protection of their rights. The organization of public meetings in connection with project milestones, such as the launching of the feasibility and re-allotment phases, and approval of the Land Consolidation Plan, is necessary.

Box 4.4: Members of the Board of Owners in Spain (Galicia)

Article 15, Paragraph 1 (Board of owners)

1. Members of the board of owners are:
 - a) All holders of the right of ownership or the right of use and agricultural usufruct of agrarian land affected by the restructuring process.
 - b) Owners of agricultural holdings with land affected by the restructuring process. (...)

Source: Spain (Galicia) – Law on the Improvement of Agrarian Land Structures of Galicia. Regional Ministry of Rural Affairs, Xunta de Galicia, Spain.

The Land Consolidation Law should promote gender equality in public meetings and respective measures should be adopted to take into account the situation in the country. The position and opinions of both spouses should be heard in the meetings as well as during the gathering of requests on behalf of the right holders. Furthermore, gender equality may be promoted by fixing minimum thresholds of the percentage of representatives of both genders that should be elected into bodies, right holders, etc.

Different competences are attributed to the meetings during different stages of the process. For example, in Denmark, during the *initial public meeting* the project is presented to the participants and the date of completion of the Land Consolidation Plan, the date of the adoption of the judgement by the Land Consolidation Commission, and the land consolidation project area are determined; landowners also elect a Committee of Landowners. During the second meeting, called the *judgement meeting*, the planner presents the Land Consolidation Plan, objections are recorded, and the Land Consolidation Commission adopts the judgement, thus finalizing the procedure (Hartvigsen, 2015b). An additional *judgement meeting* may be organized, in case there is a need for corrections of the Land Consolidation Plan, after the survey and registration of the Plan is completed.

Box 4.5: Cadastral survey meeting in Finland

Section 94, Paragraph 1

- (1) In the cadastral survey meeting, the majority of the land owners present may elect one or more representatives to take part in the pre-assessment of the matters to be handled in the cadastral procedure.
- (2) The representatives shall be heard when drafting the report referred to in Section 70 when discussing the principles to be followed for drafting the Land Consolidation Plan, and the measures to be carried out in all other important matters concerning the execution of the cadastral procedure, as needed.

Source: Finland – Real Estate Formation Act. Unofficial translation by the Ministry of Agriculture and Forestry, Finland.

In Lithuania, during the *first meeting* its participants identify the parcels to be potentially included in the land consolidation project area, determine the responsibilities of persons authorized to solve organizational issues related to the drafting of the Land Consolidation Plan, determine the procedures and conditions for the election of owners' representatives and then elect such representatives, etc. In the *second meeting*, the participants are informed, amongst other things, about the land parcels assigned to the territory of the land consolidation project, the proposed re-allotments, and proposals received from private landowners regarding the sale of parcels or portions of their parcels. In the *second meeting*, the landowners have the right to make decisions, amongst other things, on the following issues related to the drafting of the Land Consolidation Plan: land valuation; arrangement of the roads commonly used that are being designed and service roads (used by the right of servitude); location of the consolidated land parcels and design of the boundaries; the time schedule for cadastral measurement works and the beginning of the use of the consolidated land parcels; common activities on the management of the area when implementing the solutions of the Plan; and other issues related to the drafting of the project. In addition to the issues stated above, the *second meeting* may decide on issues relating to, amongst other things, methods of re-allotment; planning of parcels for public needs provided for in the general plan; possibilities to connect the land consolidation project with the works of arrangement of the territory, planning of local roads, new landscape objects; proposals to include new parcels into the land consolidation project area; proposals regarding the method of valuation (individual or global); proposals to split the land consolidation project area into zones for the purposes of land valuation; etc. In the *third meeting* organized by the State Land Fund, the participants of the land consolidation project approve the plan of project solutions that have been provided by the drafter.

Under the German *Land Consolidation Act*, the Body of Participants, represented through an elected Board, is entrusted with even a wider range of implementation functions for the project, as stated in the wording in Box 4.6.

Box 4.6: Responsibilities of the Body of Participants in Germany

Section 18, Paragraph 1

The Body of Participants shall attend to the common affairs of all participants. Their main function is to construct and maintain common facilities (Section 42) and to effect the necessary soil improvements, provided that nothing has been decided to the contrary in the Land Consolidation Plan (Section 58) if execution and maintenance have not been entrusted to individual parties concerned, or to a water resources and soil corporation. They shall also make and claim for any payments stipulated in the procedure and perform all those duties that are not the responsibility of the consolidation authority, including any preparatory work required for carrying out of the land consolidation. They may commission appropriate agencies or experts to carry out such preparatory work. (...)

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

In most of the countries analysed, the first meeting of stakeholders is called by the lead agency. For example, in Denmark this function is the responsibility of the Danish Agricultural Agency, in Lithuania it is organized by the State Land Fund, in Finland by the National Land Survey, and in the Netherlands by the Provincial Governments.

Information on the meeting is disseminated by way of a variety of instruments, such as institutional websites, local newspapers, and announcements on the billboards of local institutions.

With regard to the subsequent meetings, responsibility in some countries for organizing them is alternated between the lead agency and private service provider who is conducting the re-allotment planning. Such is the case in Lithuania, where the first and last meetings are called by the State Land Fund, while other meetings are organized by the service provider.

In order to ensure the implementation of transparency, consultation and participation principles, it is suggested that participants be invited to public meetings by a combination of individual invitations via registered mail and public announcements:

- in the Official Gazette of the country;
- in one of the local newspapers;
- on the website of the lead agency;
- on the billboard of the local municipality.

Other additional means deemed appropriate for extending invitations to public meetings may also be applied, in conjunction with those indicated above, particularly for landowners living abroad. The Land Consolidation Law should define the minimum time period between the publication of invitations and the actual date of the public meeting (e.g. 15 calendar days) as well as the occasions (procedural steps) when stakeholders must be informed.

Country practice varies considerably as regards to, the voting in public meetings, the quorum of participants, and the percentage of votes by which the decisions are adopted. Voting during the public meetings depends on the issue that is being voted on. For example, in most countries only landowners vote on the adoption of the Land Consolidation Plan, while other issues, such as the election of the Committee of Stakeholders (see Section 4.5.2), may be voted on by all the public meeting participants. The Netherlands represents an example where, besides the landowners, long-term leaseholders also had a right to vote on the Land Development

Plan (prior to 2007), but no voting was permitted on the Re-allotment Plan. In Finland, all key decisions are made by the land surveyor carrying out the re-allotment and no voting by participants is envisaged in the process.

The procedures of the approval of the Land Consolidation Plan by the public meeting participants are described in Section 6.6.2.

4.5.2 Committee of Stakeholders

Country practice has revealed that in most cases participants of public meetings elect bodies representing the landowners and other stakeholders of the land consolidation project, herein named Committee of Stakeholders (although it may have different designations and responsibilities in different countries). It is recommended that the election procedure of the Committee of Stakeholders be comparatively flexible, in order to best ensure representation of all stakeholders, both women and men. To this end, the Land Consolidation Law should not determine the exact number of the representatives to be elected. This issue may be left to the stakeholders to decide and if there is a disagreement on who should be elected to a representative body, the number of the representatives could be increased by mutual consent and additional persons added. This would ensure better representation of the different interests and spare the stakeholders unnecessary conflicts, as seen in Denmark. In most countries, members of representative bodies are elected by a simple majority of votes of the landowners present in the meeting, as seen in Denmark, Finland and Germany.

The Land Consolidation Law could also allow for the inclusion in the Committee, of large landowners in the land consolidation project area, without requiring a vote, as seen in the Czechia's *Law No. 139/2002 on Land Consolidation and Land Offices* (see § 5 (8)). For example, landowners owning at least 10 percent of the land consolidation project area could be included automatically in the Committee, if they so wish. It is recommended that the composition of the Committee of Stakeholders reflects different stakeholder groups, like full-time farmers, landowners, municipality representatives, representatives of environmental organizations, and the like.

Box 4.7: Landowner committee in Denmark

Article 3, Paragraph 2

(...) The Minister or the person authorized by the Minister may call a landowners meeting where the case is explained and where the majority of the landowners present, elect a Landowner Committee.

(...) The Landowner Committee represents the general interests of the Landowner Community.

Source: Denmark – Law on Land Consolidation and Public Purchase and Sale of Real Property for Agricultural Purposes. Unofficial translation.

The role of stakeholders' representatives varies in different countries. In general terms, their role is to represent the overall interests of the stakeholders. For example, in Denmark the elected Committee of Landowners participates actively in the land valuation process and in facilitating negotiations between the participating landowners (Haldrup, 2004).

Box 4.8: Landowner representatives in Finland

Section 94, Paragraph 1

(...) In the cadastral survey meeting, the majority of the land owners present may elect one or more representatives to take part in the pre-assessment of the matters to be handled in the cadastral procedure. (...)

Source: Finland – Real Estate Formation Act. Unofficial translation by the Ministry of Agriculture and Forestry, Finland.

The election of representative bodies should also serve to ensure gender equality. Until gender equality has been reached in a country in practice, it is appropriate to take direct measures to promote improvements. It should be required that, for example, a certain minimum percentage of both genders (e.g. one-third), be represented within the bodies, and elected to represent the landowners, to ensure that women have a voice in the process. If the local community is discriminatory towards women, even if from the legal perspective women have equal rights with men, conducting informative sessions that reach out directly to women are encouraged. When required, such informative sessions could be carried out amongst women only, without the participation of men. Practice shows, that in some cases it is not possible to organize meetings with women participating, if men are also present. In these cases, avoiding intimidation and allowing free speech may appear more important and the balance should be struck between these values and the transparency principle. When necessary, holding meetings in a women-only environment could create a feeling of greater confidence and allow women



Discussions with the Committee of Stakeholders on the draft Land Consolidation Plan in Shorsulu land consolidation pilot project, Azerbaijan (July 2018). © FAO.

to express themselves more freely. Such a method has already proved successful as a result of the international practices of FAO. Consequently, all owners, including non-registered spouses, will learn about their rights, about the land consolidation process, and will be able to make informed decisions. Spouses who are not co-owners but who are contributing through their labour or other means, should also be given an opportunity to participate and be heard, even when their signature is not required.

✓ **Key recommendations 4.4:**
Public meetings of stakeholders and elected collective bodies

1. The Land Consolidation Law should require organizing a series of public meetings (open to all stakeholders) during the implementation of a land consolidation project, dedicated to: the feasibility phase of the project; the launching of the re-allotment phase; and approval of the Land Consolidation Plan by the landowners and/or its adoption by the Land Consolidation Commission or other equivalent public body.
2. The Land Consolidation Law should establish the issues that can be decided upon and adopted during the public meetings and provide for transparent decision-making mechanisms.
3. The secondary legal acts should establish procedures related to the organization of public meetings. They should provide that the key participants of the public meeting are the legitimate landowners, while all other stakeholders should also be welcome to participate. All the stakeholders should be heard and have the right to make project-related proposals and objections.
4. The Land Consolidation Law should provide that in the beginning of the re-allotment phase the participants of the public meeting elect a Committee of Stakeholders. The number of representatives in the Committee should be decided by the stakeholders and not fixed under law.
5. The Land Consolidation Law should provide that the members of the Committee of Stakeholders should represent the common interests of the stakeholders during the land consolidation process.
6. The Land Consolidation Law should require that, if feasible, a certain minimum percentage of both genders (e.g. one-third) is represented within the bodies, and elected to represent the landowners.

FEASIBILITY PHASE



5. FEASIBILITY PHASE

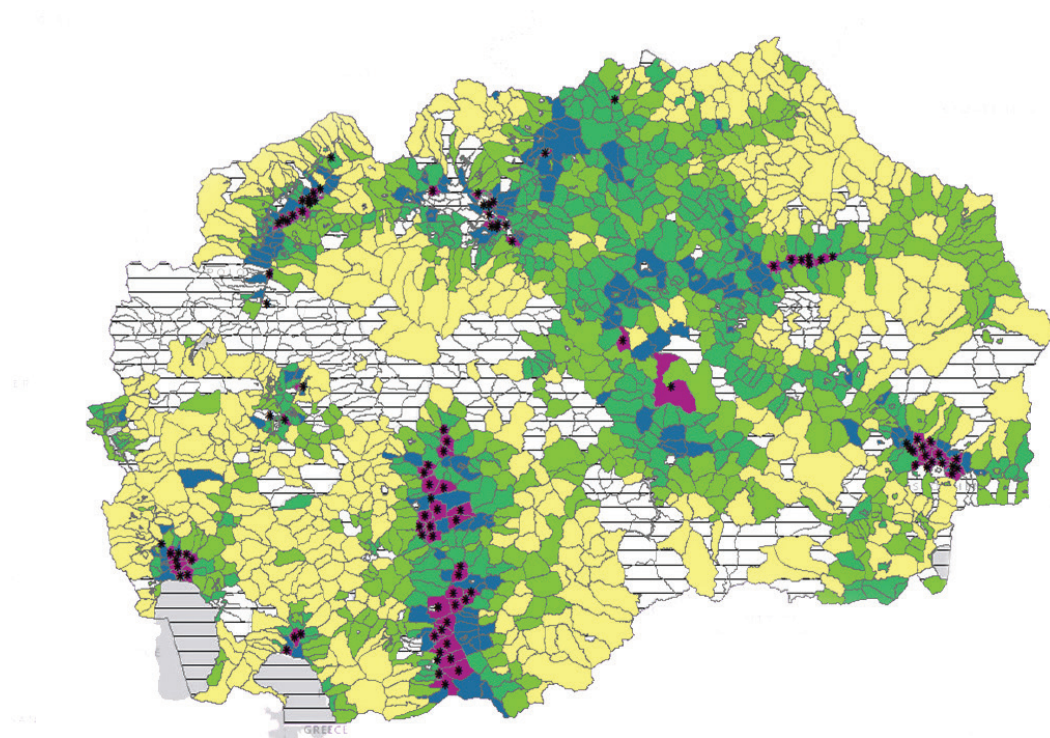
As discussed in Section 2.1.3, all land consolidation projects generally have three main phases, a feasibility phase, a re-allotment phase, and a registration and implementation phase.

Launching a land consolidation project without evaluating its potential benefits and negative impacts can lead to the loss of investment as well as causing harm to the participants, society and environment. It is therefore vital that the needs for land consolidation and the interest of landowners, farmers and other stakeholders are thoroughly assessed before initiating any land re-allotment process. Land consolidation projects should always begin with a feasibility study to provide an initial assessment of the positive and potentially negative impacts of the proposed project. Country practice shows that while feasibility studies are an integral part of land consolidation projects, the depth of the studies vary. Ideally, feasibility studies should be relatively simple, quick and inexpensive, compared with the cost of implementing the full land consolidation project. They may show that a proposed project is, in fact, unfeasible and further implementation unadvisable. At the same time, it is important to remember that the criteria for assessing feasibility will vary according to the objectives of the project.

The feasibility phase begins with the submission of a request for a land consolidation project. Should this be granted by the lead agency, then the carrying out of the study can start. Also, the lead agency must have a right to start land consolidation projects upon its own decision. However, when considering land consolidation, countries should first conduct a country-wide assessment in order to identify those areas deemed most suitable for land consolidation. Such an assessment was carried out in North Macedonia with the following criteria: i) extent of ownership registration (to avoid land conflicts, unclear ownership); ii) the percentage of private agricultural land within the cadastral municipality; iii) the average parcel size of privately owned agricultural land in the municipality; iv) the average parcel size of state-owned agricultural land in the municipality; v) the average number of parcels per owner (to identify the extent of land fragmentation); vi) average slope of land in the municipality (to avoid mountainous cadastral municipalities); vi) soil quality (to identify most suitable soil for agricultural production); and vii) average population density (to identify areas having highest population density) (FAO, 2017b).

Following this assessment, the initiation of projects should be demand driven, reflecting the needs in any given area and the interests of landowners, farmers and other stakeholders.

Figure 5.1: Map of the country-wide feasibility of land consolidation with an objective of agricultural development in North Macedonia



Colours represent the different feasibility potentials for land consolidation:



Source: Map prepared under the FAO/European Union MAINLAND project GCP/MCDI/002/IEC in 2017, FAO.

5.1 DECISION TO START A FEASIBILITY PHASE

The Land Consolidation Law should provide the lead agency with the right to initiate land consolidation projects *ex officio* or upon request. The law should identify who is entitled to request the initiation of a land consolidation project, and how such requests should be assessed. This may be defined in the secondary legal acts but also depend on the availability of funding. In case of rejection, the lead agency should provide a reasoned explanation for their decision. Where a request meets the defined criteria and funding is available, a feasibility study should then be conducted.

Depending on the land consolidation approach applied, the practice varies in different countries as to who can request a land consolidation project. In Denmark, where the voluntary land consolidation is implemented, a wide array of persons and entities have the right to apply

for the project. As provided for in the secondary legal act under Article 18 of the *Executive Order on Land Consolidation (2013)*, a request to launch a land consolidation project may be submitted by a group of landowners, private or public companies, public institutions, foundations, associations, organizations, public authorities and municipalities. Where a project is initiated by a public body, no request is needed except from the implementing entity, e.g. a public water supply company, municipality or the Ministry of Transport. In such projects, the implementing entity covers all costs of the project.

In the Netherlands, mandatory land consolidation projects are launched by a decision of the Executive Council of a province, following consultations with the local municipalities and the Water Authority. Voluntary land consolidation can be launched upon the initiative of a minimum of three landowners. In such cases, no decision of any governmental organization is required.

In Serbia, where municipalities play a key role in land consolidation, a majority-based land consolidation project is launched following a decision of the Municipal Assembly, based on the Municipal Land Consolidation Programme and adopted by the Municipal Assembly and, finally, approved by the Ministry of Agriculture and Environment. Voluntary land consolidation is launched by a decision of the Municipal Assembly on request of at least 10 landowners, or only one if state-owned land parcels are included and if it is determined that there are justified reasons for the exchange of parcels.

As this short review demonstrates, there are many potential persons and entities who can submit the request for a land consolidation project. In order to encourage a multi-purpose approach to land consolidation, it is recommended to provide flexibility on this issue and allow different actors to apply – not only landowners. This can ensure that more local and varied perspectives are presented. The lead agency has the final say over whether the formal requirements were met and, if this fits within the budget of the national Land Consolidation Programme, they can initiate a feasibility study in the respective area.

As shown earlier, in order to pre-assess applications prior to the feasibility study, countries often establish certain minimum quantitative thresholds. When the objective is to promote agricultural development, a minimum number of landowners requesting the initiation of a land consolidation project should be defined. However, it is recommended that the minimum size of a project area should not be defined. Although the size of the land consolidation project area could be one of the selection criteria, when prioritizing the project proposals, it should be taken into account that projects covering small areas may still be valuable for other reasons, for example, in the case of small wetlands restoration.

✓ **Key recommendations 5.1:** Decision to start a feasibility phase

1. The Land Consolidation Law should specify the persons and entities entitled to submit an application for a land consolidation project. It should include at least landowners and farmers from the area and entities responsible for public projects.
2. The Land Consolidation Law should establish the right for the lead agency to initiate the land consolidation projects ex officio.
3. The Land Consolidation Law should provide that the lead agency should assess requests for the land consolidation projects against the pre-defined selection criteria in order to determine whether the requests meet the minimum requirements for initiating a feasibility study. The selection criteria should be established in the secondary legal acts.

5.2 FEASIBILITY STUDY

If the request for a land consolidation project meets the criteria and the budget is available, then the lead agency can launch the feasibility study. The Agency will define the project area based on request or upon its *ex-officio* decision. As mentioned, the feasibility study should be relatively simple, fast and inexpensive. Its conclusions provide the basis for the lead agency to determine whether to continue and launch the re-allotment phase.

The study should reveal the actual ownership situation, the current land use, and assess the interest of the landowners in the project. In-depth interviews should be conducted with all landowners and land users. The main outcome will be a Feasibility Study Report with a set of maps and a narrative assessment. Depending on the project's objective, the content may differ.

The Land Consolidation Law should identify the persons who are entitled to perform the feasibility study. In Finland and Turkey, the lead agency conducts the feasibility study, while in Denmark, both private service providers and the lead agency can carry out the study. In all cases, the lead agency should guarantee the quality and impartiality of the feasibility study.

At the beginning of the feasibility phase, information from existing spatial and development plans, including environmental protection, is collected. The formal cadastral and registration records are obtained from the Land Registry and analysed. A Land Ownership Map,¹⁸ based on the *formally registered* ownership rights in the Land Registry and based on an initial assessment of the non-formalized but still legitimate rights, is prepared. This Map later constitutes the foundation for the launching of the re-allotment planning. In cases of a high prevalence of non-formalized rights, separate Land Ownership Maps of both formal and non-formalized ownership may be prepared. In areas with a high share of leased agricultural lands, it may be convenient to prepare a map showing actual land users in the project area.

¹⁸ A Land Ownership Map is a thematic map where land parcels belonging to the same property/landowner are shown with a unique combination of colour and signature and labelled with a unique serial number attributed to the landowner.

Figure 5.2: Land Ownership Map from FAO land consolidation pilot project in Dračevo, Bosnia and Herzegovina



Source: Map prepared for FAO pilot project "Support to the Preparation of a National Land Consolidation Strategy and Land Consolidation Pilot Projects" (TCP/BIH/3402), implemented during 2011-2015 in Dračevo village in Trebinje Municipality, Bosnia and Herzegovina.

Once the Land Ownership Map is prepared, the first public meeting is organized to inform the landowners and the broader community about the purpose and procedures of the study and to provide information on the subsequent stages of the land consolidation project. The Land Ownership Map serves as a support for the discussions with the landowners, land users and the wider community during the first public meeting.

Box 5.1: Identification of the right holders based on official records in the Netherlands

Paragraph 2 (The list of right holders)

Article 49

For the land within the block, the list of right holders shall state as fully as possible the nature and extent of the rights they have contributed with respect to all right holders.

Article 50

The list of right holders shall be drawn up on the basis of the Key-registry Cadastre, referred to in Article 48 of the Land Registry Act, as well as on the basis of the public registers.

Source: Netherlands (the) – Law on Development of Rural Areas. Unofficial translation.

Following the first public meeting, interviews should be conducted with all identified formal landowners and informal landowners and users (when and if they are identified). The collected information is then analysed and, based on that, the Feasibility Study Report is prepared. It includes, amongst other things, an assessment of the feasibility of the project, the interest of the landowners, the potential improvements in the agricultural infrastructure, a recommendation on the land consolidation approach to be applied (majority-based or voluntary), and the project objectives to be achieved.

Box 5.2: Feasibility report in Finland

Section 70 (1)

The executors shall draft a report on the conditions and extent of the land consolidation and a general report on the principles to be followed in the land consolidation, as well as the measures to be taken. When drafting the reports, the municipality concerned shall be heard as much as possible. (...)

Source: Finland – Real Estate Formation Act. Unofficial translation by the Ministry of Agriculture and Forestry, Finland.

A Feasibility Study Report should provide, in addition to recommendations about the overall feasibility of the project, a tentative assessment of the estimated costs of the project, and a preliminary technical design of the envisaged rural infrastructure, and its costs (if infrastructure is included). The Report should cover all other aspects deemed necessary for deciding whether to proceed with the next phase of the project, for example, agro-technical measures to address abandoned lands (re-cultivation), soil erosion, salinity, or waterlogging.



A landowner being interviewed during the feasibility phase of a land consolidation pilot project funded by the World Bank in Opaci village in Moldova during 2007-2009. © Morten Hartvigsen.

Figure 5.3: Land Mobility Map from FAO land consolidation pilot project in Dračevo, Bosnia and Herzegovina



Colour codes:

- sell
- exchange
- state-owned agricultural land

Source: Map prepared for FAO pilot project "Support to the Preparation of a National Land Consolidation Strategy and Land Consolidation Pilot Projects" (TCP/BIH/3402), implemented during 2011-2015 in Dračevo village in Trebinje Municipality, Bosnia and Herzegovina.

The Feasibility Study Report describes the formal landownership situation, but it should also reveal uncertainties concerning land ownership, such as errors in land registration and other problems related to property rights. It is important to gather as much information as possible concerning these questions as they could potentially hinder or complicate project implementation. Only after an analysis of the formal registration records and following interviews with landowners and other right holders, will it become clear how far the situation on the ground matches the official registration records. In some cases, the Report may conclude that a systematic adjudication and update of cadastre and Land Registry should be integrated into the land consolidation process.

The Feasibility Study Report should identify all non-formalized but legitimate tenure rights in the project area, which must be taken into account, thus providing an accurate basis for land re-allotment. In line with the VGGT provisions, the process of identification of the right holders should consider not only formally registered right holders but also those who have legitimate rights, even if not registered. In countries where informal or unregistered rights are

widespread, the clarification of ownership and the formalization of legitimate tenure rights is one of the core additional functions of the land consolidation process. This may concern non-formalized rights, like non-formalized inheritance. However, in some cases, the registration of rights may not be required by law, for instance, short-term land lease agreements. It is strongly recommended that the Land Consolidation Law takes all legitimate rights into account, and when it is relevant, includes a formalization process (see Section 6.3).

In addition to the right holders, the Feasibility Study Report should also identify other potential project stakeholders. Depending on the purpose of a land consolidation project, this could include, for example, professional organizations, environmental organizations, women's organizations and cultural heritage protection organizations. It is recommended to post and publish a general public notice on the initiation of the land consolidation project and convene the stakeholders to take part in the first public meeting that inaugurates the start of the feasibility study in a given area. All relevant stakeholders should be identified during the feasibility study and subsequently involved in the re-allotment phase of the project.

As regards the environmental impact of land consolidation projects, this arises from either the re-allotment of parcels and the effects of planned rural infrastructure or other physical works. Projects without rehabilitation or construction of drainage and irrigation systems do not usually result in any negative impact on nature and the environment. However, land consolidation may lead to intensification of land use, which in turn may lead to loss of biodiversity. This may be mitigated if new biotopes such as shelter belts are planted in the new parcel boundaries. Therefore, a proper environmental impact screening should be conducted in the re-allotment phase, before approval of the land consolidation plan, in order to avoid or to alleviate unintended adverse impacts (see Section 6.5.4). The feasibility study should include an initial assessment of the potential negative environmental impacts and propose mitigation measures for such negative impacts, as previously mentioned. If such impacts may not be mitigated, the project should be considered unfeasible.

In some cases, a feasibility study might have a dual purpose. For example, because in Denmark land consolidation is mainly focused on nature restoration and environmental protection (see Section 2.2.1), their feasibility studies often have a combined purpose. In projects with a nature restoration objective, initial negotiations with landowners who have land in the nature project area are performed during the feasibility study, where the interest and need for land consolidation is assessed. Such a feasibility study will encompass both an assessment of the nature project and the land consolidation itself, i.e. assessing whether landowners are interested in receiving land in compensation or would prefer to sell their land in the project area, whether land mobility is sufficient enough to implement the land consolidation project, etc.

Once the Feasibility Study Report is accomplished, the lead agency takes a decision on the feasibility of the requested land consolidation project. If approved, then this forms basis of the decision to launch the re-allotment phase (see Chapter 6). In such cases, the results of the feasibility study are presented in a second public meeting, organized at the beginning of the re-allotment phase. In cases where the lead agency considers the proposed project unfeasible, it will inform the applicants individually and make a public announcement about the results of the feasibility study and their decision not to proceed.

✓ **Key recommendations 5.2:**
Feasibility study

1. The Land Consolidation Law should require organization of the public meeting with the potential project stakeholders about the purpose and procedures of the project at the beginning of the feasibility phase.
2. The Land Consolidation Law should require that the results of the feasibility phase are presented in a Feasibility Study Report.
3. The Land Consolidation Law should provide that the feasibility study must be performed by the lead agency or by contracted service providers. In both cases, the lead agency should be responsible for the quality and impartiality of the study.
4. Secondary legal acts should provide the elements of the Feasibility Study Report, including recommendations about the overall feasibility of the project, support of the landowners, suggested land consolidation approach (voluntary or majority-based), a preliminary technical design of the envisaged agricultural infrastructure and the costs of the project.
5. The Land Consolidation Law should require the identification of non-formalized but legitimate rights and should require that, to the extent possible, all legitimate landowners and users should be interviewed as part of the feasibility study.
6. The secondary legal acts on land consolidation should require that the feasibility study includes an initial assessment of the potential negative environmental impacts and propose measures to compensate for such impacts.

RE-ALLOTMENT PHASE



6. RE-ALLOTMENT PHASE

The re-allotment phase is the second phase of the three generic phases of a land consolidation project (see Section 2.1.3). It follows the successful completion of the feasibility phase and the decision concerning which improvements of infrastructure, if any, are to be included. After this phase, there is the final registration and implementation phase. The re-allotment phase is the key part of any land consolidation process as it defines the change in land ownership structure and land use that is the core outcome of the project.

The core of the re-allotment phase is the re-allotment planning, which may be carried out by professionals of the lead agency or is outsourced to private service providers by the lead agency, as discussed in Section 4.2. In the case of planned minor agricultural infrastructure improvements, the technical projects of the improvements are prepared in parallel with re-allotment planning in the project area. In case of major changes or even fundamental re-design of the rural infrastructure and landscape, a plan of common and public facilities is drafted in a separate but integrated process (see Figure 2.1). The same will often be the case if the land consolidation project is combined with projects related to nature restoration, environmental protection, climate change mitigation and adaptation, etc. However, the main focus in this section is on re-allotment planning with the objective of supporting agricultural development.

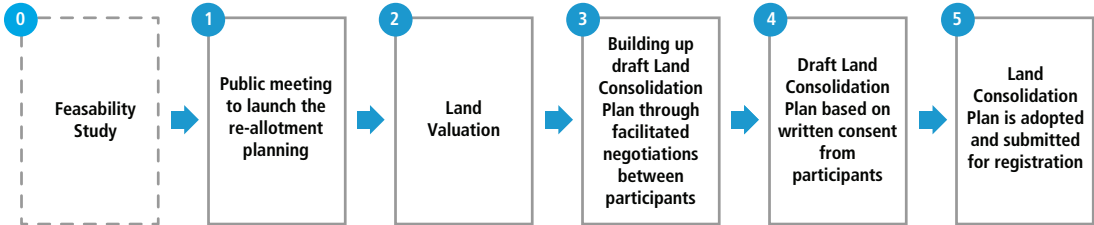
The Land Consolidation Plan is the central outcome of the re-allotment phase. It is also sometimes referred to as the “Re-allotment Plan” or the “Re-parcelling Plan”. These terms are not always synonymous. For example, in the Netherlands, the Re-allotment Plan is a component of the Land Consolidation Plan. In this guide, the term “Land Consolidation Plan” is used except when some specific country experience is described (see Section 2.1.1).

As indicated in Section 2.1.1, the Land Consolidation Plan is a set of interrelated documents defining the re-allotment for the land consolidation project area, approved by either all (in case of voluntary land consolidation) or a legally defined qualified majority (in case of majority-based land consolidation) of the involved landowners and adopted by a competent public institution. It then serves as a single basis for the simultaneous registration of property rights established by the Land Consolidation Plan.

The Land Consolidation Plan is drafted according to the preferences and opinions expressed by the landowners, land users and other relevant stakeholders, taking into account also the results of the land valuation. The re-allotment planning process for voluntary land consolidation is illustrated in Figure 6.1 and for majority-based land consolidation in Figure 6.2. Typically, the Plan is first approved by the landowners and then adopted by the lead agency or a specific entity (such as a Land Consolidation Commission) authorized to adopt the Plan.

The adoption of the Plan terminates the re-allotment phase and initiates the registration and implementation phase of the project (see Chapter 7).

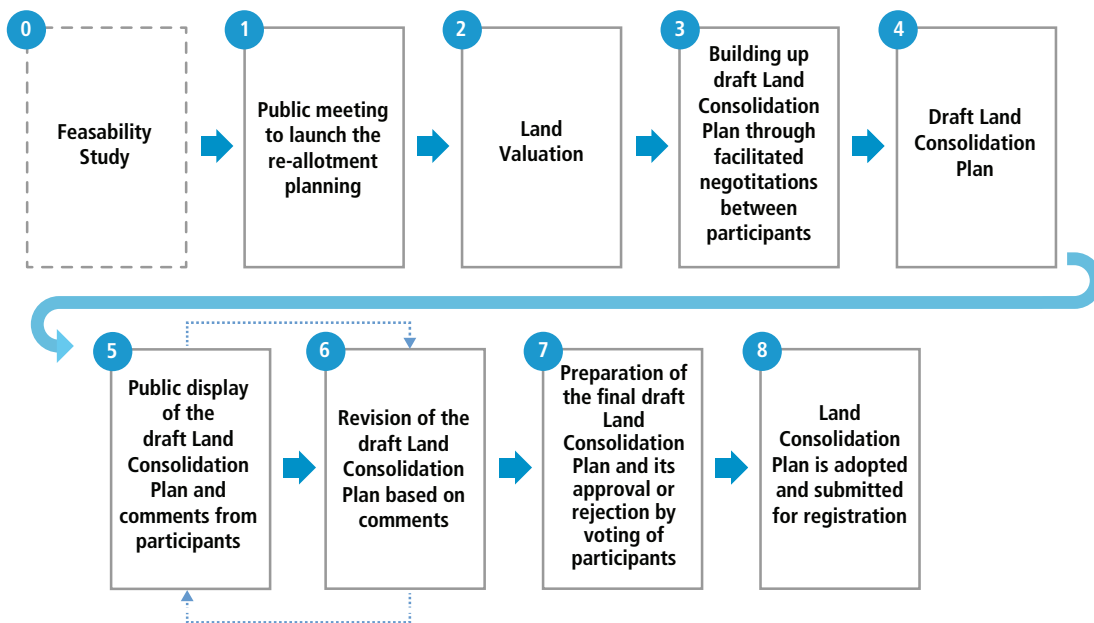
Figure 6.1: The re-allotment planning process in voluntary land consolidation projects



The structure of this chapter follows the logical sequence of the implementation of the re-allotment planning and presents a general overview of the principal aspects of the re-allotment planning process, providing concrete guidance along with selected country examples.

The beginning of the re-allotment planning is presented in Section 6.1, with the decision of its launch following a positive feasibility study outcome. In Section 6.2, various aspects of re-allotment planning negotiations are discussed, followed by the recognition and registration of legitimate ownership rights in Section 6.3. Land valuation, which is the basis for the preparation of the Land Consolidation Plan, is presented in Section 6.4 along with its purpose, responsibilities and methods for valuation, followed by a detailed description of the actual re-allotment planning including how to deal with third-party rights and impact assessment in Section 6.5. The chapter concludes in Section 6.6 with details on the final outcome of the process: the components of the Land Consolidation Plan and its final approval.

Figure 6.2: The re-allotment planning process in majority-based land consolidation projects



6.1 DECISION TO LAUNCH THE RE-ALLOTMENT PHASE

Following a positive feasibility study, i.e. where land consolidation has been found to be feasible, the lead agency can adopt a formal decision to continue the project and launch the re-allotment phase. This also depends on other factors, such as the availability of resources and competing priorities. The Land Consolidation Law or secondary legislation should stipulate that the lead agency needs to have a set criterion for deciding whether a project should continue or not. Either way, the lead agency should be required to record its justification and inform the stakeholders. The decision should also define the territory where the re-allotment will be carried out (project area). The project area may be adjusted later if it is necessary for the smooth implementation of the project.

6.1.1 Definition of the project area

The land consolidation project area is defined based on the feasibility study results and recommendations, but also depends on the project objectives and the applied approach (voluntary or majority-based). The project area can either match the boundaries where the feasibility study was conducted or its location can be adjusted, based on the recommendations of the feasibility study.

In a majority-based approach, where all parcels are in principle re-arranged during the re-allotment planning, the proposed project area should be as compact as possible in order to guarantee support for the future Land Consolidation Plan by the qualified majority of landowners. The project area should be precisely defined and based on careful analysis, to increase the chances of successful implementation of the project. Because circumstances could change, there should always be flexibility to adjust the project area as discussed in Section 6.1.2.

In voluntary land consolidation, because only those landowners who willingly agree in writing will participate in the project, the project area could be larger, thus providing greater opportunity for landowners to participate and for a wider range of potential land re-allotment solutions. Of course, if the project area is too large the re-allotment process gets overly complicated and becomes time consuming, so the project area should also be of a manageable size.

For example, in Denmark, large project areas are usually defined in such a way so as to include all interested landowners and to provide as many potential re-allotment options as possible. Since land consolidation is voluntary in Denmark, the definition of the project area usually follows the natural lines in the landscape such as major roads, forest lines, rivers, etc.

6.1.2 Adjustment of the project area

Generally, a well-designed and thoroughly conducted feasibility study should ensure that there is no need for substantial change to the project boundaries during the process. However, a certain flexibility should be ensured by the Land Consolidation Law, allowing modification of the project area during project implementation if needed, due to unforeseeable developments that require adjustment to the project borders.

National practice does indeed provide examples of such adjustment possibilities, and different legal regimes may apply in the case of minor and major adjustments. For example, according to Germany's *Land Consolidation Act*, minor adjustments are allowed based on the sole

decision of the land consolidation authority. A public notice of such a decision is not required and only the affected landowners and other right holders are notified. In the case of major adjustments of the project boundaries, the procedure in Germany calls for a revision of the formal decision to launch the project (which established the boundaries). It is then obligatory to notify concerned parties, inform public interest bodies and hold hearings before publishing the new decision on the land consolidation project and its boundaries. Similar practice is also applied in the Netherlands.

Therefore, in majority-based land consolidation, it is proposed to allow minor changes as long as the landowners do not object and that major adjustments should require taking a new formal decision to launch the re-allotment phase.

In the case of voluntary land consolidation, the lead agency should be granted the flexibility to make adjustments to the project area boundaries until the adoption of the Land Consolidation Plan and any such adjustments should be announced to the stakeholders.

6.1.3 Temporary notation and land use limitations

Generally, normal land market transactions and farm operations are not disrupted by the decision of the lead agency to launch the re-allotment phase of the land consolidation project. However, some specific limitations within the project area may be imposed. The practice differs between countries as to the nature of such limitations.

In some countries, like the Netherlands, while transfers can still take place in mandatory land consolidation projects, all parcels within the project area are subject to temporary notation in the Land Registry so that buyers are aware of the on-going process and can decide whether to go ahead with the transaction. At a certain point, a "reference date" is determined which means that transactions decided after that reference date, are not included in the Re-allotment Plan. After the reference date, every owner still has the opportunity to sell his or her land until the moment of registration of the Re-allotment Plan. However, the consequence is that the buyer obtains a piece of land that could finally lie elsewhere as a result of the registration of the Re-allotment Plan. All transactions that took place after the reference date (and which are therefore in principle not included in the Land Consolidation Plan) must of course be included in the new registration. Closely before the registration of the Re-allotment Plan this is checked so that new parcels can be allocated to the buyers while doing the registration.

Furthermore, in some countries, it is not permitted to plant perennials or erect buildings during the re-allotment phase. Without notation, it might be hard for those issuing relevant permissions to know that in these cases the permission should be temporarily withheld. Alternatively, the lead agency would need to have the legal obligation to inform all permission-issuing institutions about the project.

Germany's *Land Consolidation Act* provides for a number of temporary limitations on the use of land during the land consolidation process, such as a ban on the construction of buildings, removal of trees, etc. Serbia prohibits the construction of buildings and planting of perennial crops and plants in the area subject to land consolidation, from the date of publication of the decision to implement the project. In Turkey, during the re-allotment planning and until the notation of the new situation, all land transactions within the project area require permission from the body responsible (Jansen *et al.*, 2010).

The Land Consolidation Law should provide for notation in the Land Registry of parcels to protect the interests of potential buyers in majority-based land consolidation. It could also

do so for voluntary land consolidation. The law could also impose some temporary limits on construction or other comparable activity, like the planting of perennials, to maintain the necessary flexibility for the planner, or provide an obligation on the lead agency to inform relevant institutions about the proposed project. Such notations and limitations should be for the shortest time possible.

✓ **Key recommendations 6.1:**
Decision to launch the re-allotment phase

1. The Land Consolidation Law or secondary legislation should require that the decision to launch the re-allotment phase of the project is based on a positive feasibility study outcome.
2. The Land Consolidation Law should provide that the land consolidation project area is defined by the lead agency in order to launch the re-allotment phase.
3. In majority-based land consolidation, the Land Consolidation Law should confer the right to the lead agency to make minor adjustments to the proposed land consolidation project area. Major adjustments should require a new, formal decision to launch the re-allotment phase. All amendments of the project area should be announced to project stakeholders.
4. For voluntary land consolidation, the Land Consolidation Law should provide for the flexibility to adjust the land consolidation project area if needed, until the Land Consolidation Plan is submitted for public review.
5. The Land Consolidation Law could provide for temporary notation in the Land Registry of parcels within the land consolidation project area to protect the rights of prospective buyers, and place temporary limitations on certain activities within the project area to avoid interference with the implementation of the land consolidation plan.

6.2 RE-ALLOTMENT PLANNING CONSULTATIONS AND NEGOTIATIONS

The starting point for the re-allotment planning is the Feasibility Study Report, including, amongst other things, the maps of ownership, information on potential land mobility, preferences of the individual landowners and users, as well as other information collected during the feasibility phase of the project (see Section 5.2). Using this information, consultations and facilitated negotiations take place for the purpose of developing the draft Land Consolidation Plan.

These consultations and negotiations should be carried out by the land consolidation planner with support from the lead agency, which organizes public meetings with the project stakeholders. The consultations and negotiations could be carried out during:

- i) individual meetings with landowners and long-term leaseholders in the project area;
- ii) public meetings with the stakeholders of the project (see Section 4.5.1);
- iii) consultations with the representatives of the intermediary bodies established or elected for the purposes of the land consolidation project, like the Committee of Stakeholders (see Section 4.5.2) and bodies such as municipalities.

In all cases it is necessary to organize an iterative process of numerous consultations and negotiations facilitated and led by the land consolidation planner during the various individual meetings with involved parties and other important stakeholders, like local government representatives, as well as hold a number of public meetings. The land consolidation planner should examine opportunities to satisfy the preferences of the landowners and long-term leaseholders and come up with optimal solutions for the Land Consolidation Plan, also ensuring that the land consolidation project attains its objectives and respects the principles of land consolidation (see Section 3.2).

During the individual consultations and negotiations with the landowners and long-term leaseholders, the land consolidation planner should use the information collected through the standardized questionnaires and forms from the feasibility phase. Thus, the land consolidation planner should have a folder with all collected information for each landowner and long-term leaseholder and supplement it with the additional information gathered during the subsequent rounds of consultations and negotiations. This would not only facilitate the work of the land consolidation planner but would also ensure continuity if the land consolidation planner changes and a new planner must take over the re-allotment planning. When more planners are working on the re-allotment planning together, the updated information about the individual negotiations should be made available for all planners.

The Land Consolidation Law should require that all the involved landowners and co-owners are engaged in the re-allotment planning and are able to express their preferences, so that their constitutionally guaranteed rights of ownership are respected. Additionally, ensuring the equality of treatment between all the landowners and co-owners is fundamental. The risk of different treatment, for example one based on gender or economic situations, should be eliminated or at least reduced to a minimum. Even when the general regulatory framework prohibits discrimination, in reality some owners or co-owners may have stronger influence on other owners or co-owners, thus factually abusing the decision-making power related to a commonly owned land parcel. The consultation process should thus contribute to the safeguarding of ownership rights as well as to the prevention and elimination of any forms of discrimination between different landowners and co-owners.

Many countries require the consent of both spouses with regard to alienation when the property is considered matrimonial property. Even if the general matrimonial property regime in a country does not require the consent of the spouse, with regard to the alienation or acquisition of land, engaging spouses in interviews and negotiations should be actively promoted as part of the land consolidation process. The promotion of the good practice to consult with spouses could be enhanced through re-allotment planning manuals and capacity building instruments.

Information relevant to the establishment of the Land Consolidation Plan should also be collected from local authorities, communities, farmers' organizations, environmental organizations, women's organizations, and other stakeholders. This should be done during the public meetings and any eventual individual meetings with stakeholders.

The bodies established for the purposes of the land consolidation project, such as the Committee of Stakeholders (see Section 4.5.2), constitute another forum for the collection of information, necessary for the development of the Land Consolidation Plan. The Committee should represent the overall interests of the stakeholders in the project, participate in the land valuation process, and support the re-allotment negotiations, etc. Therefore, close cooperation

between the Committee and the land consolidation planner facilitates the implementation of the project.

It is important, that during the consultations and negotiations related to the preparation of the Land Consolidation Plan, the land consolidation planner should also act as an impartial party and as a mediator in the case of conflicting interests among different stakeholders of the project (for further information see Section 6.5). This should also be promoted through the re-allotment planning manuals and capacity development instruments.

✓ **Key recommendations 6.2:**
Re-allotment planning consultations and negotiations

1. The Land Consolidation Law should provide that the re-allotment planning is a continuation of the work already started during the feasibility phase. Thus, the consultations and facilitated negotiations with the landowners and other right holders should build upon the information collected during the earlier feasibility phase.
2. The Land Consolidation Law should require that the landowners and long-term leaseholders are fully engaged and consulted about their preferences throughout the planning process with regard to the re-allotment of the parcels they own and/or use.
3. The Land Consolidation Law should require that all land consolidation project stakeholders are provided an opportunity to express their position on the land consolidation project.
4. The Land Consolidation Law should provide that consultations with all stakeholders are carried out individually, during the public meetings and via consultations with the bodies established for the purposes of the land consolidation project (e.g. Committee of Stakeholders).
5. The Land Consolidation Law should provide that all co-owners, including spouses, should be consulted and be part of the negotiations process. In addition, re-allotment manuals should provide guidance on how to promote the active participation of women in the interviews and in the public meetings.
6. The Land Consolidation Law should provide that the land consolidation planner should facilitate negotiations between all involved stakeholders as part of the preparation of the draft Land Consolidation Plan.
7. The Land Consolidation Law should require that the land consolidation planner acts as an impartial party during the consultations and negotiations with the project stakeholders and shall mediate in the case of conflicting interests.

6.3 FACILITATION OF THE RECOGNITION AND REGISTRATION OF LEGITIMATE OWNERSHIP RIGHTS

The successful implementation of a land consolidation project depends to a large extent on the accuracy of the official registration data of the property rights, considering that the data from the official registries are the starting point for identification of the landowners and other

right holders in both the feasibility study and in the re-allotment planning. In many countries, the land registration recorded in the formal Land Registry does not fully correspond with the actual situation on the ground. The above situation can arise for the following non-exhaustive reasons: informal transactions or other circumstances where the legitimate property rights are not registered, technical errors in the Land Registry, unsolved inheritance cases, unknown owners, etc.

The extent to which the legitimate tenure rights are registered varies from country to country and depends on the traditions, the national legal system, the rules for maintenance of the Land Registry, the complexity of transaction procedures, the level of corruption, and the access to and costs of the services for registration of property rights. However, even in countries with fully developed land registration systems, mismatches between the actual situation and the official information of the registered property rights occur.

Land consolidation, as an instrument dealing with tenure rights, requires legal clarity for the purposes of identification of all rightful participants in the land consolidation project, re-allotment planning, adoption of the Land Consolidation Plan and consequently its registration. Therefore, land consolidation legislation often deals with the issues of identification and adjudication of land related rights within the land consolidation project.

The extent to which this is done depends on the national land administration systems. There are countries that do not tackle issues of adjudication at all, some are introducing mechanisms of temporary trustees for the issues that cannot be resolved within the land consolidation process, while other countries empower the land consolidation authorities to adjudicate land related rights in parallel or integrated with the land consolidation process. Some national systems also use the expedited court procedures for the purpose of resolution of the land rights issues during the land consolidation process and/or incorporation of respective final court decisions in the Land Consolidation Plan even posterior to its adoption. Germany's legal description of the topic provides one of the possible solutions (Box 6.1).



Land consolidation information meeting in Bravicea village, Moldova (February 2005). © FAO.

Box 6.1: Claims related to land rights in Germany**Section 13 (Proprietary Possession as Basis of Entitlement; Contested Claims)**

- (1) If the owner is not evident from the land register, the proprietary possessor shall be considered the party concerned.
- (2) If the proprietary possession is contested, the consolidation authority may, pending a determination of the issue, appoint a person to act as proxy for the entitled party. The same shall apply where a proprietary possessor does not exist. (...), in which case the consolidation authority will make the decisions required in order to carry out the land consolidation. The parties concerned shall be notified of the decisions taken binding them with respect to the land consolidation procedure. If a final court decision comes to the attention of the consolidation authority, it shall be taken into account. Section 64 shall apply.
- (3) The higher consolidation authority and the land consolidation court (Section 138) shall have the same rights and functions as described in Subsection (2) of this Section.
- (4) The provisions of Subsections (1) through (3) shall apply accordingly with respect to the real rights entitling the owner to own or use land or to limit the use of it. The above shall also apply where the entry of such rights in the land register to confirm their validity as against the prima facie evidence of the land register is not required.

Section 64 (Alteration of the Land Consolidation Plan subsequent to the Implementation Order)

The consolidation authority may modify or supplement the Land Consolidation Plan subsequent to the Implementation Order (Sections 61 and 63), if public interests or important unforeseeable economic requirements of the parties concerned make such a modification or supplementation necessary, or if they learn of a final court decision.

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

In Lithuania, where land consolidation is voluntary, adjudication of rights is not part of the land consolidation process and only “non-problematic” parcels may participate.

In Norway, land consolidation projects are implemented by a specialized court, while in Denmark, there is a regional Land Consolidation Commission chaired by a judge along with other professionals as members. In both countries, the adjudication of land related rights within the land consolidation area and the approval of the Land Consolidation Plan are carried out by a legal judgement.

In Finland, the institution responsible for land consolidation projects is the National Land Survey and the practical implementation is carried out by a cadastral surveyor and two trustees elected by the municipal council (see Section 2.2.2). The surveyor and the two trustees who implement the project are entitled to solve land related disputes between the landowners, although their decisions can be appealed to the Land Court.

In North Macedonia, a specific institute of trustees is introduced in the Land Consolidation Law to ensure inclusion of the land parcels of unknown and inaccessible owners and in the case of unsolved inheritance.

Through the examples above, the conclusion can be drawn that while land consolidation as an instrument does not provide remedies in all situations, it can contribute greatly to the improvement of the registration of ownership rights and this in general is an important positive result of implementing a land consolidation project. The Land Consolidation Law should

prescribe specific steps for the identification of legitimate tenure rights, possible registration problems, and other ongoing proceedings with regard to land parcels in the land consolidation project area. The law should also provide for mechanisms that would address the identified situations, wherever this is feasible.

The Land Consolidation Law should use the existing legal mechanisms to the extent possible, but also be flexible enough to prescribe new mechanisms that would provide for protection of all legitimate right holders registered or non-registered, and subsequently contribute to the registration of such rights. More than one instrument and approach can be used in the process of drafting the legislation for each different category of problems that are related to the registration of ownership rights. Figure 6.3 provides a non-exhaustive list of possible problems, responsibilities, and ways of mitigation, when aligned to the national legal system. The legal system and the set of legislative approaches chosen will determine which solutions may be workable in a specific country.

Figure 6.3. Possible solutions to specific legal or registration problems

Constraint	Institution responsible	Legal mechanism
Errors related to the personal data of the landowner, the type of right, or discrepancies between the recorded and actual category of the land	Landowner upon advice of the land consolidation planner and facilitation by the lead agency	Existing legislation for correction of errors in the Land Registry
Unsolved inheritance issues and land parcels without asserted ownership rights	Lead agency or other state institutions with relevant experience in property and legal issues	Proxy or trustee
	Standard process	Existing legislation
Disputes over land	Lead agency or non-judicial public bodies, like commissions established to carry out land reforms	Mediation
	Courts	Speedy procedures
Non-adjudicated legitimate rights	Lead agency or non-judicial public bodies, like commissions established to carry out land reforms	Specific adjudication procedures envisaged in the Land Consolidation Law
	Courts	Speedy procedures

Issues related to technical errors in the alpha numeric or graphical data in the Land Registry should be identified during the feasibility and re-allotment phases and resolved by the Land Registry upon request of the lead agency.

Other identified errors related to the personal data of the landowner, the type of right, or discrepancies between the recorded and actual category of the land, should be subject to identification during the land consolidation process. The landowner should then be advised on the necessary administrative actions to undertake for correction of the data, preferably during the re-allotment process so the problem is solved by the time of adoption of the Land Consolidation Plan. For the above examples, regular national legal procedures for the registration of land should be followed, and the process should be facilitated by the lead agency.

Unresolved inheritance issues and land parcels without asserted ownership rights (land of unknown owners) can be addressed through the regulation of an institute of proxies and trustees for the purposes of the land consolidation project. The role of the trustees could be assigned to the professionals of the lead agency or other public institution with relevant experience in property and legal issues. The role of such individuals would be to protect the interests of the heirs and the unidentified or unregistered landowners in the re-allotment planning process but also to ensure that the land consolidation process is not blocked.

Where possible, the lead agency or other specific decision-making body such as a Land Consolidation Commission should be empowered to carry out procedures related to mediation of property disputes or adjudication of property rights. The justification for such procedures would be the necessity to establish legal clarity for the purposes of re-allotment planning and create the necessary preconditions for the adoption of the Land Consolidation Plan.

It is also possible to incorporate provisions for accelerated judicial or administrative procedures for the resolution of land-related legal issues and disputes within the land consolidation project area. The Land Consolidation Law should ensure that appropriate mechanisms for the treatment of disputed land parcels in the re-allotment planning process are stipulated (e.g. compensation for one of the litigation parties if necessary), and that such parcels are considered as "fixed" parcels (see Section 6.5.1) during the re-allotment process, or left out from the land consolidation project area. The above is important in order not to delay the overall implementation of the land consolidation project.

In all cases, the approach should ensure due protection of all legitimate rights and that the land consolidation project implementation is not delayed or obstructed.

✓ **Key recommendations 6.3:**
Facilitation of the recognition and registration of legitimate ownership rights

1. The Land Consolidation Law should use the existing legal mechanisms to the extent possible, but also be flexible enough to prescribe new mechanisms that would provide for protection of all legitimate right holders, registered or non-registered, and subsequently contribute to the registration of such rights.
2. Technical errors in the Land Registry should be identified during the feasibility and re-allotment phase and resolved by the Land Registry upon request of the lead agency before the adoption of the Land Consolidation Plan.
3. Any discrepancies between the recorded and actual category of the land in the Land Registry should be subject to consultations with the respective landowners during the re-allotment process and the landowners should be advised on the necessary administrative actions to undertake for correction of the data.
4. The Land Consolidation Law could institute proxies or trustees for the duration of the land consolidation project to include parcels with unsolved inheritance and non-asserted ownership rights (land of unknown owners).
5. The Land Consolidation Law could authorize the lead agency or other specific body (e.g. Land Consolidation Commission) to facilitate the resolution of disputes over land and/or to adjudicate the land rights related to parcels within the land consolidation project area. Such process should be carried out in parallel or integrated with the re-allotment planning and ensure that legal clarity on the existing situation is established.
6. If the aforementioned dispute mechanism is not feasible, another option could be the introduction of accelerated judiciary and administrative procedures for the speedy resolution of legal issues and disputes related to parcels within the land consolidation project area, so as not to delay or block the land consolidation project. This issue should be addressed in the Land Consolidation Law or legal acts, regulating the judiciary and administrative procedures.

6.4 VALUATION OF LAND

The valuation of land parcels and other property in the project area is fundamental to all land consolidation projects. It facilitates the implementation of the “at least as well off” principle (see Section 3.2.2) and provides the basis for identification of the value of parcels before and after the implementation of the project. In addition, it is the basis for compensations when the values are not exactly the same. The modality of land valuation varies depending on whether the land consolidation is voluntary or majority-based. The valuation may not be limited to the land parcels. In rare cases, land with assets such as an irrigation system, an orchard, a forest, or a farm building, is also exchanged. In these cases, specific value assessments need to be made to settle finances between the old and new owner.

6.4.1 Purpose of land valuation

In voluntary land consolidation projects, a combination of a market-based approach and a relative value method is often applied, with the objective to guide negotiations between

landowners. The outcome is a map with values and a list of owners with the respective land values of their parcels. Based on this, the landowners eventually, when the options are clear, decide whether to participate in the project or not and what preferences they have for the exchange with others, and/or the selling or purchasing of parcels.

In majority-based land consolidation, the method of relative value of land is often applied, since the valuation process is aimed at ensuring that landowners are allocated parcels of an equivalent value compared to the situation before the project. Majority-based land consolidation usually has legal limits for under- and over-allocation as well as a deduction of a few percent for the implementation of public facilities (see Sections 2.4, 6.5.1, 6.5.3 and 7.3). For both situations, the value of the land sets the minimum and maximum deviation for each specific landowner. In order to facilitate the enlargement of farms, voluntary sales–purchase agreements are also to be facilitated in the process. In these cases, the valuation may be used to determine the market value.

6.4.2 Roles and responsibilities for land valuation

The valuation process needs a combination of expert knowledge and local knowledge. In most of the countries analysed, it is typically performed by agricultural experts, land valuers and representatives of the right holders, guided by the land consolidation planner. The lead agency is responsible for organizing the process and to mobilize the right expertise. In some cases, it may have knowledge ‘in house’ but in most cases it will contract or compensate the experts, valuers and/or local people that perform the land valuation.



Land valuation in the Danish land consolidation project “Halkjaer Enge”, Denmark (2004). The land valuation is conducted by the land consolidation planner, two local agronomists and the elected Committee of Stakeholders. © Niels Haldrup.

Country practices vary. In Denmark, the valuation is carried out by the Committee of Landowners (elected body, representing the general interests of the landowners), the land consolidation planner(s) and one or two local agronomists with specific knowledge of the soil quality and

production value of agricultural land in the project area. In Finland, valuation is carried out by a surveying engineer and two trustees, typically representatives from the municipalities.

In Lithuania, the land consolidation planner is responsible for the valuation process, but the work is carried out by a qualified property valuer, employed or sub-contracted by the land consolidation planner.

In Serbia, valuation is carried out by a sub-commission comprised of an agricultural engineer responsible for land valuation and land classification, and at least two representatives of the landowners participating in the land consolidation project.

Likewise, in the Netherlands, a sub-commission of representatives is installed, guided by an agronomist contracted by the lead agency. In Turkey, it is performed by three representatives of the Ministry of Agriculture and Forestry, plus one person representing the landowners and another representing the head of the village or town, five in total.

It is recommended to involve several persons or bodies in the land valuation process in order to guarantee the quality of the valuation. Representation of the landowners ensures transparency and trust in the process. Where it is necessary to value property other than land, specialized valuers could be called in. For example, the valuation of orchards, forests or buildings needs to be carried out by a professional valuer with knowledge in that respective field.

Box 6.2: Persons carrying out valuation in Germany

Section 31 (Valuation Procedure)

- (1) The valuation shall, as a rule, be carried out by agricultural experts. The consolidation authority shall determine the number of experts, after hearing from the board of the Body of Participants, and select them from the list of persons suitable as experts, which has been drawn up by the higher consolidation authority in agreement with the Farmers' Association. It shall direct the valuation. The board shall assist at the valuation.
- (2) If a valuation requires knowledge beyond general agricultural experience, special recognized experts shall be called in.

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

6.4.3 Method of land valuation

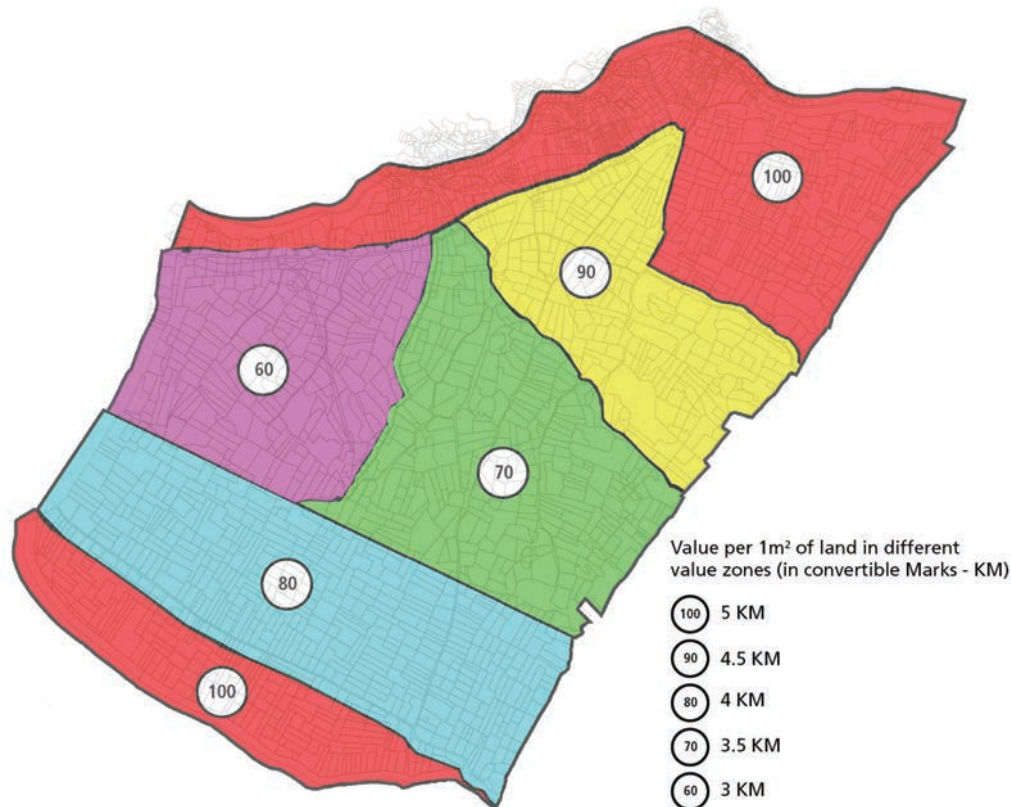
The method of land valuation is dependent on the type of land consolidation. An important principle is to use the same method throughout the project. In voluntary land consolidation, all participants freely participate in the process, which gives more flexibility on the type of valuation to be used, as long as all participants agree. The valuation method in voluntary land consolidation could be pre-defined in the Land Consolidation Law or be left to the lead agency and/or participants of the project. Often a comparison approach is followed, which is linked to sales market transactions in the region.

In Denmark, the method of valuation is decided by the land consolidation planner with the Committee of Landowners under the guidance of the Danish Agricultural Agency, which is the lead agency. A land valuation map is prepared based on the combination of the relative value of parcels (value of the best agricultural land in the project area is fixed as 100) and

their market price. After an agreement is reached with the Committee of Stakeholders on the market price of the land valued as 100 (best land in the project area), the respective market price of all other parcels is calculated mathematically based on the allocated relative value.

In Lithuania, under *Resolution No. 81 on the Approval of the National Land Consolidation Strategy*, if state or municipal-owned land is not involved in the land consolidation project, the method of valuation is decided by the owners participating in the project under the guidance of the land consolidation planner. If state or municipal land is involved, then the *Law on Land* obliges the application of an individual valuation of all parcels. All parcels must be evaluated using the same method, within a given land consolidation project area (Articles 75-77).

Figure 6.4: Land valuation map prepared for the FAO land consolidation pilot project in Dračevo village, Bosnia and Herzegovina



This voluntary land consolidation pilot project (TCP/BIH/3402) was implemented in the period 2011-2015. A simplified methodology was applied with few categories of land value – the best land has relative value 100, the second best has relative value 90, etc.

Majority-based land consolidation requires a “heavier” legal framework since all landowners participate if the Land Consolidation Plan is adopted, regardless of whether they have voted in favour or against. The legal framework needs to protect all ownership rights and provide an

objective basis to ensure that the “at least as well off” principle is followed correctly. Usually, the valuation in majority-based land consolidation is based on comparing the productive capacity of the land. Issues like accessibility, shape and size of parcels, and added value due to assets, are not taken into account while making the Plan. This would make the exchange system too complicated (too many categories, too many differences, and too much work to determine the value of assets that may not be exchanged after all). Besides this, a factor such as accessibility is subjective and can change after the construction of new infrastructure. Another reason is that legal limits for under- and over-allocation are applied. It would not be fair to take subjective factors and/or investments in land into account since in these cases it would also influence the maximum area to be over- or under-allocated. Likewise, legal limits for deduction for public infrastructure are applied uniformly and should not take into account subjective factors and investments (e.g. if an owner has an expensive irrigation facility his deduction would be higher). In case land with assets is exchanged, separate procedures for compensation are maintained (see Section 7.3).

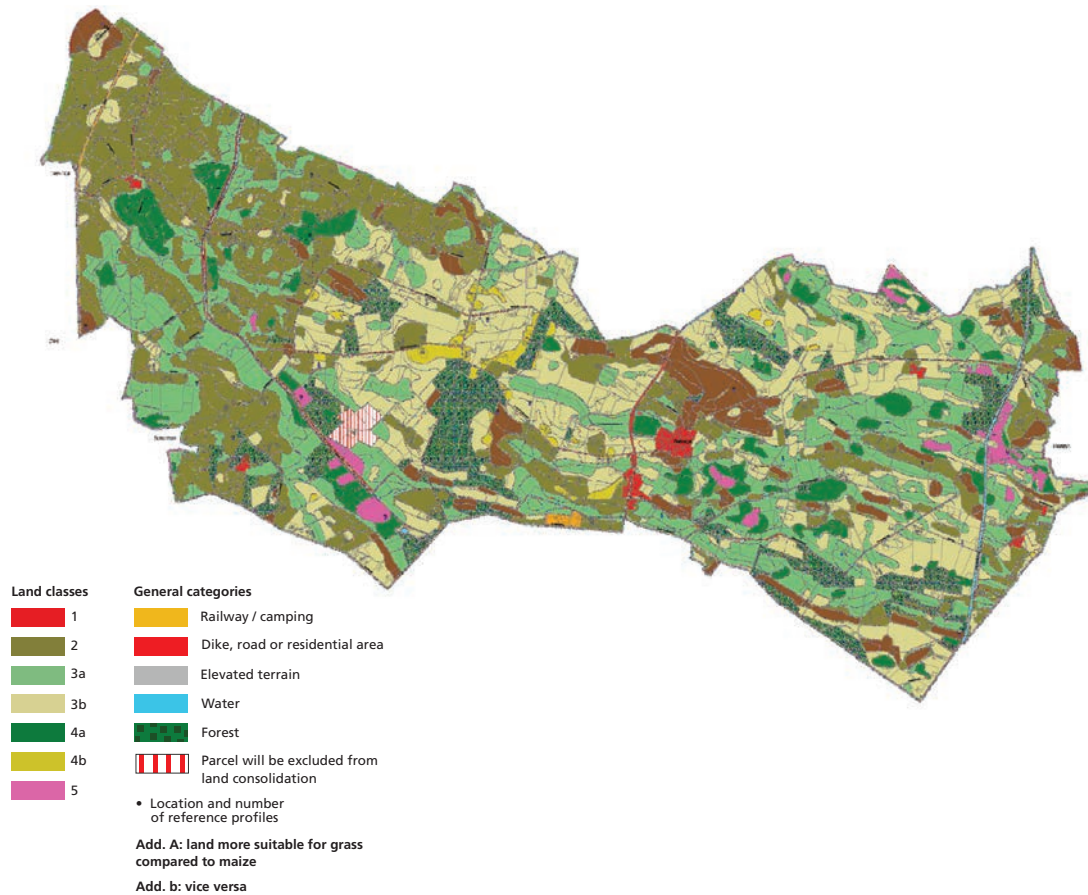
As discussed in Section 6.5.1, it is important to stimulate the enlargement of farms thereby reducing the number of plots. Selling and purchasing for enlargement purposes can be done either directly between owners or via a land bank and/or via allocation of land to farmers who want to enlarge their farms. In these situations, market price valuation is used.

While productive capacity is the basis for the formal land consolidation procedure in majority-based land consolidation, in practice, market value assessments will be undertaken also in cases where the project triggers selling and buying agreements between land owners during the land consolidation process.

In Turkey, valuation zones are defined, taking into account the intersections of soil maps, location, and yield-based polygons of the project area. When calculating the parcel index, the weight of the soil index score is 60 percent, while the location and other characteristics index score is 40 percent. In the Netherlands, the valuation is based on the productive capacity, meaning typical factors that determine the soil quality, like the soil texture, the water infiltration rate, and rooting depth. Subjective factors like size and shape of parcels, location, access, and others, are not taken into consideration. More recently, soil maps and groundwater maps at a scale of 1:25 000 provide the basis for determining a limited number of classes. Experts are involved in this part of the process, dividing the different soil types into classes of comparable value for exchange.

In Germany, a comparative valuation must be performed based on the natural soil fertility. If necessary, an additional and separate valuation may be performed for the “essential components of the parcel that have a permanent influence on its value”. As regards to building sites and land for building, a valuation based on the market value is required. Under Germany’s *Land Consolidation Act*, the key parameter on which the valuation of agricultural land parcels is based is the “lasting gains that the land can yield to any owner irrespective of its distance from the farmstead or the village, if used in a customary and ordinary way” (Section 28 (1) and (2)). In Finland, a wide range of aspects may be taken into account for valuation, such as the presence or absence of drainage, risk of flooding, or even forest shadow.

Figure 6.5: Land Valuation Map of Olst-Wesepe land consolidation project in the Netherlands



This mandatory land consolidation project of 4 073 hectares was implemented between 2010 and 2016.

Source: Wageningen University and Research.

A general principle in re-allotment planning is that land with buildings and other capital-intensive assets should not be exchanged and should be avoided where possible. However, in rare cases when this is required, the specific value of the assets need to be assessed by a valuer, who is specialized in the particular object of valuation (buildings, orchards, forest, irrigation facilities). It will then be the subject of approval and financial settlement between the old and new owner.

While drafting provisions on land valuation in the Land Consolidation Law, the drafter should review and possibly build upon existing national frameworks for land valuation, the established standards and/or certification, or determine how land consolidation valuation should differ from regular procedures.

6.4.4 Approval of the conducted land valuation

The results of the land valuation have an important effect on the process of re-allotment. In the case of voluntary land consolidation, the land valuation serves as guidance for potential participants (sellers and buyers). In majority-based land consolidation, the land valuation outcome serves as a basis for the re-allotment of parcels and subsequently the financial settlements with and between the landowners. It is key that the landowners trust the land valuation and that the re-allotment has a sound methodological and legal basis. Different mechanisms for the control of the quality of valuation are used by different countries. The use of local knowledge by involving landowners and other right holders in the land valuation process is an important mechanism to ensure quality and to build trust. This can be done via representatives like the Committee of Landowners in Denmark, or via local groups like the Valuation Sub-committee in Serbia. As practiced in many countries, checks and balances can be built in to the process to ensure that landowners have the right to make proposals and objections regarding the land valuation outcome, either during public meetings and/or directly to the re-allotment planner. In majority-based land consolidation, like for example in North Macedonia, landowners can vote on the approval of the Land Consolidation Plan, which is based on the conducted land valuation. In addition, in both majority-based and mandatory land consolidation, landowners usually have the right to appeal against the Land Consolidation Plan, including the underlying valuation results (e.g. Netherlands, Germany and North Macedonia). Strong safeguards are required to ensure transparency of the land valuation process, such as allowing voting and appeal procedures on the Plan and valuation results, since this forms the basis for the entire re-allotment procedure.

In the case of voluntary land consolidation, the involvement of representatives in the valuation is usually sufficient, since the land valuation outcome is only a guidance for the landowners and leaves them free to decide on the conditions for the re-allotment of their parcels.

In the Netherlands, before the adoption of the *Law on Development of Rural Areas* in 2006, landowners could object to the valuation results after the preparation of valuation maps. However, subsequent legislation abolished such rights and currently allows only for appeals on the Re-allotment Plan and List of Financial Settlements, which in the specific context of the Netherlands are part of the Land Consolidation Plan (which is approved at an earlier stage). What has played a role here is that land consolidation areas nowadays are much smaller than before, which means that the procedure can be shorter and simpler. After the term for appealing against the Re-allotment Plan, the lead agency coordinates with the court to ensure that appeals are dealt with within a reasonable timeframe and in connection to each other. In this way, it does not delay the transition towards the new parcels. Appeals against the Financial Settlements are dealt with after the registration of the Land Consolidation Plan.

✓ **Key recommendations 6.4:** Valuation of land

1. The Land Consolidation Law should require the valuation of parcels in land consolidation projects. The law should define the key principles of valuation, while more detailed procedures should be defined in secondary legislation.
2. While different valuation methods could be used in land consolidation, the Land Consolidation Law should require that the same valuation method is applied to all the land parcels in a specific land consolidation project.
3. Procedures for valuation should depend on whether the land consolidation uses the voluntary or majority-based approach. In the case of the former, the purpose of valuation should support facilitation of the agreements between the interested landowners. In majority-based land consolidation, the purpose should be to define the value of input parcels as the basis for ensuring the implementation of the “at least as well off” principle.
4. The Land Consolidation Law should preferably require that the valuation process is carried out by professionals in combination with a body (e.g. Committee of Stakeholders) representing the general interests of all landowners and respective right holders.
5. In majority-based land consolidation, the secondary legislation should provide the key criteria for land valuation. A land classification based on the productive capacity of the soil should be elaborated for each land consolidation project and presented to all landowners and right holders at the launch of the project.
6. The Land Consolidation Law should establish that the value of buildings or other assets will be assessed only in cases where such land will be transferred to a new owner. In such cases, the law should allow the involvement of valuers specialized in the particular object of the valuation.
7. As the entire re-allotment planning is based on the land valuation results, the Land Consolidation Law should establish strong safeguards and strict regulations in majority-based land consolidation to ensure the quality of valuation and allow the possibility for stakeholders to appeal against the Land Consolidation Plan and underlying land valuation results to the court.

6.5 RE-ALLOTMENT PLANNING

The re-allotment planning is not only a technical exercise, but it is also a complex process where transparency, consultation and participation are among the key principles. It builds directly upon the outcome of the feasibility phase of the project. Intensive consultations and facilitated negotiations throughout the process are necessary and special attention must be given to ensure the involvement of all landowners and long-term leaseholders, both men and women. This requires interpersonal and communicative skills in addition to technical knowledge, to establish trust within the community. Without these essential elements, the chances of success are often limited.

The Land Consolidation Plan is the main outcome of the land consolidation project and the Land Consolidation Law should provide for the preparation of that Plan. The land consolidation planner collects the preferences of the landowners and other stakeholders concerning the

re-allotment of parcels and the overall planning of the project area, building on the initial information and preferences already collected during the feasibility phase.

6.5.1 Re-allotment of land parcels

The re-allotment planning is usually launched through a public meeting to which all local landowners and other stakeholders identified during the feasibility phase should be invited (See Figures 6.1 and 6.2). Before launching the re-allotment of land parcels, the information regarding the preferences of the landowners should be systematically collected, starting at the feasibility phase and continuing during the re-allotment phase. Following the first public meeting a continuous process of individual consultations and facilitated negotiations should be carried out by the land consolidation planner.

In preparation of the land valuation (see Section 6.4), it is recommended to divide the project area into sub-areas with natural boundaries such as roads, water bodies or forest lines. These sub-areas are used in the valuation because the land parcels in the sub-area are often of the same or very similar value. However, the sub-areas can also be important in the re-allotment planning, as the Land Consolidation Plan is built up sub-area by sub-area in coordination with the natural or infrastructure boundaries.

As illustrated in Figure 6.1 and 6.2, there are many similarities but also significant differences between re-allotment planning conducted using a voluntary land consolidation approach and a majority-based approach. During the first stage of any re-allotment planning, it is important to identify the potential sellers in the project area. From the feasibility study, it should be clear which landowners would prefer to avail of the opportunity to voluntarily sell their land parcels without receiving other land, e.g. they wish to stop farming because of their age, because they live abroad, or for other reasons. In this way, the land consolidation project will not only be able to reduce land fragmentation but also to facilitate the enlargement of holdings and farms.

As briefly introduced in Section 5.2, the availability of a land pool, consisting of land parcels from private landowners in the project area who voluntarily choose to sell land parcels or from available publicly-owned agricultural land, is critical for the success of the re-allotment planning. A more strategical way to make publicly owned agricultural land available is to establish and apply a land banking instrument in combination with the land consolidation (see Chapter 10). An available land pool is particularly important in a voluntary land consolidation approach where the re-allotment planning often can be seen as chains of transactions and one exchange leading to the next (Hartvigsen, 2014b).

In majority-based re-allotment planning, all the land in the project area is in principle mobile. However, further land mobility is still needed to facilitate the enlargement of holdings and farm sizes, for the construction of agricultural infrastructure, etc. Following the outcome of the land valuation, the land consolidation planner can clarify with the potential sellers if they are ready to sell for the price agreed. The potential buyers must also be identified and their interest confirmed, based on the actual price revealed through the land valuation and agreed to. The land consolidation planner can in both approaches facilitate sales agreements between sellers and buyers.

During the re-allotment planning, information should be collected from participating landowners on where they would prefer to consolidate their land ownership, i.e. in which of the identified sub-areas. The parcels already owned by the participants in these areas are often

referred to as so-called “fixed parcels”, around which their other parcels are consolidated. Fixed parcels can also include parcels with additional assets such as perennials (orchard, vineyards, forest, etc.). Often, there are sub-areas that are more popular than others and many compromises need to be found. The more flexible landowners should be rewarded, e.g. through access to purchase additional land.

In general, it is important that the participants perceive the re-allotment planning process as being fair and transparent and that the preferences and interests of all landowners are equally considered. It is particularly important not to ignore or neglect the interests of small-scale farmers at the expense of larger-scale farmers. As mentioned in Section 3.2.2, the general principle for re-allotment planning is the “at least as well off” principle.

It is important that the participants are aware that not all of them will be able to equally benefit from the project because their situation is already different from the starting point. Thus, a landowner with 20 scattered land parcels will be able to benefit much more than those with only one or two parcels. This means that the landowners with a large number of parcels and therefore a higher potential to benefit from the project, should be strongly encouraged to be flexible. In voluntary re-allotment planning specifically, it is important to preserve the land mobility for as long as possible, e.g. by encouraging exchange before purchase. In majority-based land consolidation, it is relatively easy to divide the land available for enlargement between interested buyers because, in principle, all the land in the project area is re-allocated. Of course, sale of land in the re-allotment process should be voluntary and no-one should feel compelled in any way to sell. Likewise, the enlargement of farms or parcels should be based on prior consent. The time gap that ensues between selling the land and the final allocation could be overcome by introducing a land banking function in support of land consolidation (see Chapter 10).

In voluntary land consolidation, when there are more interested buyers than land available, it is important to base the re-allotment on certain principles in agreement with the Committee of Stakeholders. Such principles should vary, based on the specific situation in the project area, but could include: giving preference to active farmers to purchase additional land before an owner who is not using the land; giving preference to young farmers before old farmers (if the latter is not expected to hand over the farm to the next generation); or giving preference to local farmers before outsiders. Such difficult decisions are undertaken during any re-allotment planning situation and should, in addition to the “at least as well off” principle, be guided by the “rules of the game” on which there is local consensus.

The body responsible for the implementation of the project could be conferred the right to establish the principles applicable to the specific land consolidation project, as is the case in Germany's *Land Consolidation Act* (Section 38) and the Netherlands' *Law on Development of Rural Areas* (Article 63). For example, in the latter, the Land Consolidation Committee, created for the purposes of the specific project, formulates guidelines for re-allotment and sets objective rules to guide the planners and create transparency and clarity for the landowners. Such guidelines, indicated in a Land Consolidation Law or secondary law could indicate, for instance: which types of land should not be re-allotted (e.g. home plots, land with buildings or high investments like orchards, vineyards, etc., land not fit for agriculture, land which has a different spatial function); the percentage of land area to be deducted for public infrastructure; objectives for the future plot structure in the particular area (e.g. plot size and form); principles for safeguarding biodiversity or water bodies; and protection of valuable landscape elements.

Figure 6.6: Land ownership for five selected landowners in a land consolidation pilot project area in Shorsulu village, Azerbaijan, showing land parcels before (left) and after (right) the project



These illustrations show landownership before land consolidation (left) and after (right), for five selected landowners as part of the Land Consolidation Plan of an FAO pilot project (TCP/AZE/3601) in Shorsulu village, Azerbaijan, from 2016 to 2019. The number of parcels (belonging to the five landowners) was reduced from 100 (left) to 23 (right) after the land re-allotment.

As previously mentioned, a main objective of the re-allotment planning is to reduce land fragmentation, both of land ownership and land use, and to facilitate voluntary enlargement of the participating holdings and farms. The land parcels owned by each landowner should be consolidated into as few parcels as possible and as close as possible to the main interest area of the landowners, reducing distances between homestead and land parcel(s) and between land parcels. At the same time, the shape of the parcel should be as regular as possible, e.g. if possible, with a ratio of one-quarter between width and length, and right angles. After the project, parcels should have access to a road and if relevant and included, to irrigation and/or drainage. While aiming for rational parcel sizes and shapes a balance should be found to protect typical landscape elements such as meandering streams or small wood lots.

The Land Consolidation Law should permit a small range of over- and under-allocation of land to participants, particularly in majority-based land consolidation. These small deviations usually result from practical obstacles in the field and cannot be avoided while drawing new parcel boundaries. The range or limit for such deviation is to be determined in the Land Consolidation Law of the specific country. For example, in the Netherlands and North Macedonia, the value of parcels that the participant receives as a result of a land consolidation project must be within the limit of maximum 5 percent lower or higher compared to the old parcels. As explained further in Section 7.3, both under- and over-allocation need to be settled financially to adhere to the principle that everyone should be at least as well off after land consolidation compared to before. The Land Consolidation Plan deals with two key classes of assets: i) parcels; and ii) permanent and temporary buildings and other constructions. The key rule established in many civil legal systems is that buildings and other constructions are considered as accessories

to the land parcel. This is reflected in the logic of land consolidation planning, where the main attention is paid to the establishment of a new functional parcel structure within the area. The transfer of buildings is recommended to be, in principle, excluded from the Land Consolidation Plan.

As discussed further in Section 6.6, the outcome of the re-allotment planning is the draft Land Consolidation Plan. In a voluntary approach, the participating landowners will when the planning is finalized, already have provided their written consent of their participation in the Plan, i.e. which land parcels are sold and which are received and on which conditions (price, etc.). The form in Figure 6.7 is used in Denmark for participating landowners to provide their written consent in voluntary land consolidations in Denmark. The form specifies the land parcels that are sold and purchased from a specific holding, including their sizes and values.



Discussions being held around a Land Ownership Map during land consolidation negotiations in the Netherlands (2013). © Kadaster.

Figure 6.7: Consent form for landowners participating in voluntary land consolidation in Denmark

**Ministry of Environment and Food
The Danish Agriculture Agency**

File number: _____
Project number: _____
Serial number: _____
Sheet number ____ of ____ sheets in total
Cadastral number: _____

Implementation date:
Day _____ Month _____ Year _____

Owner: _____
Company ID: [] [] [] [] [] [] [] [] [] [] [] [] [] []
Permanent Address of owner: _____
Telephone: _____ Mobile: _____
E-mail: _____

Address of the holding: _____
Total size of the agricultural holding (ha) _____

Land plots sold

Cadastral number (of land sold)	Transferred from serial number	Plot number	Preliminary size (hectares)	Sales price in Danish Kroner	Special remarks / conditions
Sold in total		Size in total		Total value:	
Reimbursement of property tax from sold land ((tax value x 2 [for 2 years until valuation after land consolidation] x ha):					

Seller agrees to provide guarantee that the sold plots can be released from mortgage within the above mentioned sales price.
Seller informs that there may be common wild oat on the sold plots [no guarantee against is provided].

Land plots purchased

Cadastral number [of land sold]	Transferred from serial number	Plot number	Preliminary size (hectares)	Purchase price in Danish Kroner	Special remarks / conditions
Purchased in total		Total area:		Sum:	
Reimbursement of property tax from sold land ((tax value x 2 [for 2 years until valuation after land consolidation] x ha):					

Buyer is in agreement that there may be common wild oat on the sold plots.
Buyer accepts to provide guarantee for the payment of the difference between the value of land sold and purchased latest by the _____ [date]

In case of more owners, the payment can be made to bank account belonging to: _____

Value	Reimbursed value of property tax	In total
Owner shall in total pay net (Kr.)		
Owner shall in total receive net (Kr.)		

Net size
The property is in total increased with (ha.) _____
The property is in total decreased with (ha.) _____

Net payment
The undersigned agrees to participate in this land consolidation agreement respecting the standard conditions (see backside) and declares to have received a copy of the signed document.

Location and date: _____ Signature: _____ Signature: _____
:Signature of spouse (if applicable) _____

As witness that the signature is genuine, the date is correct and the signer is authorized [legally has the right to sign]:

Name: _____ Name: _____ Land consolidation planner
Position: _____ Position: _____
Address: _____ Address: _____
Signature and if applicable stamp

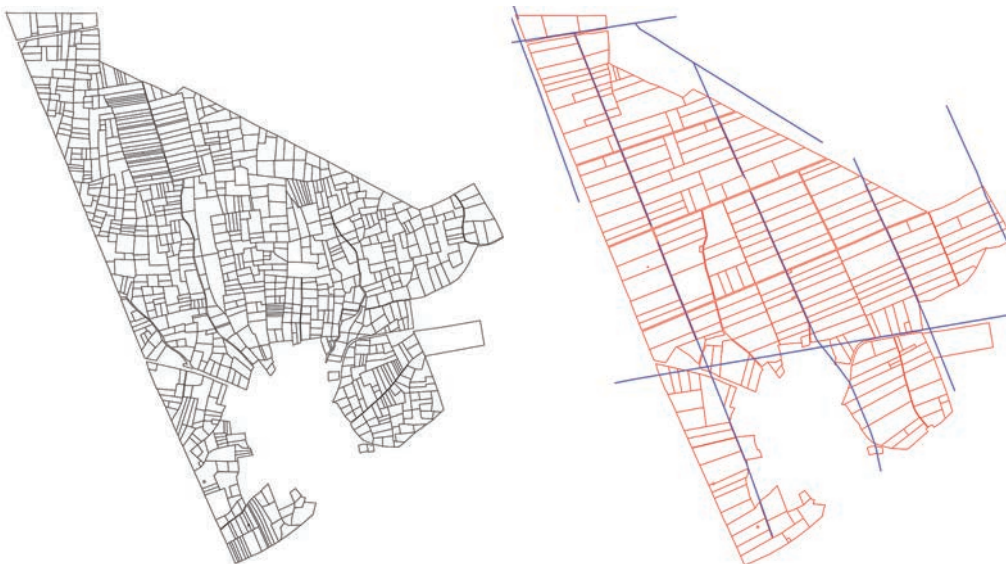
Pionér Allé 9, 6270 Tønder Tlf.: 33 95 80 00 E-mail: jordfordeling@lbst.dk www.lbst.dk

This form is used in Denmark for landowners participating in voluntary land consolidations to provide written consent of their participation in the Land Consolidation Plan of the project. The back of the form contains the general terms and conditions that apply. Unofficial translation.

In majority-based land consolidation, however, there is often the need to revise the Plan after public display and once the landowners have had an opportunity to provide their comments. Facilitating this process can significantly increase the support of the landowners, which is essential to achieve the required qualified majority. The procedure of public display and revision can be repeated if needed.

The use of maps greatly supports the re-allotment planning. A geographic information system (GIS) is the main information technology tool used by land consolidation planners for the mapping and handling of parcel data. There is a general and recurrent need for mapping throughout the entire land consolidation process. Starting with the cadastral maps and alphanumeric data describing property rights, land consolidation projects generate large amounts of data and mapping products (e.g. land ownership map, land valuation map, Land Consolidation Plan, etc.). Tools such as GIS and information and communications technology (ICT) are instrumental not only for preparation of these products and for handling the data, but also for ensuring that they meet certain technical and quality standards. The complexity of the applied tools varies, from standard GIS programmes and custom tools that assist land consolidation tasks and activities (including algorithms to automatize re-allotment planning), to integrated solutions aiming to manage the entire land consolidation project workflow.

Figure 6.8: Re-allotment planning map for a majority-based land consolidation project in Egri village, North Macedonia, showing parcels before (left) and after (right) the project



These illustrations show two maps from a majority-based land consolidation project in Egri village, North Macedonia. In a project area of 336 hectares, 874 land parcels before the project (left) are consolidated into 260 parcels after the project (right) along with improvements to agricultural infrastructure (construction of new access roads, construction of new and rehabilitation of existing drainage channels, and upgrades in the existing irrigation system). The average parcel size after the project is 1.30 hectares, compared to 0.38 hectares average before consolidation. The Land Re-allotment Plan was approved by the landowners in January 2020. The project is part of the FAO implemented MAINLAND project funded by the European Union (GCP/MCD/002/EC)

6.5.2 Third party rights in the re-allotment planning process

The re-allotment planning also affects third party rights related to the parcels within the project area. Therefore, the Land Consolidation Law should provide for a legal regime applicable to mortgages, servitudes, leases, pre-emption and other third-party rights. The law should also define whether land parcels undergoing judicial disputes should be permitted to be part of the land consolidation project, since this may impact the rights of parties to the dispute.

Mortgages. The existence of mortgaged land parcels should not be an obstacle for land consolidation. The general rule is that mortgage as a real right follows the parcel and not the landowner. In the case of land consolidation, in most countries the law provides for an exception to this rule. Thus, in a re-allotment planning process, the mortgage follows the landowner (mortgagor) instead and is consequently transferred from the original land parcel(s) to the re-allotted land parcel(s) of the landowner and registered accordingly during the registration of the Land Consolidation Plan. Such regulation allows to relocate the mortgage without the consent of the mortgagee, but under the overall supervision of the lead agency or the Land Consolidation Commission, if established, ensuring that also the mortgagee is “at least as well off” (see Section 3.2.2).

Thus, the Land Consolidation Law should establish that, both in voluntary and majority-based land consolidation, the mortgage should be relocated to the new parcel of the landowner (mortgagor) without the mortgagee’s consent. The general principle is that the value of such parcel is not lower than the value of the initially mortgaged parcel and there is no negative impact on the interests of the mortgagee. If the mortgagor prefers to transfer the ownership of the parcel or part of it for monetary consideration, the mortgagee should have a right to request the repayment of the part of the mortgage loan corresponding to the reduction of the security of the collateral.

If the landowner has more than one mortgaged parcel/holding and the amalgamation of the parcels would appear unfeasible during the re-allotment, such parcels could be re-allocated next to each other.

Box 6.3: Mortgages in the Netherlands

Article 60

(...)

1. While preserving their grade, mortgages will be transferred to the plots or parts of plots to be reallocated instead of the immovable property on which they rest. (...)

Source: Netherlands (the) – Law on Development of Rural Areas. Unofficial translation.

Servitudes (easements). As to servitudes, they can either be abolished or accepted by the new owner of the parcel depending on the type of servitude. Servitudes are established for various purposes and the respective decision whether to leave, abolish or establish a new servitude depends on each particular situation.

For example, the servitudes established for utility installations and pipelines, like water or electricity supply, will stay in the same location and will need to be respected and be included in

the Land Consolidation Plan. On the other hand, decisions regarding servitudes like the rights of way would depend on the outcome of the re-allotment planning. Some of such servitudes may be no longer needed, while in other places it may be necessary to establish new ones. Personal servitudes, including, amongst other things, usufructs, should be abolished during the re-allotment process and potentially re-established by the relevant parties after the registration of the Land Consolidation Plan.

Box 6.4: Establishment of servitudes in Finland

Section 156, Paragraph 1

(...) if the establishment of an easement is necessary for (...) land consolidation (...), the easement referred to in Section 154(1)(1-6) and (9) may be established without the consent of the interested parties in the area subject to the cadastral procedure.

Source: Finland – Real Estate Formation Act. Unofficial translation by the Ministry of Agriculture and Forestry, Finland.

Box 6.5: Abolition of rights and substitution of real estate rights in Germany

Section 49 (Abolition of Rights)

- (1) If necessary in pursuance of the land consolidation purpose, easements and land charges, acquisition rights in land as well as any personal rights entitling the holder of such rights to own or use a parcel or to limit the use of it, may be abolished. Holders of rights that have become dispensable as a result of the land consolidation procedure shall not be entitled to an indemnity. If any of the rights specified in the first sentence of this subsection that have not become dispensable are abolished, the holders of such rights shall be compensated either with land or with equivalent rights, or subject to their agreement with money.
- (2) Any right specified in the first sentence of Subsection (1) above shall be abolished upon application of the entitled party, if in the case of transfer of the rights to the land received in compensation the said rights can no longer be exercised to the same extent as previously. Subsection (1), sentence 3 through 5, shall apply accordingly.
- (3) The deterioration of the value of the old parcel resulting from the existence of rights to be abolished shall not be considered when fixing the compensation due to a participant, unless deterioration is considerable.

Section 68 (Substitution for Real Estate Rights)

- (1) In respect of any rights in the old parcels and in respect of any legal relationships concerning those parcels, as far as such rights and relationships have not been abolished (Section 49). The lots received in compensation shall be deemed to be substituted for the old parcels. Any public encumbrances on the old parcels that are locally binding on the land shall be deemed to be transferred to the new lots in the same site.
- (2) If one lot is allocated in compensation for several old parcels or rights that are subject to various legal relationships, the consolidation authority shall determine which new lots or fractions of new lots are to be deemed to be substituted for the individual old parcels or rights.

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

Lease rights. In many countries, a large portion of the agricultural land is being used based on land tenancy agreements. The Land Consolidation Law should define the legal regime with respect to such rights and their holders. The regulation of lease relations in land consolidation projects should differ, depending on whether the lease is short-term (up to two years) or long-term (longer than two years) and to what extent lease rights are legally protected.

In case of short-term leases, the lease contracts should be allowed to expire before the Land Consolidation Plan takes legal effect. The leaseholders should be allowed to finish the agricultural season and the owner or user of the parcel could be changed between the two seasons.

As to long-term leases, they should be either respected or negotiated involving the old and new owners of the parcel and the tenant. In all cases long-term leaseholders should be actively involved in the re-allotment planning. Participation of leaseholders in the re-allotment process is described in more detail in Section 4.3.4.

Pre-emption rights. As regards pre-emption rights, the Land Consolidation Law should distinguish between the statutory rights established by law, and contractual pre-emption rights, agreed between private parties. If the pre-emption rights are established by law, they should by default be abolished in the land consolidation project area while the re-allotment planning is ongoing. Otherwise the re-allotment might become impossible or cumbersome. If the pre-emption rights are established by contract, they should be respected and revealed in the early stages of the project, e.g. in the feasibility phase, so that the re-allotment planning is performed accordingly, either respecting the right in the re-allotment planning process or abolishing it after negotiations with the person holding the right.

Parcels under court dispute. The Land Consolidation Law should provide for whether parcels under court dispute may be included in the land consolidation project. Country practice varies on the matter. For example, in Denmark and Lithuania, where only voluntary land consolidation is applied, parcels under court dispute may not be included in the project.

The Land Consolidation Law should provide different solutions, depending on the type of the dispute. In case of disputes over the title of the parcel, such parcel should not be included into the land consolidation project in voluntary land consolidation. In majority-based land consolidation such parcel should be included into the project, and if the dispute is not solved prior to the approval of the Land Consolidation Plan by the landowners, the vote on behalf of the owner of the parcel should be counted as a vote against the Land Consolidation Plan.

6.5.3 Combining re-allotment planning with improvement of rural infrastructure

Rural communities often have many more development constraints than land fragmentation, and small holdings and farm sizes and the re-allotment of parcels is often not the only purpose of land consolidation projects (see Section 3.1). Land consolidation projects may include the improvement of local agriculture and other infrastructure in the project area (new field and access roads or their improvement, irrigation, drainage, wind breaks, power lines, village renewal and recreational areas) and be linked to broader community needs. Through an inclusive and participatory process, community development plans could be prepared and integrated with the land consolidation project, as is the standard practice of FAO in countries where the organization is supporting the introduction of land consolidation (Hartvigsen, 2019), e.g. North Macedonia and Azerbaijan.

Besides identifying the construction and/or rehabilitation of local infrastructure as an objective of land consolidation, the Law should authorize the respective institutions to use their budgetary resources or other financing sources for works relating to rural infrastructure. Works may be funded from other sources, such as municipalities or sector agencies responsible for roads or water management. Such local infrastructure solutions should be integrated with the re-allotment of land parcels. Secondary legal acts should provide for planning principles, according to which, amongst other things, the users of the land would have an optimal access to the local infrastructure. For example, it is necessary to plan the project area in such a way that each parcel has access to a public road or eventual waterway. Keeping in mind the discussion in Section 6.5.1 on the practical re-allotment planning, the planned improvement of local rural infrastructure (roads, canals, etc.) is the skeleton upon which the re-allotment planning is conducted.

Box 6.6: Planning of local infrastructure in Germany

Section 41 (Road and Water Resources Plan with Accompanying Landscape Conservation Plan; Plan Approval Procedure)

- (1) After conferring with the board of the Body of Participants, the consolidation authority shall draw up a plan covering the common and public facilities, especially the removal, alteration and construction of public ways and roads, as well as the water management facilities, soil improvement and landscaping facilities (road and water resources plan with accompanying landscape conservation plan). (...)

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

In majority-based land consolidation, some countries allow for the possibility to deduct up to a certain percentage of the value or area of private land, for improvement of the rural infrastructure (see Section 2.4). Such deduction provides extra space with which to widen roads, for drainage or irrigation canals or to construct new infrastructure to the benefit of the farmers in situations when public land is not sufficiently available. In the Netherlands and North Macedonia, the limit is 5 percent. In practice, such deduction is often smaller than the limit of 5 percent, either because less space is needed or because public land is available or could be acquired by land banking. In the example of the Olst Wesepe land consolidation project in the Netherlands, the deduction is 0.4 percent (see Figure 6.5). In Spain (Galicia), the contributions of the owners in the land consolidation may be subject to a maximum deduction of 9 percent of the total value. The deduction for rural infrastructure is a maximum of 6 percent of the total value and 3 percent for readjustments. An extra 2 percent can be reduced if measures for nature conservation or special infrastructures are needed.

Such deduction must be distributed equitably and the effect of the deduction of land may not infringe the “at least as well off” principle. Like in under- and over-allocation, the principle is that loss of land is either financially settled as explained in Section 6.5.1, or the partial loss of land is settled and accepted in return for improvements that will increase the value of the property after development. A landowner then receives smaller but more valuable replacement land that has been developed by the project itself. An example of this approach is land consolidation in combination with irrigation, where affected farmers relinquish rainfed land for a smaller portion of irrigated and more productive land. It can only be applied if the Land Consolidation Law permits such a deduction to fit in improvements of infrastructure. In

that case, the maximum percentage preferably should not be higher than 5 percent and the deduction should be equally applied to all land owners.

Local needs for improvement of rural infrastructure in the project are initially assessed during the feasibility phase (see Chapter 5). If such improvements of rural infrastructure are decided to be included in the project, a detailed technical design is prepared in the re-allotment phase in parallel with the re-allotment planning (see Figure 2.1).

6.5.4 Environmental Impact Assessment

Land consolidation can directly or indirectly influence nature, climate, and the environment through its impact on water, air (atmosphere), soil, biodiversity, landscape or cultural heritage. Already during the feasibility phase of the project (see Section 5.2), it should be initially assessed if the project could result in negative impacts on nature and the environment. As indicated in Section 3.2.3, once the Land Consolidation Plan is drafted and before its adoption and implementation, legal acts should require an environmental screening or even a full environmental impact assessment (EIA). The European Union's *EIA Directive* and the respective national legal acts implementing the Directive, regulate this aspect for its member countries. The same rules would also apply in accession countries, while other countries may or may not have similar provisions.

In the Netherlands, the requirements of the aforementioned European Union EIA Directive have been included in the national *Law on Environmental Management* and the *Decree on Environmental Impact Assessment*. Land consolidation projects must comply with Annex II of the European Union EIA Directive, which means that the national legislation defines whether environmental impact screening is needed to determine whether a full EIA is necessary (hence, the full EIA is not automatically required in all cases). This screening is required when land consolidation leads to: i) a change of the (spatial) function of water, nature, recreation or agriculture in the area larger than 125 hectares; or (ii) the establishment of a glasshouse area or flower bulb production area larger than 50 hectares. In Germany, the EIA is a regular and integral part of the Plan for Common and Public Facilities and its public approval.

Other countries may have a slightly different approach to the environmental screening procedures. However, it is essential to evaluate the possible impact of the land consolidation project on nature and the environment to ensure that there will not be a negative impact. This should be done when the solutions proposed by the Land Consolidation Plan are clear. Therefore, the legislation of the country should require that environmental screening is undertaken before the adoption of the Land Consolidation Plan. All the necessary procedures should be established in the relevant legal acts regulating environmental issues, depending on the type of environmental screening required, which could necessitate the intervention of an independent institution that is usually appointed by the ministry responsible for the environment. This should be addressed in the Land Consolidation Law only if a country does not have existing legal provisions on EIA or screening.

✓ **Key recommendations 6.5:**
Re-allotment planning

1. The Land Consolidation Law should establish what the outcome should be of the re-allotment phase, such as a draft Land Consolidation Plan. Detailed regulation and guidance should be provided in secondary legal acts.
2. Secondary legal acts should establish general principles for re-allotment planning, including to consolidate the land parcels of each participating landowner in as few parcels as possible, reduce distance between parcels and between parcels and the homestead, improve the shape of parcels, etc. Additional project-specific principles should be agreed with the elected Committee of Stakeholders.
3. For majority-based land consolidation, the Land Consolidation Law should fix a range of under- and over-allocation, defining the maximum percentage of difference in value between the original and new parcels of the landowner. Such a range should be within 5 percent and should be financially settled.
4. Secondary legislation should provide that re-allotment planning, in addition to reduction of land fragmentation, equally focuses on voluntary enlargement of holdings and farms through the facilitation of voluntary sale of land from inactive landowners to active local farmers, and in this way also contribute to the development of commercial family farms.
5. The Land Consolidation Law should establish a general rule, according to which mortgages would follow the landowner (mortgagor) and be transferred to the newly formed parcels without the explicit consent of the mortgagee.
6. The Land Consolidation Law should require that existing and new servitudes should be negotiated between the respective landowners as part of the re-allotment planning. Servitudes that are obviously redundant should be abolished as part of the registration and implementation of the Land Consolidation Plan.
7. The Land Consolidation Law should provide that existing short-term lease agreements are either respected (allowed to expire) or renegotiated between the interested parties. For long-term lease agreements, the tenant should be involved in the re-allotment negotiations and solutions found.
8. The Land Consolidation Law may permit deduction of the land to be allocated in order to fit in improvements of infrastructure. In that case the maximum percentage should not be higher than 5 percent.
9. The national legislation should require performing environmental screening before the approval of the Land Consolidation Plan to ensure that the implementation of the Plan will not have negative impacts on nature and the environment. Specific requirements as to the contents and procedures of such environmental impact screenings should be defined in legal acts regulating environmental issues.

6.6 THE LAND CONSOLIDATION PLAN

Land Consolidation Plan is the main outcome of the re-allotment planning process. The Land Consolidation Law should establish procedures for the simultaneous and cost-efficient registration and implementation of the new land ownership, as well as other rights resulting from the land consolidation project.

6.6.1 Components of the Land Consolidation Plan

The Land Consolidation Plan consists of a set of documents that are defined either in the Land Consolidation Law or in its secondary legal acts. The elements to be included in the Land Consolidation Plan vary for each country, and will be supplemented as the Plan progresses from its first draft to its final state. For example, in Denmark the draft Land Consolidation Plan consists of a map showing land ownership of the participating agricultural holdings before the project commenced (called Plan 1), and a map of the new ownership situation (called Plan 2), as well as written consent through signed Land Consolidation Forms (legally-binding offers) from each of the participants (see Figure 6.7), bank guarantees (to make sure that the payments are carried out when additional land is purchased), results of the environmental screening or a full EIA, and all necessary permissions according to other legislation (Hartvigsen, 2014a).

Although the land consolidation projects may differ in complexity and scope, the core of any Land Consolidation Plan will represent the documents related to the re-allotment of parcels and transfers of ownership and other third party rights such as mortgages, servitudes (easements), usufructs, leases, contractual pre-emptions and other rights. From the land administration perspective, the Land Consolidation Plan shall provide an “exhaustive instruction” regarding registration of the new property rights situation stemming from an approved Land Consolidation Plan. In some countries, the package of documents representing the Land Consolidation Plan may also include technical projects (designs) for improvement of local rural infrastructure in the project area, plans related to water or forest use, landscape, etc. (see Section 6.5.3). The approval of the Land Consolidation Plan by the landowners and subsequent adoption by the authorized body discussed in the next section (Section 6.6.2) refers to its re-allotment part. Technical designs for rural infrastructure and other plans are audited by the competent bodies, after which respective permits and authorizations are granted.

The exact content of the draft Land Consolidation Plan will depend on the national legal system and land consolidation approach, but it should, at the stage of public consultations, include:

- Explanatory note: This provides information about the land consolidation project, re-allotment process (e.g. number of participating owners and area represented by them, re-allotment criteria), expected outcome (e.g. average parcel size before and after, average number of parcels per owner before and after) and other relevant information.
- Land Ownership Map: A cadastral map showing the ownership situation before the re-allotment.
- Land Re-allotment Map: A cadastral map showing the ownership situation after the re-allotment, including a layout of planned agricultural infrastructures.
- An overview table: This table lists participating landowners and their parcels before and after the re-allotment, including the size, value, money payable or money receivable (financial settlements).
- Other relevant elements.

After public display of the proposed draft Land Consolidation Plan and following consultation with the participants, the Land consolidation planner revises, as discussed in Section 6.5.1, the documents (listed above) comprising the draft Plan, and organizes an environmental screening or EIA (see Section 6.5.4).

When the amended draft Land Consolidation Plan is re-submitted for public consultation, it should also contain information about the process so far, including information about any objections received and how they were addressed, as well as the reasons for taking them into account or not.

To ensure that the Plan is implementable, technical components for the improvement of infrastructures in the project area are finalized, such as plans related to water or forest use, plans of the landscape restoration or other elements integrated within the project, and the necessary infrastructure and other work authorizations according to the legislation in force have been requested or consultations have already taken place.

Before the landowners vote on the approval of the draft Land Consolidation Plan (in majority-based land consolidation), the revised Plan is submitted to the lead agency and placed under scrutiny for potential errors. This is to ensure that all issues that could jeopardize the registration and implementation of the Plan have been handled correctly (e.g. all rights are respected and accounted for, all relevant regulations followed, permissions obtained, etc.).

After its approval and adoption (see Section 6.6.2), and before submitting it for registration, the Land Consolidation Plan is supplemented with:

- The administrative decision by the lead agency or other competent body regarding adoption of the Land Consolidation Plan.
- Approval of the Land Consolidation Plan by a qualified majority of landowners (in majority-based land consolidation) or individually signed Land Consolidation Forms by all participating landowners (in voluntary land consolidation).
- Technical project(s) for improvement of the infrastructure and other plans.
- Environmental and other necessary permissions as relevant.

6.6.2 Approval and adoption of the Land Consolidation Plan

Before its approval and adoption, the draft Land Consolidation Plan must be presented for consultation (regardless of the consolidation approach) with all the participating landowners, other right holders and the general public, at which time the interested parties can make their respective proposals and objections (see Section 6.5.1). The public consultation procedure is slightly different between voluntary and majority-based approaches, and the Land Consolidation Law should prescribe such a public review procedure. The suggested period during which stakeholders can file proposals and objections should be at least two weeks after the public display of the Plan. The potential means of information utilized for the public consultation and review are presented in Section 4.5.1.

In majority-based land consolidation, the Law should provide for the possibility of revision before a dedicated public meeting to approve the Plan can be organized. This is necessary because of the voting threshold, which should be met before the administrative adoption of the Plan. The Law should also provide for the possibility to repeat the voting after additional revision(s) of the Plan if the first voting was unsuccessful. In practice, by the end of the review period it should become clear whether the qualified majority of landowners support the Plan.

In addressing the comments and suggestions, the land consolidation planner shall not only aim to meet the thresholds imposed by the Law, but also to increase the number of supporting landowners to the greatest extent possible.

In contrast to majority-based land consolidation, only one public review session needs to be organized in voluntary projects before the adoption of the Plan by the authorized body. As explained below, the participants in a voluntary land consolidation process provide written consent that they are in agreement with the Plan.

After public consultation of the Land Consolidation Plan, its formalization follows in two stages. In the first stage, the Plan needs to be approved by the participating landowners, and in the second stage, adopted by an administrative decision of the authorized body. The main purpose of the mechanism of administrative adoption of the Land Consolidation Plan by the authorized body is to ensure the simultaneous and cost-efficient registration and implementation of the new ownership situation resulting from the land consolidation project, thus, it can be similar in majority-based and voluntary land consolidation. The approval of the Plan by the participating landowners, however, follows a slightly different track.

The key difference is that in voluntary land consolidation there is no need for public voting of the Plan since every interested landowner has already provided individual written consent to their participation (see Figure 6.7 and Section 6.5.1), describing precisely the conditions of their participation (e.g. indicating specific plots to acquire and/or transfer, and money to be paid and/or received, etc.).

In majority-based land consolidation, the Plan has to be approved by a qualified majority of the landowners in the project area, since all land parcels in the project area are subject to re-allotment.

In order to safeguard the land rights of the landowners in majority-based land consolidation, the Land Consolidation Law should provide voting thresholds for the approval of the Land Consolidation Plan, based on both the percentage of landowners and the percentage of the area represented by them (double majority).

It should be carefully weighted what the thresholds should be to define a qualified majority for each specific country seeking to introduce a land consolidation instrument. At the collective level, a high qualified majority threshold makes it hard to reach a decision, potentially leading to an impasse and making the overall land consolidation procedure non-operational. On the other hand, thresholds too low could endanger legitimacy of the decision taken. For example, the experience of Portugal, where the majority of 50 percent is sufficient in majority-based land consolidation projects, has demonstrated that such a percentage is often too low to gain the support from the landowners, part of whom may refuse to leave the parcels, impede the implementation of works, etc.

In North Macedonia, the *Law on Consolidation of Agricultural Land* defines a qualified majority to be at least 70 percent of landowners, representing at least 50 percent of the land in the project area. With reference to the approval of the majority-based Land Consolidation Plan in Egri village, North Macedonia, in January 2020, it has to be noted that landowners, who do not show up for the approval (voting) process, count as voted against the Plan.

Thus, it is recommended to establish such approval thresholds, which would balance the protection of rights of the individual landowners on one hand and ensure the efficient

implementation of the land consolidation project on the other. For example, in majority-based land consolidation, the approval of the Land Consolidation Plan could be done by at least 70 percent of the landowners representing at least 50 percent of the project area.

As regards to the form of voting on the Land Consolidation Plan, again country practice varies. The voting may be done through signature or balloting.



A landowner votes at the Land Consolidation Assembly of landowners for the approval of the Land Consolidation Plan for the village of Egri, North Macedonia (29 January 2020). ©FAO.

Only after approval of the Plan by the landowners, the procedure would then be accomplished by the adoption of the Plan by the authorized institution or body (e.g. lead agency or Land Consolidation Commission). In Denmark, the Land Consolidation Plan is adopted by the judgement of the Land Consolidation Commission during a public meeting organized in the project area and open for the participation of landowners and other stakeholders.

6.6.3 Legal effect of the Land Consolidation Plan

The adoption of the Land Consolidation Plan by the Land Consolidation Commission or other relevant public body has legal consequences, as the initial legal situation within the project area is superseded by a new one. Based on the Land Consolidation Plan, old rights are abolished or modified, and the new ones are established. However, in most of countries the effect intended by the Land Consolidation Plan is not produced at the moment of adoption of the Plan, but at an ulterior date. The Land Consolidation Law must clearly establish the moment in which such legal effects take place (the implementation date).

Countries have different approaches regarding the implementation date. This largely depends on the system of judicial review applied to the land consolidation process (see Chapter 9). Some countries allow appeals against the Land Consolidation Plan before its registration, like in the Netherlands, while others, like Denmark, only allow claims for damages against the lead agency, and the respective litigation does not delay the registration and implementation of the Land Consolidation Plan.

In Denmark, the implementation date is agreed, upon the suggestion of the land consolidation planner among the participants during the initial public meeting when the re-allotment phase is launched. It is publicly announced after the initial public meeting and the land consolidation planner is working towards concluding negotiations and finalizing the Land Consolidation Plan in due time before the agreed implementation date. The lead agency in its role as the Secretariat of the Land Consolidation Commission needs a couple of months to check all elements of the Plan, including that all necessary permissions are obtained according to other legislation (see Section 6.6.1). The implementation date is then confirmed by the judgement of the Land Consolidation Commission that is adopting the Land Consolidation Plan. The implementation date is usually a couple of weeks after the adoption of the Land Consolidation Plan by the Commission. For practical reasons, the date of implementation is usually following the agricultural season and is either in autumn after harvest or in early spring.

In Germany, the date at which the new legal situation supersedes the old one is determined within the so-called Implementation Order. Thus, from the date of entry into force indicated in the Implementation Order issued by the lead agency, the existing prior legal situation ceases and the new legal situation corresponding to the Land Consolidation Plan is established. Between the implementation date and the date of registration in the respective registries, the Land Consolidation Plan serves as an official record of the ownership of parcels (see Box 6.7 below).

Box 6.7: The Land Consolidation Plan as an official proof of land rights in Germany

Section 81 (Land Consolidation Plan Serving as an Official Record of the Lots)

- (1) Pending the updating of the cadastral land register the Land Consolidation Plan shall serve as the official record of the lots (Section 2 (2) of the Land Register Rules). (...)

Source: Germany – Land Consolidation Act of 1953. Translation by ArgeFlurb, 1995.

✓ **Key recommendations 6.6:**
The Land Consolidation Plan

1. The Land Consolidation Law should establish that the adoption of the Land Consolidation Plan should be made by an administrative act of the Land Consolidation Commission or other competent body and serve as a single basis for the registration of the new legal situation resulting from the Land Consolidation Plan.
2. The secondary legal acts should establish the documents which constitute the Land Consolidation Plan.
3. The secondary legal acts should establish procedures of publication and consultation of the Land Consolidation Plan. In the case of majority-based land consolidation all landowners and other interested parties should have the right to review the draft Plan and present their proposals and objections in accordance with the respective established procedure.
4. The Land Consolidation Law should require that in a majority-based land consolidation project the Land Consolidation Plan, prior to its adoption by the Land Consolidation Commission or other competent body, is approved by a qualified majority of the involved landowners.
5. The Land Consolidation Law should provide voting thresholds for the approval of the Land Consolidation Plan based on both the percentage of landowners and the percentage of the area represented by them.
6. The Land Consolidation Law should define the moment when the Land Consolidation Plan takes full legal effect (implementation date) and the new legal situation supersedes the one prior to the land consolidation project.

REGISTRATION AND IMPLEMENTATION PHASE



7. REGISTRATION AND IMPLEMENTATION PHASE

Once the Land Consolidation Plan is adopted (see Section 6.6.3), the registration and implementation phase begins. This is the third and final phase of the land consolidation project. It consists of the following key elements, whose implementation sequence may vary in different countries: i) implementation of cadastral surveying works; ii) registration of parcels in the Land Registry and transfer into possession of the new owners; iii) implementation of the financial settlements provided for in the Land Consolidation Plan; and iv) implementation of the field works (if included) provided for in the Land Consolidation Plan.

7.1 CADASTRAL SURVEYING

In order to formalize the new legal situation, the new parcel structure approved with the Land Consolidation Plan must be marked on the ground and the necessary data, related to the newly formed parcels, must be entered into the Land Registry. Cadastral surveying in the registration and implementation phase of land consolidation projects includes surveying works, necessary to mark the new boundaries of parcels and have them registered, as well as the actual marking of the boundaries. The Land Consolidation Law should require that cadastral surveying works are conducted as necessary and only in case of any change to boundaries or for other necessary technical reasons such as deviation between the situation in the Land Registry and on the ground.

In countries where the functions of the lead agency are performed by the national land administration authorities in charge of cadastre and registration, such as Finland, the lead agency also ensures the cadastral surveying and registration of properties. In countries where the role of the lead agency is performed by entities other than the national land administration authorities (usually under the Ministry of Agriculture), the cadastral surveying and registration of properties is usually a shared responsibility between the lead agency and the land administration authority (or authorities – in the case of dualistic land registration systems, like in Germany and Denmark). Therefore, the Land Consolidation Law and the legal acts regulating the Land Registry should provide for a distribution of respective functions between the lead agency and the authorities in charge of the Registry, also providing for the co-operation between these institutions. In most countries, cadastral surveying can only be performed by professionals with a license such as land surveyors and geodetic engineers.

In some countries, cadastral surveying in the registration and implementation phase of land consolidation projects is a technical exercise implemented by the professionals without involving the landowners, their neighbours or other stakeholders. For example, in Denmark landowners are only informed after the final registration is implemented. However, landowners may be invited to participate in the process should they be interested to do so.

Some countries involve the landowners in the cadastral surveying process. For example, in Lithuania cadastral surveying is performed by a certified land surveyor in the presence of the owner(s) of the parcel and the owners of the neighbouring parcels. Also, in Turkey, owner(s) of the parcel as well as owners of the neighbouring parcels are invited to participate in the procedure of the on-field determination of the new boundaries.

The participation of landowners and neighbours in the cadastral surveying process should depend on the specific situation in the country as well as in the project area. Since all land consolidation works should be fully transparent, landowners should be allowed to participate if they wish. Their participation could also be a tool to prevent future conflicts and eliminate or mitigate other risks, such as corruption. This is of particular relevance in a majority-based land consolidation, where most of the initial parcels are reshaped.

✓ **Key recommendations 7.1:**
Cadastral surveying

1. The Land Consolidation Law and the legal acts regulating the Land Registry should provide for a distribution of respective functions between the lead agency and the authorities in charge of the Land Registry, also providing for the co-operation between these institutions.
2. The Land Consolidation Law should require that cadastral surveying works are conducted as necessary and only in case of any change to boundaries or for other necessary technical reasons such as deviation between the situation in the Land Registry and on the ground.
3. The secondary legal acts should allow the participation of landowners and neighbours in the cadastral surveying process to increase transparency and this could prevent future conflicts and eliminate or mitigate other risks, such as corruption.

7.2 REGISTRATION OF PARCELS AND TRANSFER OF POSSESSION

The administrative decision of the Land Consolidation Commission or other body adopting the Land Consolidation Plan should be the sole basis for the registration of the landownership and other land-related rights deriving from the Plan, as opposed to normal bilateral land market transactions. Since the Plan is adopted by an administrative act of the lead agency or Land Consolidation Commission, there is no additional need for notarization. The Land Consolidation Law should provide for cost-effective registration of the changes to the property rights through submission of the adopted Plan as basis for registration, rather than through the submission of many separate documents like in normal land market transactions.

The Land Consolidation Law should empower the lead agency or the Land Consolidation Commission to submit the Land Consolidation Plan directly for registration at the Land Registry. Subsequently, the Registry is updated based on the Plan and it takes full legal effect.

The lead agency or the Land Consolidation Commission must ensure that no legitimate rights deriving from the Land Consolidation Plan are lost or disregarded in the registration process. This is of particular importance, due to the fact that the actual registration of the re-allotted properties is usually performed without the involvement of the landowners and other right holders.

Particular attention should be paid to gender issues, and ensuring that the ownership rights of spouses for the matrimonial property are fully taken into account and ensure registration of both spouses in the Land Registry in all situations where the legal framework allows it.

There is a time gap between the date of adoption of the Land Consolidation Plan and its registration in the Land Registry. In some countries this is overcome by a temporary ban on transactions, while in others, transactions that took place between the adoption and registration of the Plan are included shortly before its registration. Especially in larger mandatory and majority-based projects, it is not feasible to prohibit transactions. For example, in the Netherlands the Land Registry ensures that all transactions performed in between the reference date (as explained in Section 6.5) and registration of the Re-allotment Plan in the Registry, are taken into account. In these cases, the new owners receive their new parcels in the places allocated to the old owners in accordance with the Plan. Because all parcels in the land consolidation project area are notified in the Registry, new owners are aware of this procedure when they buy the land.

An important aspect, which should be envisaged in the Land Consolidation Law, is the transfer of parcels into possession of the new owners. The modalities of the transfer of parcels into possession and the timeframe should be part of the Land Consolidation Plan, while the actual responsibility for the transfer should belong to the lead agency. The transfer of possession should be performed after the implementation date of the Plan (see Section 6.6.3), however, based on individual arrangements between the landowners, the date of transfer of possession may differ.

✓ **Key recommendations 7.2:**
Registration of parcels and transfer of possession

1. The Land Consolidation Law should require the simultaneous and cost-effective registration of the Land Consolidation Plan as the sole basis for the registration of the landownership and other land-related rights resulting from the land consolidation project.
2. The Land Consolidation Law should require that the lead agency, in co-operation with the Land Registry, ensures that the Land Consolidation Plan, including respective rights, is registered without the landowners needing to take further action themselves.
3. In the cases of matrimonial property, the Land Consolidation Law or the legal acts regulating land registration should require that the registration of properties resulting from the land consolidation project are made jointly in the name of both spouses.
4. The Land Consolidation Law should envisage the transfer of possession of all new land parcels and should delegate the responsibility for its implementation to the lead agency, while the Land Consolidation Plan should include the procedure and timeframe for the transfer of all parcels.

7.3 FINANCIAL SETTLEMENTS

The adoption of the Land Consolidation Plan leads to the need to settle a number of financial issues with and between the participants.

Firstly, this relates to small changes in area or value before and after the re-allotment. It is often impossible to ensure that as a result of the land consolidation project, a landowner receives one

or more new parcels whose value is completely identical to the value of their parcels before the project. As explained in Section 6.5, such minor over- and under-allocation of land to the project participants is regular practice in majority-based land consolidation. This can be caused both by practical obstacles in the field, known and included in the Land Consolidation Plan, and by small adjustments needed to harmonize the Plan with the situation in the field after the cadastral surveying is done. It usually has a legally defined maximum percentage range and it requires financial settlement based on the outcome of the conducted land valuation, which can be indexed in case average prices in the region increase between the time of the valuation and the financial settlement. In voluntary land consolidation, there is no need to fix a range of over- and under-allocation, since it is up to the landowners to agree on the conditions of the re-allotment and they are free to decide whether to accept any difference in value between their old and new land parcels. However, in practice, the same mechanism is applied if there is deviation in value (above a threshold) after surveying and registration.

Secondly, enlargement of holdings and farms, as described in Section 6.5, leads to over allocation beyond the legally defined percentage as mentioned above. Such transactions should also be part of the financial settlements. The land consolidation project should actively pursue the potential to enlarge holdings and farms besides reduction of the number of parcels. Landowners and farmers who want to retire or are already not using their land or who live abroad, should be actively encouraged to sell their parcels voluntarily so that other farms can be enlarged. In voluntary land consolidation such buying and selling is part of the negotiations of the re-allotment planning process. Based on these negotiations, the enlargement and its compensation will be included in the financial settlement.

In majority-based land consolidation such enlargement is organized during the elaboration of the Land Consolidation Plan. Since this would exceed the normal limits of over- and under-allocation, as explained above, the Land Consolidation Law should facilitate this by allowing voluntary over- and under-allocation above the limits and by setting the financial arrangements for this. For example, in the Netherlands, a value difference of more than 5 percent is only possible with the permission of the landowner (and/or leaseholder). A practical approach often applied in the Netherlands is that the land bank (see Chapter 10) acquires such land and makes it available for farm enlargement. In that way, sellers can be paid immediately and do not have to wait until the Re-allotment Plan and the list of financial arrangements are finalized. When drawing up the Re-allotment Plan, it is known what the land bank will contribute and on the basis of this (and the preferences of the landowners) enlargement with land from the land bank can be planned. The land bank is then 100 percent under-allocated. Farm enlargement of more than 5 percent is usually settled directly by monetary payment, so before the approval of the list of financial settlements. This is recorded by making an appointment with the landowner regarding the over-allocation.

Thirdly, as explained in Section 6.5, majority-based land consolidation generally has the opportunity to deduct a few percent from the value of each landowner to accumulate extra space for the improvement of local infrastructure, if public land is not available. Such deduction requires due compensation and is equally applied to all landowners. There are two ways for compensating the deduction. The first option is to compensate based on the valuation, like in minor under-allocations. The second option is to settle the partial loss of land in return for improvements that will increase the value of their property after the project, as explained in Section 6.5.3, e.g. by providing access to irrigation. A landowner then receives smaller but more valuable replacement land that has been developed by the project itself.

And finally, as discussed in Section 6.4, land with buildings like barns or storage facilities or other assets like orchards, vineyards, and irrigation or drainage facilities, may occasionally be exchanged. In such cases, the financial settlement is done between the old and new owner via the lead agency. A general principle is that land with buildings and other capital-intensive assets are not exchanged and should be avoided where possible. In rare cases when this is needed and a willing buyer is available, the specific value needs to be assessed by a valuer, who is specialized in the particular object of valuation (buildings, orchards, forest, irrigation facilities). The Land Consolidation Law should define that this is subject to prior agreement between the old and new owner. The outcome should be included in the list of financial settlements, as described below, and arranged via the lead agency.

In conclusion, monetary settlements with and between the landowners are an integral part of the land consolidation process and should be regulated by the Land Consolidation Law. The list of financial settlements constitutes an integral part of the Land Consolidation Plan. Like the re-allotment planning in general, the financial settlement is guided by the principle that all participants are at least as well off after land consolidation and therefore the settlement is open to administrative and judicial appeal in majority-based land consolidation for those not satisfied with the outcome (see Chapter 9).

Ensuring that all financial settlements between the landowners are arranged is the responsibility of the body adopting the Land Consolidation Plan, like the lead agency or the Land Consolidation Commission. This means that all the settlements are made via the lead agency or the Land Consolidation Commission instead of directly between the participants in the project. Different financial mechanisms are used to guarantee this, like payments prior to the registration, a system with bank guarantees if the amount exceeds a certain threshold or via a system of guaranteed payment after finalizing the process.

In the Danish system of voluntary land consolidation, the landowners transfer the funds or provide respective bank guarantees to the lead agency as the secretariat of the Land Consolidation Commission, which then distributes the funds in accordance with the list of financial settlements, which is prepared before the Land Consolidation Plan takes legal effect and adjusted if necessary after cadastral surveying. Guarantees ensuring that respective payments will be made should be required from the landowners designated as payers in the list of financial settlements in cases where the payment exceeds the threshold of DKK 10 000 (around EUR 1 100). Such guarantees should be received by the lead agency before the judgement of the Land Consolidation Commission adopting the Land Consolidation Plan. Otherwise, since the Land Consolidation Plan is irrevocable, there would be a risk that the payer does not pay the received additional value.

In the mandatory land consolidation projects in the Netherlands, a list of financial settlements is prepared after all appeals to the Land Re-allotment Plan have been heard by the court and after the Re-allotment Plan is finalized and registered. After this moment, the Land Re-allotment Plan cannot change anymore and has entered into force. The handing over of parcels is now done, since the financial settlement follows a separate procedure which does not delay the new situation entering into force. The settlement includes all financial arrangements for under- and over- allocation and deduction for infrastructure, as described above, as well as settlements for farm enlargement and settlements in cases where land with buildings or other assets is exchanged. Moreover, it includes a system of distribution of common costs based on benefits of the land consolidation project, as explained in Section 2.4. Monetary settlements are made by immediate payment, following the same procedure as provincial tax payments or returns (following taxation law).

✓ **Key recommendations 7.3:**
Financial settlements

1. The Land Consolidation Law should provide for a financial settlement mechanism for minor under- and over-allocations of land, guided by the principle that landowners are at least as well off after land consolidation compared to before.
2. The financial settlement mechanism should allow for settling voluntary under- and over-allocation which (as in the case of majority-based land consolidation) exceeds generally applied limits in order to stimulate the enlargement of holdings and farms.
3. The Land Consolidation Law should provide for the financial settlement mechanism to allow for deduction of land for public infrastructure, guided by the principle that landowners are at least as well off after land consolidation as before.
4. The Land Consolidation Law should require that financial settlement related to the (occasional) transfer of agricultural buildings like barns or storage facilities or other assets like orchards, vineyards, irrigation or drainage facilities, is arranged via the lead agency based on the list of financial settlements in agreement between the old and new owner(s).
5. The Land Consolidation Law should establish that monetary settlements with and between the landowners is the responsibility and task of the lead agency, Land Consolidation Commission or other institution adopting the Land Consolidation Plan.
6. The secondary legal acts should determine the paying method for landowners having an obligation to pay monetary compensations in accordance with the list of financial settlements.

7.4 IMPLEMENTATION OF INFRASTRUCTURE AND OTHER WORKS

As discussed in Section 6.5.3, land consolidation is often combined with the improvement of the local agricultural infrastructure in the project area. When land consolidation is applied in a multi-purpose approach, construction works related to nature restoration, environmental protection, or large-scale infrastructure, may also be part of the process. The magnitude of such works integrated with land consolidation projects can range from improvement of local drainage conditions to construction of new highways.

The sequence of actions in relation to infrastructure planning and implementation, and the method of integration with land consolidation, differs among the countries. In countries like the Netherlands, Germany or Portugal, land consolidation projects follow an integrated planning approach aimed at comprehensive development of project areas. In the Netherlands, the first step in this land development process is the preparation and adoption of the Land Development Plan, which depending on local needs, envisages measures like nature restoration, landscaping, new or improved roads, water courses, etc. (Leenen, 2014). The Plan is adopted by the provincial government and should be in line with the spatial planning documentation in force. The land consolidation process then begins in parallel with the infrastructure design.

Land consolidation project settings can be quite complex and involve multiple public authorities responsible for different measures included in the project and with mixed funding sources.

Nevertheless, the Land Consolidation Law should stipulate that the lead agency is responsible for the overall co-ordination of implementation of works included in the Land Consolidation Plan. The lead agency can in addition be made responsible for the infrastructure at local level including construction, improvements, and fine-tuning of the existing infrastructure to the new plot structure.

In some other cases, where land consolidation is part of a large-scale infrastructure project, the Land Consolidation Law or other relevant legal acts could retain the responsibility for the implementation of the works with the entity or agency initiating and implementing the infrastructure project. For example, in Denmark, if the land consolidation project is implemented as part of a road construction project, construction and implementation works are commissioned by either the municipality (in case of a municipal road project) or the Road Directorate under the Ministry of Transport.

It is recommended to begin the implementation works of planned agricultural infrastructure and other measures when the new parcel boundaries stemming from the Land Consolidation Plan are marked on the ground (see Section 7.1). Prior to commencing the works, all technical projects have to be finalized and construction and other necessary permissions obtained.

If applicable, the Land Consolidation Law could include procedures to allocate future ownership of the new infrastructure, along with the function of future operations and management, to relevant public authorities.



Rehabilitated irrigation system in land consolidation project in Cuimra, Konya province, Turkey (2014).
© FAO.

✓ **Key recommendations 7.4:**
Implementation of infrastructure and other works

1. The Land Consolidation Law should stipulate the institution with overall responsibility for the implementation of works included in the Land Consolidation Plan (e.g. budgeting, the commissioning of works through the public procurement process, and the organization of technical supervision).
2. The Land Consolidation Law should define the timing in the process for the start of infrastructure works.

MONITORING AND EVALUATION



8. MONITORING AND EVALUATION

The Land Consolidation Law should require regular monitoring and evaluation of land consolidation projects and programmes. This would ensure that the projects and programmes attain their pre-defined objectives, as well as to provide recommendations about the eventual future changes at the programme and/or project level. In the Law, a clear distinction should be made between: i) the monitoring of ongoing projects included in the national land consolidation programme as a tool for the lead agency to supervise the process, ii) the evaluation of individual projects; and iii) the evaluation of the land consolidation programme.

Considering the funding that countries with a long tradition for land consolidation have spent on the implementation of land consolidation projects, it is remarkable what little effort has been made and funds used to evaluate the outcome of the projects and their socio-economic impact (Hartvigsen, 2015b). It is recommended that the lead agency should develop a plan for monitoring and evaluation of the land consolidation programme and its projects and ensures that the plan is implemented.

8.1 MONITORING OF LAND CONSOLIDATION PROJECTS AND PROGRAMMES

In order to assess if the respective land consolidation project is being implemented in accordance with the defined objectives and procedures, it is important to perform the monitoring of the implementation of land consolidation projects that are included in the national programme. Land consolidation projects may last several years, so it is essential to have criteria indicating if the implementation of a project needs additional action or modification. Thus, the secondary legal acts should require for the regular monitoring of all individual projects, for example, through progress reports by the land consolidation planner to the lead agency. In addition, all projects should be briefly evaluated based on pre-defined criteria by the lead agency directly upon their completion.

The results of such monitoring should be used not only to supervise the implementation while the project implementation is ongoing, so as to evaluate a particular project, but also to better plan future projects and better estimate their expected costs. For example, evaluation could allow to assess the cost of field roads per kilometre, average surveying costs per surveyed parcel, costs for rehabilitation of former field roads, costs for campaigns and public community meetings, costs for commissions or services by professional bodies, costs for feasibility studies, etc.

When the works in Land consolidation projects such as the feasibility study and the re-allotment planning is not conducted by staff of the lead agency but contracted to private service providers, the lead agency has an additional need to closely monitor the implementation of the different stages of the projects. This obviously also requires that the staff of the lead agency has the technical skills, competencies, and experience to monitor and supervise all aspects of the implementation of land consolidation projects. Therefore, it is recommended that not all projects are outsourced to service providers but that at least some projects are fully implemented by the staff of the lead agency.

8.2 PROJECT EVALUATION INCLUDING SOCIO-ECONOMIC IMPACT ASSESSMENTS

In order to assess the positive and negative impacts of land consolidation projects and to be able to draw respective conclusions and improve practices, it is recommended to perform regular evaluation of implemented land consolidation projects.

Evaluation at both project and programme level should be distinguished between output indicators and impact indicators. Output indicators, such as increase in average parcel size, average number of parcels per holding, reduced distances between parcels and homestead, improved access to road, and irrigation or drainage, can be assessed immediately after the Land Consolidation Plan is adopted. However, impact indicators, such as increased income from private investments in agriculture, e.g. in drip irrigation or in planting an orchard or a vineyard on the consolidated parcels, can only be fully assessed some years after the land consolidation project has been finalized, through a full socio-economic impact assessment.

Each implemented project should at least pass a simplified evaluation where basic output indicators, like those mentioned above, are checked and compared before and after the project and if the project has met its objectives and the broader objectives of the national programme. Lessons learned should be collected for future adjustment of procedures and discussed with private service providers if they are involved.

In Finland, the key indicators used during project evaluation are average parcel size and average distance to the farmhouse, and since 2009, unified cost-benefit tools are used. The land consolidation planner (in Finland, a cadastral surveyor) submits the final report on the land consolidation project to the head of the Land Consolidation Unit of the National Land Survey. Furthermore, because there was found to be a lack of evaluation of the social criteria of land consolidation projects, respective actions were taken by the National Land Survey in 2017 to evaluate social aspects of land consolidation projects (Konttinen, 2016).

The legal wording example below illustrates how the requirement to evaluate the expected impact was formulated in the *Land Development Law of 1985* (valid until 2007) in the Netherlands (Box 8.1).

Box 8.1: Requirement to perform expected impact assessment in the Netherlands (prior to 2007)

Article 35, Paragraph 1

1. The land development program includes: (...)
 - b) with regard to the area to be developed in accordance with the considerations and basic principles referred to in Article 20, Paragraph 2, point b:
- (...)
6. a description of the expected consequences of the measures and facilities provided for in points 4 and 5 for the economic situation, including employment, living and working conditions, nature and landscape and the condition of water, soil and air (...).

Source: Netherlands (the) – *Land Development Law of 1985*. Unofficial translation.

The Netherlands' *Ministerial Regulation on Functioning of Land Consolidation Committee of 1998* elaborated further on the requirement mentioned in Box 8.1 by prescribing the "HELP method for the evaluation of the land development projects". Cost-benefit analysis was an important part of the HELP method. For different re-allotment alternatives, some common key criteria were evaluated such as the size of the parcel(s), the size of the home parcel(s) and the distance to the new parcel(s). For larger projects that were in preparation, the assessment was conducted for smaller sub-areas representing the entire project area. For each sub-area the costs and benefits of the improved parcel structure were assessed and then extrapolated to the entire Land Development Plan and compared to the agriculture-related costs. The objective was to have a minimum internal rate of return of 5 percent. In addition to this rather low economic threshold, other more qualitative effects were taken into account while making decisions on the final Plan. This included (among others) a description of improvements to the visual qualities of the landscape, increased connection between areas with natural values, and increased traffic safety.

The secondary legal acts regulating land consolidation should require the preparation of a brief annual report by the lead agency containing evaluations about the land consolidation projects and other related activities under the national land consolidation programme, as well as to conduct a more detailed programme evaluation every three or five years following standard programme evaluation principles.

In addition to the relatively simple evaluation that should be conducted of each implemented land consolidation project, it is recommended to select projects on a regular basis for a more in-depth socio-economic impact assessment. The quantity of how many such assessments should be conducted would depend on the volume of the national programme.

Impact assessment results, together with the above suggested brief evaluations of each project, may serve as evidence for the lead agency in convincing governments and decision-makers about the positive outcomes of land consolidation, showing that it is worth the investment. The results of such assessments may also be useful in raising awareness about the benefits of land consolidation among farmers and landowners.

A full and detailed socio-economic impact assessment of a fully implemented project requires significant funding, therefore, the impacts of only 5-10 percent of the implemented land consolidation projects could be fully assessed.

Since 2017, the National Land Survey of Finland has conducted such ex-post impact assessments, even though it is not mandatory. In 2018 in Serbia, impact assessments were conducted in eight areas, which were implemented with German support from GIZ. In-depth analyses were conducted in six areas where land consolidation was implemented after 2006, and in two areas where land consolidation was not implemented (control areas) (Vasiljevic *et al.*, 2018). Of the six areas where land consolidation had been implemented, three areas were selected from the Autonomous Province of Vojvodina and three from the territory of Central Serbia. The two control villages were from Vojvodina and from Central Serbia. The study on the assessments found that public sector investments into land consolidation implementation are necessary and justified. Investments in land consolidation are needed given that the fragmentation level and structure of agriculture land is representing a barrier to more efficient agricultural production and competitiveness of Serbian agriculture in international markets.

A well-implemented impact assessment requires a good baseline, i.e. detailed socio-economic data for the pre-land consolidation situation to compare with the situation after land consolidation. The assessment should not only look into increased productivity because of the consolidation of land parcels (e.g. larger and better shaped parcels, reduced transportation and fuel costs, reduced emission of greenhouse gasses), but it should also assess catalysed private investments. Such baseline indicators should ideally be established during the feasibility phase of the project. Socio-economic impact assessments of projects should be carried out at the earliest 2–3 years after the land consolidation project has ended in order to capture all the different impacts.

FAO implemented a pilot evaluation of land consolidation in Turkey during 2014–2015, together with the General Directorate of Agrarian Reform in Turkey, under the project *Strengthening of national and institutional capacity on land consolidation (UTF/TUR/060/TUR)* (FAO, 2015). The impact assessment showed that the project fulfilled all four key objectives related to: the reduction of fragmentation, access to roads, irrigation and access to water, and financial effectiveness. It also evaluated the achieved results and impacts in the field of parcel pattern and related costs, water, land use, productivity, value of production, and investments of farmers. The efficiency of the land consolidation project was also evaluated and it was concluded that TRY 1 million (EUR 492 000) investment in the land consolidation project generated:

- increased land parcel size by 31 percent;
- reduced fragmentation (number of parcels per owner) by 23 percent;
- increased number of optimal shaped parcels by 25 percent;
- 45 700 metres of new rural roads constructed;
- reduced farm work and transportation costs by 7.8 percent;
- 24 300 metres of new irrigation system constructed;
- TRY 8.2 million (EUR 4 million) in private (farmer) investments in total;
- TRY 5 million (EUR 2.46 million) in private (farmer) investments because of the land consolidation project.

As an illustration of the private investments that can be catalysed by the implementation of a land consolidation project, several farmers after this land consolidation had taken place invested in drip-irrigation systems because now they had larger and more productive parcels and because they also now had access to water for irrigation.

8.3 PROGRAMME EVALUATION

At the programme level, many countries implement even large land consolidation programmes without having clear evidence of the impact of the funds allocated, as previously mentioned. However, there are some countries that assess the respective effects that land consolidation produces. For example, Finland evaluates land consolidation with a long-term perspective. The National Land Survey of Finland surveyed 25 areas where land consolidation was previously carried out, evaluating such criteria as the number of farms, cultivated area, leased area, number of parcels, average parcel size, and farming distance from farmhouse to parcel by road. As a result of the evaluation study, it was found that the “parcel structure has not deteriorated in areas where land consolidation was completed roughly 15 years ago” and that “investigation of older land consolidations showed that over 100 years have not much changed how cultivated parcels lay in the Finnish countryside” (Konttinen, 2016, pp. 6–7). It was also found that the average parcel size has remained almost the same in some areas and has

demonstrated small growth in other areas over the period of 100 years after the completion of respective projects (Konttinen, 2016).

European Union Member States, which fund land consolidation projects from the national Rural Development Programmes (RDP) along with co-financing from European Union funds, are required to evaluate land consolidation measures as part of the European Union programme cycle evaluation according to the European Union's *Regulation No. 1 305/2013 on support for rural development*. These mandatory evaluations provide an overview of how the funding under the RDP was spent, including on measures funding land consolidation projects. However, the European Union evaluations should complement and not replace more detailed and technically focused evaluations conducted at the initiative of the lead agency.

It is recommended that the lead agency on a regular basis, e.g. every four to five years, initiates a thorough evaluation of the national land consolidation programme. The evaluation should be conducted by independent evaluation experts with detailed knowledge and understanding of agriculture, land markets and land consolidation.

✓ **Key recommendations 8.1:** Monitoring and evaluation

1. The national land consolidation programme and the secondary legal acts should require that the lead agency performs regular monitoring of the individual land consolidation projects during their implementation.
2. It is recommended that the lead agency develops a plan for the monitoring and evaluation of the land consolidation programme and its projects and ensures that the plan is implemented.
3. When land consolidation projects are implemented by private service providers contracted by the lead agency, it is recommended that some projects each year are fully implemented by staff of the lead agency in order to build up and maintain the capacity to efficiently monitor and supervise the work of the service providers.
4. All implemented land consolidation projects should be at least briefly evaluated to assess whether planned outputs were achieved and to capture the lessons learned for future adjustments of procedures and the programme.
5. The Land Consolidation Law and the national land consolidation programme should require the lead agency to perform an in-depth evaluation of a selected sample of implemented consolidation projects.
6. It is recommended that the lead agency on a regular basis, e.g. every four to five years, initiates a thorough evaluation of the national land consolidation programme.

LEGAL REMEDIES



9. LEGAL REMEDIES

Legal remedies related to land consolidation play a fundamental role in safeguarding the process. Taking into account the specific nature of land consolidation, which includes a large number of interested parties, the sensitivity of issues tackled and the time pressure to conclude the projects, legal remedies must be organized accordingly. However, countries must find efficient ways to ensure the aforementioned safeguards, so that the implementation of the projects is not jeopardized or unnecessarily delayed.

Countries have different approaches in ensuring the necessary safeguards. There are examples, where the judiciary branch is closely involved in the process. In Norway, all land consolidation is dealt with by a special court (Sky, 2015), while in Denmark, a judge chairs the Land Consolidation Commissions. However, in most countries land consolidation is an administrative process and the Land Consolidation Plan is adopted through an administrative decision. Accordingly, administrative process rules apply, including administrative remedies. This is the case in North Macedonia where the land consolidation process is safeguarded by the opportunity to lodge complaints in several different phases of the re-allotment planning, including the valuation and draft Land Consolidation Plan. The approved Land Consolidation Plan after the adoption through administrative procedure may be subject to judicial review before entering into force.

Despite different approaches, in all countries the land consolidation process is based on consultations and inclusion of a wide range of stakeholders, like landowners and other right holders. Landowners and land users are consulted individually as well as during public meetings and through the representative bodies (see Section 6.2). This means that they must be heard and their positions must be considered. The process must be organized in a way that the majority of issues could be solved by the Land Consolidation Commission or other competent body as the project advances. Those unsatisfied with the respective solutions should have a right to lodge an appeal to a higher administrative authority, if the land consolidation is organized as part of an administrative process. Administrative remedies not only allow to better ensure the safeguards, but they also diminish the number of potential ulterior complaints in the courts.

Administrative remedies should suspend the implementation of the project only in exceptional cases. For example, in majority-based land consolidation administrative appeals against the land valuation results could delay the re-allotment planning, since the re-allotment would not be feasible without a fully finalized land valuation. On the contrary, appeals against the proposed re-allotment of specific parcels should not delay the advancement of the project. Such appeals could be dealt with in parallel with the ongoing re-allotment of parcels. However, in all cases, administrative remedies should guarantee that project stakeholders have a possibility to be heard and receive a reasoned decision on the matter from the respective administrative body.

Only upon exhaustion of the administrative remedies, should the interested parties have a right to lodge a complaint to the court. The approaches with regard to the judiciary review of the process vary. For example, in Denmark, where only voluntary land consolidation is applied, there is no possibility to lodge an appeal against the adoption of the Land Consolidation Plan or any other decision made by the Land Consolidation Commission. The only option is to launch a judiciary action against the lead agency (the Ministry of Environment and Food) and claim damages resulting from the land consolidation project.

In the Netherlands (in mandatory land consolidation) the judicial review is performed stepwise. The Land Development Plan, which is prepared at the beginning of the project, may be appealed against upon its adoption. Appeals may relate to issues of delineation of land consolidation block(s), deduction of land for common purposes, allocation of ownership, operation and maintenance of roads, decisions related to roads being removed, and roads becoming public (Heinen, 2018). The Re-allotment Plan makes up a constituent part of the Land Development Plan and is adopted at the end of the planning process (see Section 2.2.5). The Re-allotment Plan, including the List of Rightful Claimants, undergoes judicial review upon its adoption. When all appeals related to the Re-allotment Plan are dealt with, the decision adopting the Re-allotment Plan is amended accordingly (if decided so by the court) and the Plan is registered. Once the Re-allotment Plan is registered, the List of Financial Settlements is finalized and also undergoes judicial review, which does not suspend the practical implementation of the project.

In Finland, appeals related to land consolidation may be introduced to the Land Court and later appealed to the Supreme Court. Appeals are introduced to the courts via the National Land Survey, responsible for the implementation of the land consolidation projects. The spectrum of issues that may be subject to judicial appeal is illustrated in Box 9.1, where land consolidation is one of the “cadastral procedures”.

Box 9.1: Issues that may be subject to judicial review in Finland

Section 232

- (1) An appeal can be made during the cadastral procedure concerning:
- 1) the right to be an interested party in a cadastral procedure;
 - 2) the rejection of an objection on the grounds of prejudice;
 - 3) the limitations concerning the carrying out of measures or use of areas referred to in Section 177;
 - 4) the interruption of a cadastral procedure;
 - 5) the conditions of a land consolidation or the extent of the land consolidation;
 - 6) the projects referred to in Sections 72-74 or matters referred to in Section 84;
 - 7) a land consolidation plan where a separate appeal has not been allowed on an issue included in the plan;
 - 8) the conditions for the execution and urban land replotting and the extent of the replotting area;
 - 9) a decision referred to in Section 142 concerning the division of a joint property area;
 - 10) a rejection of a demand for the dismissal of a partitioning, as well as a division plan in the case referred to in Section 52(2);
 - 10a) a decision on whether a partitioning is to be executed as a joint partitioning in compliance with Section 48, unless the decision is based on an agreement of the land owners; (...)
 - 11) a division plan of a joint property area when part of the division is executed in the manner referred to in Section 137(1);
 - 12) the payment of compensation in the case referred to in Section 203(2);
- (...).

Source: Finland – Real Estate Formation Act. Unofficial translation by the Ministry of Agriculture and Forestry, Finland.

Country practice illustrates, that different approaches to legal remedies may be applied and each country should elaborate mechanisms, which best suit their situation. In all cases, the Land Consolidation Law should provide that the final control of the land consolidation project should be performed by the courts. The prior administrative process should diminish the number of judicial claims and the legal remedies should be organized in a way, so as not to hinder and/or suspend the implementation of the land consolidation projects. To this end, the Land Consolidation Law could define who has the right to submit claims and thereby limit the scope of issues that could be appealed to the court. Respective legal actions should not suspend implementation unless there is a fundamental necessity for such a measure due to misuse, abuse of power, corruption, or other aspects. For example, the implementation of the project could be suspended by the court, if due to misuse the project threatens to inflict serious environmental damage, or the process is abused to serve the private interests of only a number of the landowners.

Moreover, legal acts regulating judicial review of the process could require that all appeals related to the land consolidation project are dealt with in the same court. This could ensure a more speedy judicial procedure and uniform final judgement by a single court, with the subsequent eventual cassation in the upper court. Relevant legal acts could also provide for specific speedy procedures of judicial review applicable to land consolidation.

✓ **Key recommendations 9.1:**
Legal remedies

1. The Land Consolidation Law and other relevant legal acts should provide for legal remedies safeguarding the land consolidation process. This should include both administrative legal remedies and the possibility for judicial review.
2. The Land Consolidation Law should confer the right to appeal against the decisions of the Land Consolidation Commission or other competent body adopting the Land Consolidation Plan to a higher administrative authority.
3. The Land Consolidation Law should define who has a right to lodge judicial appeals related to the land consolidation project and what issues may be subject of the appeal.
4. The Land Consolidation Law or other relevant legal acts should ensure that the legal remedies do not hinder the smooth realization of the land consolidation projects and do not suspend their implementation without a fundamental necessity for such a measure.
5. The Land Consolidation Law or legal acts regulating judicial procedures could require that all appeals related to the land consolidation project should be dealt with in the same court.
6. Legal acts regulating judicial procedures could provide for specific speedy procedures of judicial review applicable to land consolidation.

COMBINING LAND CONSOLIDATION WITH LAND BANKING



10. COMBINING LAND CONSOLIDATION WITH LAND BANKING

Land banking is a land management instrument that has proven its effectiveness and importance in facilitating the implementation of land consolidation projects. This Chapter focuses on those aspects of land banking and does not cover other uses of the instrument or any institutional issues.

Land banking is used broadly and combined with land consolidation in some of the analysed Western European countries, like Denmark, Germany and the Netherlands, as a tool to increase land mobility during the re-allotment planning. The instrument is also used to compensate landowners in land, instead of monetary compensation, when agricultural land is taken out of production for public-initiated projects. It allows for greater flexibility during the re-allotment planning when preparing the Land Consolidation Plan (see Section 6.5).

For the purposes of clarity in this guide, the term land bank should be understood as a public institution, performing the intermediate buying, selling or leasing of land in order to increase land mobility, to facilitate the rural land market in general, and to pursue public policy targets related to sustainable rural land use in particular (see Section 2.1.1). The function of land banking in the re-allotment planning is that it increases the land mobility by making more land available in the “land pool”. This is also crucial in order to allow facilitation of enlargement of holdings and farms in the land consolidation process.

Land banking is important because the use of available state-owned land can catalyse the re-allotment planning process in the project area. This would mainly involve the use of small and often badly shaped state-owned land parcels in land consolidation projects. Therefore, it is recommended to use land banking to purchase (if needed), sell, or lease out agricultural land on the market, as well as use these instruments to support and facilitate the implementation of the land consolidation projects or other large public purpose projects. Countries that have much available state-owned agricultural land in the land consolidation project areas would be able to simply make available this land to improve the land mobility in the re-allotment process.

The use of land banking integrated with the land consolidation process is also crucial when land consolidation projects with multi-purpose objectives are implemented (see Sections 3.1 and 6.5.1), e.g. when agricultural land is taken out of production to be part of projects such as construction of large-scale infrastructure, nature restoration, environmental protection, or climate change mitigation and adaptation. In these situations, the land banking instrument facilitates that landowners and farmers in the land consolidation process can be compensated in land instead of in monetary funds. This can avoid disturbance of farm structures in the project areas. In this way, land consolidation becomes an alternative to acquisition of private land through expropriation.

The purchase of privately-owned land by the land bank is especially relevant in areas with a small amount of land already owned by the state, where few private landowners are interested to sell land parcels, and where additional land is needed for compensation to active farmers for the land that they have relinquished to the aforementioned projects. After a project has been planned and before the land consolidation project is launched, the land bank should

seek to purchase land from private owners under normal land market conditions, rent it out temporarily, and then use it to catalyse the re-allotment planning through increasing land mobility. The land bank may also sell or exchange land during the land consolidation project to allow the formation of larger, better shaped parcels and attain other land consolidation objectives. In some countries, land banks are granted the pre-emption right to acquire land in land consolidation project areas.

One of the main strengths of land banking as an accessory tool to land consolidation is the availability of revolving resources, since the land bank acquires and sells the land receiving the funds. If the land bank has the right to hold the receipts from the sale of land and use them later for other acquisitions, rather than depending on the state budget, this would create a more flexible and sustainable instrument. Therefore, the legal acts regulating land banking should allow for the land bank to have a revolving budget, which would therefore not be required to be transferred to the state budget on a yearly basis. Land banking activities cannot function effectively if the funds are allocated yearly to the land bank, as the land bank must ensure the continuity of its activities. It is also necessary that decision procedures in the land bank are short and speedy and allows the land bank to act in the land market in the same way as private owners, i.e. take decisions on purchases and sales with short notice. Having to request ministerial or government permission for each transaction would most likely lead to delays and missing out on a purchase. Conferring at least a portion of the available state-owned agricultural land to the land bank should be the first step to launching land banking activities.

The legal form of land banks varies largely from country to country. In Denmark, the Land Consolidation Unit of the Danish Agricultural Agency performs land banking activities on behalf of the Ministry of Environment and Food.

In Finland, the purchase of land for land banking purposes is performed by the Local State Economic, Environmental and Traffic Centres. This is done in coordination with the staff of the National Land Survey and the yearly budget for this is assigned by the Ministry of Agriculture and Forestry (for agricultural or forest land consolidation projects), the Ministry of Transportation (for land consolidation in highway or railway projects) or the Ministry of Environment (for land consolidation in nature conservation projects).

In Germany, land banking (as a temporary limited action for the duration of a land consolidation project) is regularly exercised in every land consolidation project in a flexible and cost-effective manner. This allows to increase the land mobility and to acquire land for public purposes in the project area. The role of the land bank is performed either by the land consolidation authority or even by the Body of Participants, represented through its Board (see Section 2.2.3).

The land bank could also ensure broader functions and the implementation of an active land policy. It could be responsible for managing all or part of the state land and therefore, use it for land consolidation or other public objectives. Land banking can also be used actively to support development of smallholders or farms of young farmers into commercial family farms and hence give priority to such groups when state land is leased out or privatized. The Land bank may also acquire land from private owners in areas where respective future projects are being planned or in areas where agricultural land suitable for production is abandoned.

✓ **Key recommendations 10.1:**
Combining land consolidation with land banking

1. The Land Consolidation Law or a separate legal act on land banking should provide for the use of a land banking instrument in combination with land consolidation to increase land mobility, to facilitate farm enlargement, and to compensate landowners in land instead of monetary compensation, when agricultural land is taken out of production for public-initiated projects.
2. The legal acts regulating the land banking activities should provide that land banking activities are used in conformity with the broader strategic objectives of land consolidation.
3. The legal acts regulating the land banking activities should allow for the inclusion of state-owned agricultural land into the land bank.

GLOBAL PERSPECTIVES FOR LAND CONSOLIDATION



11. GLOBAL PERSPECTIVES FOR LAND CONSOLIDATION

The main focus of this guide has been to provide legal guidance to countries in Europe and Central Asia, particularly in support of the FAO regional programme to develop sound and operational land consolidation legislation in support of rural development. The recommendations of the guide build on the conducted regional study of good practice for land consolidation legislation in European countries with national land consolidation programmes, as well as on the experiences of FAO and the authors in the region (Hartvigsen, 2019).

However, it is both the hope and expectation that the guide will be relevant to countries in other regions as well. Europe is the region with the strongest and longest land consolidation tradition but countries in East and South East Asia such as China, the Republic of Korea, Japan and India have a long-lasting land consolidation tradition as well (Bullard, 2007). Other countries in Asia that are new to land consolidation, such as Myanmar (see Figure 11.1) and Vietnam, have shown interest in introducing it into their national frameworks and preliminary work is already underway. All agricultural land is state-owned in these countries, the focus is on consolidation of land use rights.

Also, some countries in Africa have experience with land consolidation, not always very successful but the need is documented (Asiama, Bennett and Zevenbergen, 2017). Furthermore, land fragmentation as a driver for land consolidation is widespread also in countries in North Africa and the Near East where there is so far little experience with land consolidation (FAO, 2017c). Thus, it is reasonable to assume that there is an unfulfilled potential for developing and introducing land consolidation instruments way beyond Europe and Asia. At the same time, many countries with ongoing land consolidation programmes are facing legal and operational constraints and will hopefully benefit from the guide as well.

While more than 20 regional workshops have been organized or co-organized by FAO since 2002 with a focus on different aspects of land consolidation in Europe,¹⁹ there have so far been very few events and initiatives with a global perspective. There is an overall need to establish a global overview of land consolidation practices, as well as for a cross-regional and global exchange of experiences on land consolidation. This also relates to land consolidation legislation. As previously mentioned, land consolidation has a global potential that includes regions with little or no experience. Furthermore, it could be beneficial to develop and apply land consolidation instruments in countries where land fragmentation, both ownership and land use fragmentation, and smallholding and farm sizes, are hampering the development of sustainable farms in all three dimensions (economically, socially and environmentally). Land consolidation may also be developed where there is a need for a multi-purpose land management instrument to adjust land ownership and land use for a larger number of landowners, as well as users in the same areas affected by area-demanding projects, such as construction of large-scale infrastructure, nature restoration, environmental protection, climate change adaptation and mitigation, etc.

¹⁹ See FAO website: <http://www.fao.org/europe/resources/land-tenure-workshops/en/>

Figure 11.1: Land parcel map before and after the land consolidation pilot project in Tegyi Gone village, Myanmar



Source: Taken from the Completion Report – Farmland Consolidation in Tegyigone village, KOICA project, 2015.

One of the few events that focused on land consolidation in a global perspective was the “Symposium on land consolidation and land readjustment for sustainable development” organized in Apeldoorn, the Netherlands, in November 2016 (see Section 1.1). The symposium concluded with the “Apeldoorn Declaration on Land Consolidation and Land readjustment for Sustainable Development (Louwsma et al., 2017). This Declaration emphasized the importance of developing land consolidation instruments that are in line with the VGGT, respect for all legitimate tenure right holders and their rights, and the best possible contributions to achieving the Sustainable Development Goals. The need for inter-regional exchange of experiences was recognized and it is now time to continue this process.

REFERENCES

REFERENCES

LITERATURE

- Aleknavičius, P.** 2012. *Nepriklausomoje Lietuvoje atliktų žemės ūkio paskirties žemės pertvarkymo darbų lyginamoji analizė*. Public Policy and Administration, Vol. 11, No. 2, pp. 246-259. Mykolas Romeris University, Lithuania. (also available at https://www.mruni.eu/upload/iblock/721/007_Aleknavicius.pdf).
- Arbeitsgemeinschaft Flurbereinigung (ArgeFlurb).** 1995. Flurbereinigungsgesetz / Land Consolidation Act (Federal Republic of Germany), Schriftenreihe der ArgeFlurb, HEFT 6.
- Asiama, K.O., Bennett, R.M. & Zevenbergen, J.A.** 2017. Land Consolidation for Sub-Saharan Africa's Customary Lands – The Need for Responsible Approaches. *American Journal of Rural Development*, 2017, Vol. 5, No. 2, 39-45.
- Avramovic, M.** 2004. Uredenje zemljsne teritorije komasacijom u Republici Srbiji. Geodetska sluzba, Vol. 33, No. 1, pp. 54-68.
- Basalykas, A.** 2014. *Lietuvos kraštovaizdis*. Vilniaus universitetas, Vilnius. 242 p. (also available at www.gkk.gf.vu.lt/images/leidiniai/A.Basalykas.pdf).
- Becker, M.** 2017. *Options for Legislative and Institutional Reform of Land Consolidation in Serbia: Choosing the Right Approach and Building Regional Expert Networks*. Paper prepared for presentation at the 2017 World Bank Conference on Land and Poverty, 21-24 March 2017. The World Bank, Washington, DC.
- Binns, B.** 1950. *The consolidation of fragmented agricultural holdings*. Rome, FAO.
- Bullard, R.** 2007. *Land consolidation and rural development*. Anglia Ruskin University.
- Daugaliene, V.** 2007. *Recent developments in land consolidation in Lithuania*. Article presented in the Regional Workshop on EU Rural Development Programme 2007-13 and its application to land consolidation, Prague, Czechia.
- FAO.** 1955. *The State of Food and Agriculture 1955 – review of a decade and outlook*. Rome.
- FAO.** 2002. *Land Tenure and Rural Development*. FAO Land Tenure Studies 3. Rome. (also available at <http://www.fao.org/3/y4307e/y4307e05.htm#bm05>).
- FAO.** 2008. *Opportunities to mainstream land consolidation in rural development programmes of the European Union*. FAO Land Tenure Policy Series 2. Rome.
- FAO.** 2013. *Governing Land for Women and Men – A Technical Guide to Support the Achievement of Responsible Gender-Equitable Governance of Land Tenure*. Governance of Tenure Technical Guide 1. Rome. (also available at <http://www.fao.org/3/a-i3114e.pdf>).

FAO. 2015. *Pilot evaluation: Land Consolidation in Konya Region, Cumra District, villages Inli and Dinlendik (2010-2012)*. Final Report by Kvistgaard, M. with input from Hartvigsen, M. FAO/Turkey Partnership Programme (UTF/TUR/060/TUR). Rome.

FAO. 2016. *Responsible Governance of Tenure and the Law*. FAO Governance of Tenure Technical Guide No. 5. Rome. (also available at <http://www.fao.org/tenure/resources/results/card/en/c/27fac10b-126d-48fa-a417-d5c65a120b86>).

FAO. 2017a. *Creating a system to record tenure rights and first registration*. Governance of Tenure Technical Guide. Rome. (also available at <http://www.fao.org/3/a-i7559e.pdf>).

FAO. 2017b. *Report for Country wide analysis of feasibility for implementation of land consolidation*. Prepared under the MAINLAND project in North Macedonia (GCP/MCD/002/EC – Mainstreaming of the National Land Consolidation Programme), implemented by FAO and funded by the European Union.

FAO. 2017c. *Study on small-scale family farming in the Near East and North Africa Region – Focus Country: Egypt*. Rome.

FAO. 2018. *Realizing women's legal rights to land in the law – A guide for reporting on SDG 5a2*. Rome. (also available at <http://www.fao.org/3/I8785EN/i8785en.pdf>).

FAO & GIZ. 2019. *Guidelines on Strengthening Gender Equality in Notarial Practices – South-East Europe*. 36 pp. (also available at <http://www.fao.org/3/CA2953EN/ca2953en.pdf>).

Gollwitzer, T. 2018. *Land Consolidation Legislation in Germany/Bavaria*. A presentation from the 10th International LANDNET Workshop, Regional Consultation Land Consolidation Legislation, Skopje, North Macedonia, 19-21 June 2018.

Haldrup, N.O. 2004. *Danish Land Consolidation/The interaction between land consolidation and land banking*. International Workshop: Land banking/Land Funds as an Instrument for Improved Land Management for CEEC and CIS, organized by the Directorate for Food, Fisheries and Agri Business, Land Consolidation Division (DFFE) and FAO/UN, Tonder- Denmark, 17th – 20th March 2004.

Hartvigsen, M. 2014a. *Land consolidation and land banking in Denmark – tradition, multi-purpose and perspectives*. *Danish Journal of Geoinformatics and Land Management*, Year 122, Vol. 47, 1-7, p. 52.

Hartvigsen, M. 2014b. *Land Mobility in a Central and Eastern European Land Consolidation Context*. *Nordic Journal of Surveying and Real Estate Research* 10:1, p. 26.

Hartvigsen, M. 2015a. *Land Reform and Land Consolidation in Central and Eastern Europe After 1989: Experiences and Perspectives*. PhD Dissertation, Aalborg University. (also available at https://vbn.aau.dk/ws/files/316449007/Morten_B._Hartvigsen_EPUB.pdf).

Hartvigsen, M. 2015b. *Experiences with Land Consolidation and Land Banking in Central and Eastern Europe After 1989*. Presentation for FAO Land Tenure Working Paper, No. 26, 138 pp. (also available at <http://www.fao.org/3/a-i4352e.pdf>).

Hartvigsen, M. 2019. *FAO support to land consolidation in Europe and Central Asia from 2002-2018, Experiences and way forward*. *FAO Land Tenure Journal* 1/2019. Rome. (also available at <http://www.fao.org/3/CA3184EN/ca3184en.pdf>).

- Hartvigsen, M., Versinkas, T., Vidar, M., Mitic Arsova, K., Van Holst, F. & Gorgan, M.** 2019. *FAO recommendation on land consolidation legislation*. Paper presented at the 2019 World Bank Conference on Land and Poverty, Washington, DC, March 25-29, 2019.
- Heinen, J.** 2018. Overzicht landinrichtingsjurisprudentie 2007-2017: het inrichtingsplan. *Tijdschrift voor Agrarisch Recht*, Issue 11/2017, pp. 602-611.
- Hiironen, J. & Niukkanen, K.** 2014. On the structural development of arable land in Finland – How costly will it be for the climate? *Land Use Policy* 36, p. 196, ELSEVIER.
- Jacoby, E.H.** 1959. *Land Consolidation in Europe*. A study based on the work of the Working Party on Consolidation of Holdings organized under the sub-Commission on Land and Water Use of the European Commission on Agriculture. Issued by International Institute for Land Reclamation and Improvement at the Wageningen University, The Netherlands. Rome, FAO.
- Jansen, L., Lemmen, C. & Wouters, R.** 2010. *The computerised land re-allotment process in Turkey and the Netherlands in multi-purpose land consolidation projects*. Paper presented at FIG Congress 2010, Sydney, Australia, 11-16 April 2010.
- Konttinen, K.** 2016. *The Effectivity of Land Consolidation in Finland. Symposium on Land Consolidation and Readjustment for Sustainable Development*. FIG OICRF, 9-11 November 2016. Apeldoorn, Netherlands. (also available at <https://www.oicrf.org/-/the-effectivity-of-land-consolidation-in-finla-1>).
- Leenen, H.** 2014. Land Development in The Netherlands. *Zeitschrift für Geodäsie, Geo-information and Land Management*, Issue 3/2014, pp. 166-172.
- Louwsma, M., Lemmen, C., Hartvigsen, M., Hiironen, J., Du Plessis, J., Chen, M. & Laarakker, P.M.** 2017. *Land consolidation and land readjustment for sustainable development – the issues to be addressed*. Paper presented at the International Federation of Surveyors (FIG) Working Week in Helsinki, Finland.
- Ministry of Agriculture and Forestry (Finland).** 2015. *Land Rearrangement Strategy of the Ministry of Agriculture and Forestry for 2015–2020*. Helsinki. (also available at www.mmm.fi).
- Marinkovic, G., Trifkovic, M. & Nestorovic, Z.** 2013. Mogucnosti Rekomasacije u Srbiji na Primeru Opstine Sombor. *Zbornik radova GF Subotica*, No. 22, pp. 199-208, UDK: 332.3, 2013.
- Meijer, G. & Emmens, N.** [No date]. *Financial arrangements in land consolidation – a visual method for valuation explained*. (also available at <https://www.oicrf.org/-/financial-arrangements-in-land-consolidation-a-visual-method-for-valuation-explain-1>).
- Meliczek, H.** 1973. The work of FAO and experiences in land consolidation. *Land Reform, Land Settlement and Co-operatives*, No. 1. Rome, FAO. pp. 50–63.
- Ónega-López, F.J., Puppim de Oliveira, J.A. & Crecente-Maseda, R.** 2010. *Planning Innovations in Land Management and Governance in Fragmented Rural Areas: Two Examples from Galicia (Spain)*. *European Planning Studies* Vol. 18, No. 5.
- Palmer, D., Munro-Faure, P. & Rembold, F.** 2004. Land consolidation and rural development in Central and Eastern Europe. *Zeitschrift für Geodäsie, Geoinformation und Land management*, 2/2004.

Sky, P.K. 2015. Land consolidation in Norway in an international perspective. *Spanish Journal of Rural Development*, Vol. VI (1-2): 81-90.

Sulonen, K. & Kotilainen, S. 2016. *Lessor's Status in Land Consolidation in Finland*. *Nordic Journal of Surveying and Real Estate Research*. 1:11. 18-36.

Thomas, J. 2004. Modern Land Consolidation - recent trends on land consolidation in Germany. (also available at <https://pdfs.semanticscholar.org/5fb9/0c15f48bbd627ea6c587e8462a7261a56801.pdf>).

Thomas, J. 2006. Attempt on Systematization of Land Consolidation Approaches in Europe. *Zeitschrift für Geodäsie, Geoinformation und Land management*, 3/2006, p. 156-161.

Trifkovic, M., Ninkov, T. & Marinkovic G. 2013. *Komasacija*. FTN izdavastvo, Novi Sad.

Van den Noort, P.C. 1987. Land consolidation in the Netherlands. *Land Use Policy*, Vol. 4 (1), January 1987, pp. 11-13. Elsevier Ltd. (also available at <https://www.sciencedirect.com/science/article/abs/pii/0264837787900044>).

Van Holst, F. 2018. *Towards Improved Farm Structures and Rural Land Market Functioning: Policy Options based on Lessons from European Experience*. Background Report for World Bank Systematic Country Diagnostic for Armenia, pp. 16-17.

Van Holst, F., Hartvigsen, M., & Ónega López, F. 2018. *Land governance for development in Central and Eastern Europe: Land fragmentation and land consolidation as part of Sustainable Development Goals*. World Bank Land and Poverty Conference, March 2018.

Vasiljevic, D., Radulovic, B., Babovic, M. & Todorovic, S. 2018. Land Consolidation as unused potential - The effects of implementation, barriers and potential relevance of agricultural land consolidation in Serbia. NALED.

LEGAL INSTRUMENTS

Legally-binding instruments

Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted by the United Nations General Assembly on 18 December 1979 in New York. It was ratified 3 September 1981.

European Convention for the Protection of Human Rights and Fundamental Freedoms (also known as the European Convention on Human Rights), adopted in Rome on 4 November 1950 and came into force in 1953.

Non-legally-binding instruments

Apeldoorn Declaration on Land Consolidation and Land Readjustment for Sustainable Development. Concluding declaration at the International Symposium on Land Consolidation and Land Readjustment, organized in Apeldoorn, the Netherlands, 9–11 November 2016.

The Munich Statement on land consolidation as a tool for rural development in CEE/CIS countries. Concluding statement at the International Symposium on Land Fragmentation and Land Consolidation in CEEC: A gate towards sustainable rural development in the new millennium, held in Munich, dated 28 February 2002.

The Tonder Statement – Land Banking and Land Funds: Elements for Land Consolidation, Land Management and Rural Development. Concluding statement at the International Workshop on Land banking / Land funds as an Instrument for Improved Land Management in CEEC and CIS, held in Tonder, Denmark, dated 20 March 2004.

Transforming our world: the 2030 Agenda for Sustainable Development, adopted by 193 countries at the UN General Assembly on 25 September 2015 (UN Resolution 70/1). The Agenda has 92 paragraphs. Paragraph 59 outlines the 17 Sustainable Development Goals and the associated 169 targets and 232 indicators.

Universal Declaration of Human Rights, adopted by the United Nations General Assembly A/RES/217 A (III), 10 December 1948.

Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security. FAO, 2012. Rome. (also available at <http://www.fao.org/docrep/016/i2801e/i2801e.pdf>)

SUPRANATIONAL LEGISLATION

European Union

Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment (EIA Directive).

Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (Nitrate Directive).

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy, 23 October 2000 (Water Framework Directive).

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive).

Regulation No. 1 305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No. 1 698/2005.

NATIONAL LEGISLATION

Czechia

- Law No. 139/2002 on Land Consolidation and Land Offices (*Zákon č. 139/2002 Sb., ze dne 21. března 2002 o pozemkových úpravách a pozemkových úřadech a o změně zákona č. 229/1991 Sb., o úpravě vlastnických vztahů k půdě a jinému zemědělskému majetku*).

Denmark

- Executive Order on Land Consolidation (*Bekendtgørelse om jordfordeling*) No. 331, dated 25 March 2013.
- Law on Land Consolidation and Public Purchase and Sale of Real Property for Agricultural Purposes (*Bekendtgørelse af lov om jordfordeling og offentligt køb og salg af fast ejendom til jordbrugsmæssige formål m.m. (jordfordelingsloven)*, nr 31 af 04/01/2017).

Finland

- Real Estate Formation Act 12.4.1995/554 (*Kiinteistönmuodostamislaki* – Finnish) and (*Fastighetsbildningslag* – Swedish), 1995.
- Highways Act (503/2005), (*Maantielaki 23.6.2005/503* – Finnish) and (*Landsvägslag 23.6.2005/503* – Swedish) 2005.
- Land Rearrangement Strategy, adopted by the Ministry of Agriculture and Forestry, 2015. Does not have the status of a legal document.

Germany

- Land Consolidation Act (*Flurbereinigungsgesetz (FlurbG)*) adopted on 14 July 1953, consolidated on 16 March 1976, with latest amendments adopted on 19 December 2008.
- (Bavaria) Land Consolidation Implementation Law (*Gesetz zur Ausführung des Flurbereinigungsgesetzes [AGFlurbG]*) published on 8 February 1994, amended by Section 39 of the Law on 20 December 2011.
- (Bavaria) Village Renewal Guidelines (*Dorferneuerungsrichtlinien zum Vollzug des Bayerischen Dorfentwicklungsprogramms [DorfR]*). Notice from the Bavarian State Ministry of Food, Agriculture and Forestry, dated 29 March 2019.
- (Bavaria) Financing Guidelines for Rural Development (*Finanzierungsrichtlinien Ländliche Entwicklung [FinR-L]*). Notice from the Bavarian State Ministry of Food, Agriculture and Forestry, dated 9 July 2019.

Lithuania

- Law on Land (*Žemės įstatymas*), No. I-446, 26 April 1994.
- Government Resolution no. 697 on the Approval of Rules for Drafting and Implementation of Land Consolidation Projects (*Lietuvos Respublikos Vyriausybės nutarimas Nr. 697 Dėl žemės konsolidacijos projektų rengimo ir įgyvendinimo taisyklių patvirtinimo*), dated 27 June 2005.
- Government Resolution no. 81 on the Approval of the National Land Consolidation Strategy (*Lietuvos Respublikos Vyriausybės nutarimas Nr. 81 Dėl Nacionalinės žemės konsolidacijos strategijos patvirtinimo*), dated 23 January 2008.

Netherlands

- Law on Land Consolidation (*Wet op de Ruilverkaveling*), adopted in 1924 and entered into force 1 December 1924.
- Land Consolidation Law of 1954 (*Ruilverkavelingswet 1954*) (entered in force 15 February 1955).
- Law on Environmental Management (*Wet Milieubeheer*), adopted 13 July 1979.

- Land Development Law (*Landinrichtingswet*), adopted 9 May 1985.
- Law on Development of Rural Areas (*Wet Inrichting Landelijk Gebied*), adopted 7 December 2006 and entry into force on 1 January 2007. Note: by 2022, this Law will be incorporated into a single Act entitled Environment and Planning Act (*Omgevingswet*).
- Decree on Environmental Impact Assessment (*Milieueffectrapportage*), adopted 4 July 1994.
- Ministerial Regulation on Functioning of Land Consolidation Committee (*Regeling Werkwijze Landinrichtingscommissie*) (Staatscourant 1985 No. 217), adopted in 1985.

North Macedonia

- Law on Consolidation of Agricultural Land, Official Gazette of North Macedonia 187/2013, 61/2016 and 83/2018.

Portugal

- Law No. 111/2015 dated 27 August 2015 Establishing the Legal Regime of Land Re-structuring, amending the Civil Code, and repealing the Decree-Laws No. 384/88 dated 25 October 1988 and 103/90 dated 22 March 1990 (*Lei n.º 111/2015 de 27 de agosto Estabelece o Regime Jurídico da Estruturação Fundiária, altera o Código Civil, e revoga os Decretos - Leis n.os 384/88, de 25 de outubro, e 103/90, de 22 de março*).

Serbia

- *Urbar* Law on Land Consolidation, entered into force in 1836 under the territory of the Austro-Hungarian Empire.
- Law on Consolidation in Banat and Backa, entered into force in 1908.
- Law on Arrondation and Consolidation of Agricultural and Forest Land, Official Gazette of the Socialist Republic of Serbia No. 47/1974 (*Zakon o arondaciji i komasaciji poljoprivrednog i sumskog zemljišta, Sluzbeni Glasnik Socijalisticke Republike Srbije Br. 47/1974*).
- Law on Agricultural Land, Official Gazette of the Republic of Serbia, No. 62/2006, 65/2008 and 41/2009. (*Zakon o poljoprivrednom zemljištu, Sluzbeni Glasnik Republike Srbije Br. 62/2006, 65/2008 i 41/2009*) Unofficial translation.

Spain

- Law of 20 December 1952 (BOE No. 358, of 23 December 1952).
- (Galicia). Law on Land Consolidation (*LEY 10/1985, de 14 de agosto, de Concentración Parcelaria para Galicia*), 1985.
- (Galicia). Law on the Improvement of Agrarian Land Structures of Galicia (*LEY 4/2015, de 17 de junio, de mejora de la estructura territorial agraria de Galicia*), dated 17 June 2015.
- Decree No. 118 approving the text of the Law on Agrarian Reform and Development (*Decreto de reforma agraria e desenvolvimento*), 12 January 1973.

Turkey

- Law No. 7 139 of 19 April 2018.

Legal guide on land consolidation

Based on regulatory practices in Europe

Land consolidation is a highly effective land management instrument that allows for the improvement of the structure of agricultural holdings and farms, which increases their economic and social efficiency and brings benefits both to right holders as well as to society in general. Since land consolidation gives mobility to land ownership and other land rights, it may also facilitate the allocation of new areas with specific purposes other than agriculture, such as for public infrastructure or nature protection and restoration. FAO project experiences from Member States are that land consolidation instruments necessitate a thoroughly elaborated legal regulation that is integrated into the national legal framework.

Land consolidation is a legally regulated procedure led by a public authority and used to adjust the property structure in rural areas through a comprehensive reallocation of parcels, coordinated between landowners and users in order to reduce land fragmentation, facilitate farm enlargement and/or achieve other public objectives, including nature restoration and construction of infrastructure.

This legal guide provides detailed guidance on legislative issues regarding land consolidation in ways that align with the Voluntary Guidelines on Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security and international human rights law. It focuses on land consolidation in rural areas and is based on regional good land consolidation legislative practices in Europe,

This legal guide is published in collaboration with the FAO Regional Office for Europe and Central Asia.

ISBN 978-92-5-132858-3



9 789251 328583

CA9520EN/1/06.20