



# Farland

Near Future



# FAR LAND NEAR FUTURE

North East South West  
 **INTERREG IIC**



**PROJECT PART-FINANCED  
BY THE EUROPEAN UNION**





# Farland



FUTURE APPROACHES TO  
LAND DEVELOPMENT



## Editors

Pat van der Jagt

Frank van Holst

Joachim Thomas

Adri van den Brink

Jeroen Reyniers

Olga Jongeneelen

Terry van Dijk

Wim Timmermans

Vilma Daugaliene

Rafael Crecente

Margarida Ambar

Zsuzsanna Flachner



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Upper Land Consolidation Authority North Rhine-Westphalia, Germany

Kassel University, Germany

Research Institute for Soil Science and Agricultural Chemistry, Hungary

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We hope that this book will reach a wide circle of professionals, policy makers, and researchers.

Enjoy reading it!

The Editors

# Preface

“FARLAND” stands for “Future Approaches to Land Development”.

The project is part of the EU-INTERREG III Programme supporting the EU Regional Policy under the responsibility of European Commissioner Danuta Hübner. The mission of the Regional Policy is to strengthen economic, social and territorial cohesion by reducing disparities in the level of development among regions and Member States.

I am very pleased that the Common Initiative INTERREG has funded this project allocated to rural space as FARLAND deals with rural development in Europe. The focus is on upgrading and improving strategies, instruments and tools for integrated rural development. Seven institutional and four scientific partners from seven different countries of the European Union have joined FARLAND by exchanging their experiences, knowledge and information.

The “FARLAND book” presents the conclusions of the project. Reading the book I am happy to see that INTERREG III has supported the analysis and study of the different approaches of rural development between regions and regional authorities. INTERREG III has successfully supported the development of networks and the exchange of experiences.

The results are astonishing and remarkable. Great emphasis has been put in particular to encourage innovative approaches and practices. I am sure that they will not only promote the rural development in the participating regions but the results are transferable to all other European countries enabling them to establish and implement their own regional and national Development Programmes.

I congratulate the project partners and involved experts. I hope that the FARLAND book will receive Europe-wide attention. I am convinced that the International FARLAND Conference in Budapest will initiate a broad discussion about strategies, instruments and tools for rural development throughout Europe. I hope that it will create awareness about an even more efficient implementation of the European Structural and Rural Development Policies and that we shall become better and better at bringing welfare to the people living and working in rural Europe.



Mariann FISCHER BOEL  
European Commissioner  
for Agriculture and Rural Development



## Once Upon a Time in a Far, FARLAND...

... policies of territorial planning were effectively implemented. Good intentions did not stop after drawing up strategic plans for regional and rural development. In this land, the instruments for land development were available to harmonise land use, to reconcile public interests with private landowners and to facilitate the processes of planning, negotiation and decision-making. Projects were integrated by nature. In fact, the word 'integrated' was not necessary anymore since the process of bringing together different voices, and the balanced way of assessing and setting priorities always led to general development plans of the area. Words like 'rural', 'urban', 'regional' etc. were abandoned since the only things that mattered were the area itself, its specific challenges, and the opportunities that changes in society offered.

Local and regional stakeholders were always ready to get involved and take responsibility and the people were always impatient! They simply did not accept development or implementation to last longer than necessary. When a change took longer than necessary, they just wouldn't accept! They would go out of their way to quit the procedures, find new ways, be adaptive or adjust legislation. Everything they could possibly do, they would do! And always, the quality of the area and the concerns of the people were put first.

But the situation wasn't always like this. Like life itself, a gradual evolution was needed to achieve this balanced state. At first, after the war, land development instruments were used to secure food production. Land use patterns and infrastructure were improved. Via 'land consolidation', the landscape was rationalised and farm structures were scaled up. Under a 'common agricultural policy' a new balance was sought. After reaching food security in the 1970s, society changed rapidly. Agriculture, as the engine for rural development staggered while concern for landscape and quality for the living environment grew.

This trend got even more prominent until the 1990s with the growing concern on losing biodiversity and nature. Some policy makers tried to adapt. They made new legislation and new procedures but they made a mistake by trying to solve everything via laws and decrees. Apparent lack of trust in local and regional stakeholders prevented the establishment of more flexible frameworks.

In some areas the broadening of the land development approach hampered. There were too many other priorities and people kept dreaming about bigger plots, higher production and happy farmers. More balanced development was the ultimate goal but any attempt to change got stuck in the overriding idea that economy needed to keep growing before 'luxurious' topics as landscape quality and biodiversity could be tackled.

A new flow of democracy and freedom raged through the central parts of the land from the beginning of the 1990s. A "Civil Society" arose and raised its voice. New hope and dreams were born and hidden problems came to the surface. Land use structures of the pre-war period were reintroduced. Large parts of this central area were poor; too dependant on agriculture and struggling with major issues like small scale, unclear ownership situations and the belief that governments perpetuated problems instead of solving them. A new approach was needed since it was strongly felt that old objectives and their instruments could not be simply replicated.

Meanwhile, at the international level, the leaders decided that they should skip trade barriers and protective agricultural policies and instead be part of an international economic competition. This led to confusion: should governments still attempt to regulate land use and facilitate the solving of land use conflicts or should everything be left to the market in the future?

At this point something magical happened. Experts were brought together and they started learning from and inspiring each other. Instead of finding differences, they started looking for similarities and common accomplishments. They learned quickly, worked hard and made changes. New definitions of land development were created and every government switched from old familiar techniques to more complete, decentralised and flexible approaches. Land development was no longer a sectoral approach, associated with lengthy and costly procedures. It was reinvented and everyone believed in it!

So far, we were describing an imaginary land, called FARLAND. Of course, it is the dream of every exchange and development project to fulfil a crucial role at a turning point in history. With the risk of overestimating our role, we think that the network project 'FARLAND' has played an important role in the past few years.

Professionals from seven countries and 11 organizations were brought together. While founding the partnership, a very conscious decision was made to involve partners from different parts of Europe and apply different types of land development approaches. Land development practice is formed by differences in geography, climate, population density, welfare status and institutional setting. Apparent differences between the approaches raised our curiosity over how and to what extent can organisations learn from each other.

Partners on the one hand were oriented by the mix of policy and implementation, and by research and development on the other hand. This raised expectations of cross fertilisation for learning and development and we managed to learn to use a common language and we stimulated the upgrading of policies.

The essence of FARLAND is a thorough assessment of good practices and approaches. These were analysed in six regional study tours. The studied projects range from the northern Karst region of Lithuania down to the irrigated land of Mondego valley in Portugal. Additionally, 20 Technical Exchange Visits gave us the opportunity to analyse and discuss what was investigated and experienced. The central theme was always the land development approach.

Land development in FARLAND is defined as a public task for adapting the nature and the location of land use and land ownership for the sake of public as well as private objectives. To achieve this, a set of legal and informal land related instruments are used.

Land development deals with a broad range of topics. Hungary, for example, is studying the opportunities to use 'land development' for controlling and mitigating the effects of flooding problems along the Danube and Tisza rivers. Lithuania is using it to address the small-scale structure of post-communist land use reality. North Rhine - Westphalia is using the approach to introduce multi-objective projects, for example to fit in big infrastructure projects in the landscape or to reconvert brown coal mining areas. The Netherlands uses land development to balance metropolitan development with objectives to keep rural areas viable and attractive. The situation is the same in Flanders, where a strong bottom-up approach is combined with concepts of regional identity. In some of the remote Galician mountains, land development facilitates strong community involvement and a better balancing of agricultural and other forms of regional development. Portugal in turn has shown that land development can optimise investments in irrigated agricultural areas. A whole village was removed and 'reinvented' via land development in the broader regional development programme of the Alqueva dam in Alentejo region. All these examples were submitted to a process of review, analysis and joint learning in order to improve policies.



The results of our teamwork are documented in this book.

The book has two main parts. The first part deals with policies and approaches and it reflects the main output of the process of reviewing, learning and developing.

Chapter 1 shows the current state-of-the-art methods in our partner countries. It describes how agricultural sector approaches have evolved and how they have broadened to current policies and instruments.

Chapter 2 focuses on innovation as the basis for this continuous evolution of policies. By illustrating how innovations take place, we hope to stimulate professionals to engage more explicitly in experiments related to policy development.

Chapter 3 investigates whether we are heading to one common approach. By looking at the issues at stake, the main challenges for future land development are made clear. This part also illustrates how the FARLAND partners are preparing for the future by highlighting the common directions in learning and development. Examples from the different countries show how these developments will be put in practice.

Chapter 4 answers the question: 'Are we heading towards a common approach?' It draws conclusions regarding the added value of FARLAND and it sketches our common challenges.

The second part deals with people and places. Since we believe in 'living case studies', a selection of 18 remarkable and stimulating projects are documented in this part of the book, hoping to inspire other projects.

We hope that policy makers across Europe will recognise the added value of land development instruments in broad territorial planning and will use the findings to improve the living and working conditions in rural areas. Proper (re-) formulations of strategies and frameworks are needed in the different countries, regions and at the EU level in order to gain the full benefits of land development. We believe that European regions will become more prosperous and dynamic if they do so.

The enthusiasm and drive of the FARLAND network is heart-warming. All European projects would succeed if the people involved would be like 'our group' of motivated and culturally sensitive professionals. In our FARLAND, there are no borders, and cultural differences are merely subjects of conversation at the diner table. We consider this as a major outcome in itself.

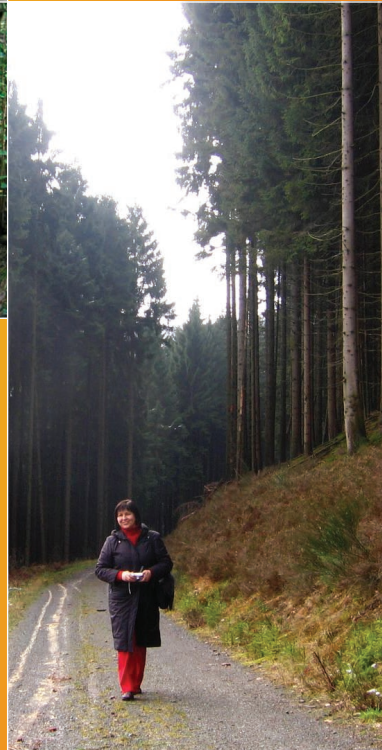
On behalf of the whole FARLAND team, we wish you a lot of pleasure and inspiration while reading the book!



Frank van Holst  
Project manager FARLAND



Joachim Thomas  
Chairman FARLAND steering committee



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# PART I



# CHAPTER 1

## What's cooking in Land Development

Francisco Onega Lopez, University of Santiago de Compostella  
Joachim Thomas, Upper Land Consolidation Authority North Rhine-Westphalia  
Terry van Dijk, Wageningen University  
Rafael Crecente, University of Santiago de Compostella  
Margarida Ambar, DGADR, Ministry of Agriculture, Rural Development and Fisheries of Portugal  
Adri van den Brink, Government Service for Land and Water Management (DLG)  
Wim Timmermans, Alterra  
Szabolcs Bíró, Research Institute for Soil Science and Agricultural Chemistry Hungary

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### 1.1.1 INTRODUCTION

The following paragraphs will give an overview of what's cooking in land development across FARLAND countries and present the state-of-the-art of land development. The FARLAND Kitchen has both different and similar ingredients, recent past and future challenges, and the partners together configure a rich menu of land development situations across Europe. The intention of evolving and upgrading land development practices for the future is an element that unites FARLAND partners in a homogeneous flavour.

But first let's introduce land development as an implementation approach to realise the objectives of regional and rural development policies within the spatial planning scheme. The essence of the relationship between the spatial dimension of land use and property rights is shown in the 'onion ring' figure below (Figure 1).

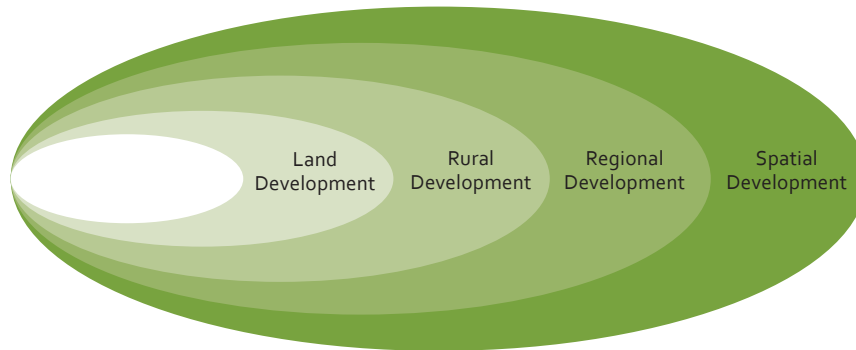


Figure 1 – The relation between land development and spatial development

Spatial planning regulates the functions of the land at national, provincial and municipal level. Typical functions indicated in a spatial plan include residential areas, business areas, infrastructure, agricultural areas, forests and natural reserves. A spatial plan sets the legal framework for activities in certain areas; these plans are usually not development programs.

Activities of economically oriented regional development involve the development of strong economic sectors, the revival of city centres; the extension of residential areas; the creation of new commercial centres; the construction of highways and regional roads; harbour extensions; and the creation of infrastructure for energy production (like dams, pipelines), etc. Within this context, rural development policies focus on less densely populated areas<sup>1</sup> acting on the local level and scale. Thus, rural regional development is not only about general economic and social development but also the strengthening of the countryside.

Both regional and rural development policies use different implementation approaches and several kinds of physical activities. These activities also have to deal with the spatial dimension of land use and property rights. In this case, the activities are usually known as land development, a term that can have different meanings according to, for example, the legal system of a country, the width of the sectors involved, the specific physical and social circumstances that have to be taken into account, or the organisational setting in which projects are implemented.

Land development projects can be very broad, i.e. extended to many functions and sectors, or more narrow, dealing with one or a few specific functions, such as agriculture or nature. Projects can also be legally based or voluntary. Land consolidation is a more specific form of land development, i.e. mainly focused on the exchange of land to improve the structure of agriculture.

<sup>1</sup> The official OECD norm to call an area a rural area is <150 inhabitants / km<sup>2</sup> but many countries use a broader interpretation and consider the 'countryside' in general to be rural areas as well.

Land development instruments arrange the land structure and ownership in an interactive way, protecting legal rights. By combining different tools, such as buying and selling land, exchange of land between different owners and users, construction of facilities, etc., land development makes sure that land is rearranged in a qualitatively high and cost-effective way in order to provide better conditions for existing functions and to ensure the availability of land for new functions.

Thus, land development implements regional and rural development measures in a specific site under the spatial planning scheme. This process also contains the actual construction of new infrastructure, landscape elements etc., although it concerns mainly the more simple facilities of local use.

In large regional or national development projects, land development is involved directly in construction activities (e.g. highways, dams, residential areas) rearranging land use and coordinating small-scale activities in the surrounding area (e.g. compensation activities).

The chapter starts with a review of the main characteristics and trends of rural areas that frame land development activities, then the different instruments that are being used by FARLAND partners are presented and described.

Within the array of land development instruments, land consolidation is the point of departure as it has a long-standing tradition and importance in most of the countries, and its implementation is the immediate goal in the others. Then the scope is broadened in order to get a more complete overview of land development systems that are mostly applied simultaneously to optimise their effectiveness.

The land development related organisational and operational frameworks of various countries are also compared, paying special attention to the stakeholders involved and the allocation of responsibilities. The position of land development with regard to spatial policies is briefly treated as well. The final section, with the conclusions, introduces the next chapters.

### 1.1.2 WHAT'S GOING ON?

What is the object of land development instruments? What are the nature and the distribution of land use and land ownership in the rural areas of the FARLAND countries?

In other words, the interaction between people and land, the social, economical and environmental circumstances that shape land tenure and land development practices play a very important role. Since these circumstances change and vary, land development approaches should adapt (Magel 2000). Depending on the different stages of regional development in the course of time either the relationship between society and its land is dynamic (Steudler et al. 2004) or the idea of land and land ownership itself varies (Bromley 2006).

Thus, the adaptation of land development instruments is an ongoing and continuous process. In Magel and Wehrmann's words: "as long as there are people, land remains of essential importance" (Magel and Wehrmann 2006). In the following paragraphs numerous examples of this will be presented.

What are the main driving forces that trigger the dynamics of the adaptation process? Presented below are some simple variables that can give us a general overview of the multicoloured picture.

#### 1.1.2.1 Population and Space: Managing the Rural Ambiguity

When trying to characterise the social and economic circumstances in rural areas, one of the first indicators that come to mind is population density, a factor that determines the level of pressure over land at regional level. Population density gives an idea of the general balance between resources and necessities.

The differences are considerable among the FARLAND partners (Table 1). Moreover, in some countries the distribution of the population is unbalanced and most people concentrate in urban areas. This causes population densities in numerous rural areas to be even lower than average, with numbers well below 25 inhabitants per km<sup>2</sup>.



The perception of “rural” can be very different. Flemish people, for example, perceive an area as rural when it is under 600 inhabitants per km<sup>2</sup> (Lenders et al. 2005). Compared to other FARLAND regions, and considering the OECD (OECD 1994) definition of rural areas, it could be said that no rural areas appear in Flanders and in The Netherlands, only very few in North Rhine - Westphalia (NRW), while Lithuania is almost totally rural. Urbanisation issues are of great importance as driving forces for rural change in such areas.

As the residential, industrial and infrastructural sectors grow by consuming rural land, their integration from landscape, ecological, and cultural aspects demands the attention of land development instruments. Rural areas become increasingly urbanised and when the so-called artificial surfaces reach 25% of the country or more - as it happens in Flanders - the distinction between urban and rural becomes negligible. This is linked to the expansion of infrastructures such as roads or railways.

The figures in Table 1 show the differences between the FARLAND partners. For instance, in The Netherlands or NRW the infrastructure network density is four times that of Lithuania. This may not only cause the loss of agricultural or natural land, but the consequences can also be manifold: it creates a process that influences economic, social and environmental issues and calls for a systematic (land development) approach.

In the case of new infrastructures or urban developments, mitigation and compensation measures from agricultural, social and environmental points of view receive increasing attention. The objective is to maintain the quality of the affected area. Sometimes land development is not prompted by compensation but by the need for direct participation with a view to balancing spatial functions. Usually the traditional rural activity, agriculture, provides the matrix where this dialogue flows, both maintaining its *raison d'être* and increasingly being the joker of the play.

When space is such a scarce resource, the pieces of the puzzle become smaller and must be carefully fitted. Thus, the importance of the urban-rural relationship and the role of land development instruments, among other land management activities, in achieving the right and mutual valuable balance of spatial developments are increasingly recognised (Magel 2004). The most densely populated FARLAND regions are good examples of this.

This situation of strong pressure and competition among land uses and functions that damage the quality of the countryside contrasts with some rural areas of Portugal, Lithuania or Galicia. There, the phenomenon of land abandonment or 'lack of management' also appears, linked sometimes to significant depopulation trends mainly in inland areas. This is often accompanied by the relatively lower development rate of facilities and infrastructures in the most eastern or southern FARLAND partners.

For this group of countries, landscape and nature are not the key objective of land development, although they frame all activities. The objective here instead is to provide a proper standard for rural infrastructure, facilities and services. These very different situations, pressure and depression, are both objects of land development practices.

So, the definition and perception of what is an agrarian area or an urbanised landscape are clearly conditioned by various factors that are in a permanent and dynamic evolution. Additionally, the importance in terms of surface of each type of landscape varies among the FARLAND countries (Table 1), determining its relative value and subsequently the focus of the main instruments and actions.

The little patches of 'natural' areas make the landscapes comparatively more valuable, e.g. in The Netherlands, and in relative terms, farmland in Portugal. These circumstances dictate the types of goods and services that are needed. The more pressure over land, the more frequent are the land use conflicts and more pressing is the need for integrated approaches that bring joint solutions for all the sectors involved.

Table 1		FL	NRW	NL	PT	GC	LT	HU
<b>Population</b>								
Area	(km <sup>2</sup> ) <sup>A</sup>	13 522	34 077	41 540	92 117	29 573	65 300	93 030
Population density 2004	(inhab./km <sup>2</sup> ) <sup>A</sup>	450	530	4801	114	91	55	109
Country surface below 150 inhab /km <sup>2</sup>	(%) <sup>A</sup>	2,7	9,3	2,11	74	84,7	100	88
	Density <sup>A</sup>	133	138	1471	40	71	55	83
<b>Land Uses</b>								
Utilised Agricultural Area (2004)	(%) <sup>A</sup>	47%	45%	52% <sup>1</sup>	42%	30%	40%	63%
Forest area (2004)	(%) <sup>A</sup>	8%	25%	9% <sup>1</sup>	38%	60%	31%	19%
Natura 2000 (2006)	(% of the country) <sup>B</sup>	14%	8%	10% <sup>1</sup>	21%	12%	14%	20%
Artificial surfaces	(% of the country) <sup>C</sup>	25%	15%	12% <sup>1</sup>	1%	1%	3%	6%
Density of roads and railway networks	(km/ km <sup>2</sup> ) <sup>C</sup>	0,57	0,38	0,371	0,2	0,14	0,1	0,15
<b>Agricultural structure</b>								
People engaged in agriculture and forestry (2003)	(%) <sup>A</sup>	2,20%	1,50%	2,70%	12%	7,30%	17,20%	5,40%
Medium size of farms (2003)	(%) <sup>A</sup>	17,9	32,3	25,6	12,5	11,1	10,4	8
<b>Land tenure</b>								
Agricultural Area owned by farmers (2003)	(%)	34%	44%	61%	72%	82%	46%	44%

Table 1

A: Eurostat, various years and own elaboration; B: European Environmental Agency, 2006; C: © ESPON Database, 2006

FL: Flanders; NRW: North Rhine-Westphalia; NL: The Netherlands; PT: Portugal; GC: Galicia; LT: Lithuania; HU: Hungary

<sup>1</sup>: related to inland surfaces (excluding big water bodies)

### 1.1.2.2 An Old Marriage: Agriculture and Land Tenure

Diversity in land use and tenure is considerable. Even among the countries with most fragmented real estate property, the differences go from the extreme situation of 2 ha in average per holding in Galicia to the almost 7 ha in Lithuania. Apart from this, property rights are often not clear due to the lack of a proper land administration system (register or cadastre), a situation that some countries, such as Galicia and Lithuania, aim to improve by land development projects.

Ownership fragmentation also affects agro-forestry activities, and farm structures remain unsuitable when there is a significant proportion of units with uneconomical dimensions and fragmented land. Though property fragmentation in rural areas is high in most countries, farm sizes differ widely, from less than 10 ha in average in Portugal or Galicia to almost 30 ha in NRW. One of the reasons is the high tenure rate that helps coping with the fragmentation problem, especially in Flanders, which has the highest percentage in Europe with almost 70% of leased land in farms.

Lithuania and Hungary are both dealing with 'market readjustment'. In their case, the adaptation of former state production units is the history behind current challenges. The privatisation of state land and the restitution of private property during the 1990s lead to strong ownership fragmentation and resulted in a dual situation.

On the one hand, there are big cooperatives/enterprises that are managing the land for a large number of owners. After restitution many owners who have 'lost' contact with their land prefer letting the land to be managed by these entities. On the other hand, there is a huge number of small to very small farmers who are just able to do subsistence farming (Thomas 2006b). The problem is that farm structure with few big farms and many small ones is responsible for the diminishing medium farm size. For example, less than 2% of the farms hold almost 35% of the agricultural land in Lithuania and 70% in Hungary (Eurostat 2005).

Galicia and Portugal, facing urban migration processes and farm closures, have one of the lowest lease rates in Europe. Although many farms stop their farming activities, the land is neither sold nor rented afterwards. This means that improving agrarian structures is still an important challenge for land development instruments in these countries. Moreover, the agricultural sector is still more important there in terms of employment (17% in Lithuania and less than 2% in NRW and its neighbouring countries).

The lowest proportions of farmland (Galicia, Portugal) are linked in some cases to abandoned land that also triggers the adaptation of land development approaches. It is interesting how two very distinct historic patterns, Galicia-North Portugal vs. Lithuania-Hungary, have resulted in a similar situation in terms of ownership fragmentation. Land abandonment that is present in both cases, shows the problems of adapting to new socio-economic requirements.



### 1.1.2.3 More Facts to be Considered

A number of new land development tasks in relation to the agricultural sector have appeared, in some cases as a result of past strategies that stimulated excessive land use intensification (e.g. the measures conducted to fight against water pollution or soil erosion in The Netherlands).

In the densely populated FARLAND regions land development practices pay attention primarily to the economic diversification of farms, the generation of new sources of income in rural areas, and the enhancement of rural living conditions - objectives that are becoming typical to new rural development strategies across Europe. Since this process calls for bottom-up approaches pursuing to reinforce rural vitality and individual entrepreneurship, decentralisation is seen as an important principle.

The adaptation or preservation of farming systems for delivering environmental services is an increasingly important issue. Like most of Europe, the landscapes of the FARLAND countries have been fully shaped by the human hand, including current areas with high biodiversity and important cultural values, often linked to traditional agricultural or forestry activities. For instance, a particular livestock system is fundamental for preserving wetlands and meadows for important bird populations in The Netherlands and Flanders. In the Natura 2000 mountainous areas of Galicia and NRW, the high diversity of plant species is maintained by the grazing of free cattle.

Whereas these examples show quite diversity in the intensity of human intervention, the role that land development has (or has had) in that realm is also different. In some cases, its role goes beyond adapting farming systems, as it focuses directly on the improvement of natural areas and/or the implementation of ecological networks and natural corridors. Flanders and The Netherlands are clear examples of this. The shift of perspectives from agriculture to nature is framed by the Natura 2000 Programme, the implementation of which, together with the Water Framework Directive, is a topical goal throughout Europe.

But environmental aspects are not limited to the preservation and management of natural values. The so-called 'environmental risks or hazards' also shape and push land development instruments. Flooding in The Netherlands and Hungary, forest fires in Galicia and Portugal, or the recent storm in NRW are examples of the environmental hazards.

Without a doubt, climate change will increase the need of these considerations as well as trigger the demand for a new and strategic function of rural land, i.e. providing renewable (bio-)energy. This new function is competing for the often already overburdened space.

### 1.1.3. THE KALEIDOSCOPE OF SOLUTIONS

A notable barrier in reviews of this kind is the language. A crucial challenge when performing comparisons is to clarify the applied terminology. Land Development action was introduced in the first section as adapting the nature and the location of land use and land ownership for the sake of different kinds of public as well as private objectives. In a more precise definition, Land Development covers all 'land referring' measures which aim at the main goal of improving living and working conditions in the rural sector (Thomas 2006a), taking into account the many different perspectives that the meaning of the rural sector has.

A broad variety of instruments and/or single measures fit into this approach, providing many ways by which governments can operate. Moreover, there is quite some diversity in how land development systems are organised among the FARLAND countries and the list of land development instruments is growing.

#### 1.1.3.1 A Multicoloured Fan: Land Development

Within the array of measures and instruments, one of the most important and powerful land development tools of the last decades in Europe has been land consolidation (Thomas 2006c). This is also true for the main part of the FARLAND countries. Apart from Hungary, one or more land consolidation instruments based on a special legal framework are present in each region, ranging from the long German tradition to the young but determined Lithuanian practice.

Land consolidation is mainly understood as concerning parcel reallocation and typically being executed in a project-framework according to a procedure that is defined by law (van Dijk 2006). In essence, land consolidation is a mix of 'agrarian physical planning' and 'statutory land readjustment' (Thomas 1995).

Parcel readjustment and reallocation involves the exchange of private ownership of spatially dispersed fragments of land. This land readjustment component is the key for achieving the planning objectives pursued by all land consolidation projects (see i.e. Sonnenberg 1996 and Thomas 2006d). Regularly,

it provides a compulsory mechanism, although Lithuania, due to the events from the recent past, implements the reallocation of parcels only on a voluntary and contractual basis.

'Agrarian physical planning' is focussed on improving production and working conditions and increasingly on promoting the general use and development of land. The area in question has to be rearranged and scattered or uneconomically shaped parcels have to be consolidated to meet modern managerial requirements and to obtain units of a more favourable location, shape and size.

The definition of land consolidation requires caution because the bundle of measures or mechanisms that the instrument includes, apart from the readjustment component, can vary from one country to another and from project to project, thus determining its real 'power' as an area-specific instrument. If we consider all FARLAND regions, the complete list of measures that are contemplated is quite long, but a comparison between other countries shows the same diversity (Vitikainen 2004). In general terms, all laws basically allow a broad range of action. Frequently, various types of land consolidation instruments are present in each country, varying from legally based, comprehensive instruments to more simplified, voluntary approaches, such as voluntary parcel exchange.

According to the objectives and rural situation as described previously, Flanders, NRW and The Netherlands have the most evolved instruments. These countries present a certain extension from traditional operations, moving from the agro-forestry sector and basic rural infrastructure to measures within environmental, landscape or rural competitiveness realms both with private as well as public objectives. In this scenario the land consolidation area is reshaped with due regard for the landscape structure, to serve the interests of all the parties concerned and not only some of the sectors involved (agriculture, forestry, etc.). Thus, actions for the development of recreational areas or paths for the protection and development of nature areas, like placing tourist infrastructure (signs, posters, etc.), or measures for the enhancement of the landscape (trees, hedges, etc.) and of the quality of village conditions (traffic, public areas) are all part of the land consolidation project. Such trends can be found in other countries as well, such as France (Derlich 2002), Denmark (Eskildsen 2002) or Finland (Uimonen 2004) due to a similar evolution of socio-economic and environmental demands.



'Traditional' measures remain topical issues for the eastern and southern partners, partly due to the different levels of agriculture and rural development. Lithuanian operations try to focus on improving the deficient parcel structure, upgrading the average farm size and establishing basic rural road networks. But environment and landscape considerations need also be involved in order to work with an integrated approach from the beginning.

In Portugal land consolidation projects that are initiated and developed by the State are mainly implemented in fertile valleys in close connection to irrigation systems, an aspect that makes the projects more attractive to farmers and obtains a better cost/benefit ratio, but has reduced impact in the rural areas that are not included. In these areas, the projects are quite specialised and - apart from those related to parcel restructuring and road (re)construction - works for soil improvement (e.g. levelling), irrigation, and drainage infrastructures are very important. Up to now, Galician land consolidation projects are not so much oriented to productive agricultural areas and they often have a low cost-benefit ratio in economical terms but look for social profits.

### 1.1.3.2 The Specialisation of the Crew

Although land consolidation provides the measures and legal support for some of the non-agricultural actions, a number of specialised instruments emerged such as Land Development for Nature in Flanders for 'the protection, recovery, management and development of nature and the natural environment' and Village Renewal in North Rhine-Westphalia that aims at 'working against the negative effects caused by structural change in rural areas', pursuing new uses, functions, and habitability for small villages.

Land Development for Nature, a specific instrument shows land development as useful to reach other objectives and other customers, i.e. be more integrated. This is a pre-set objective, being a strategic guideline with a new instrument rather than an operational behaviour of an older instrument that was thought to serve agriculture only. In Germany this goal is integrated in the federal Land Consolidation Act.

Both Portugal and Galicia have recently developed specific tools for dealing with their extreme fragmentation. Consolidation of parcels is not sufficient for very small farms. To achieve proper management, farms need to be made bigger. Two new instruments are being developed to deal with fragmentation: the Portuguese Forest Intervention Zones (FIZ) and the Galician Forest Management Units (FMU), aiming to establish common management of parcels owned by different people. They are designed to deal with many small private properties and to set up, compulsorily under certain circumstances, a common management – a task fulfilled by a new association of owners through its executive board. Both the above mentioned instruments have legal foundations and are specially targeted to forest areas that are important in terms of surface and environmentally sensitive in terms of fire risk. Land development appears to evolve according to rural challenges.

A similar possibility, but for common lands, appears in NRW. In order to improve the management of forest cooperatives, the Law on Community Forest allows the merging of existing cooperatives either in co-ownership by fractional shares or in joint ownership. On the basis of the Land Consolidation Act, cooperatives are adjusted to the actual economic need.

Additionally, a particular land consolidation approach has been used in Germany for the past 70 years in order to prevent disadvantages for the agricultural structure that occur due to big public infrastructure projects and to make available the needed land for the implementation of the project. This legally regulated approach is normally applied by projects of traffic infrastructure and projects of flood protection - where it is permissible to acquire land by compulsory purchase (Thomas 2004).

Hungary, which has not implemented a legal base yet for land consolidation, presents on the other hand, a highly developed system of agro-environment measures with more than 80 varieties. This shows an approach based on influencing land use behaviour more through an economic incentive than through modifying land ownership.





The most far-reaching approach in land development is applied in The Netherlands. In peri-urban and metropolitan areas, the Government Service for Land and Water Management (DLG) is acting as 'agent' (investor and project developer) in public-private cooperation that are responsible for planning, financing and implementation. Based on its skills in land management, its professionalism in rural issues and its position as a state/provincial agency, DLG is developing recreational projects and is also involved in residential developments.

### 1.1.3.3 Is Land Banking the 'Richest' Instrument?

The activity of some of the instruments mentioned above involves the purchase of land by the land development agencies. Indeed, land banking is developed in most of the FARLAND regions, and The Netherlands for instance is one of the most recognised examples in Europe (van Dijk and Kopeva 2006).

Originally concerned with enlarging farm sizes, land banking today focuses more on acquiring and developing land for public purposes, such as nature conservation in The Netherlands. The compensation approach, both social and environmental, in case of new infrastructures is highlighted in North Rhine-Westphalia (NRW) and in Flanders, where a decree on land banking was adopted in 2006 after some years of gaining experience in projects on a contract base.

Nevertheless, increasing farmland mobility is still the main purpose for the new land bank in Galicia, launched in 2007. This initiative is based on rental mechanisms instead of purchase and selling - given the shortages in funding and the social value of property. Improving the agricultural structure is also the objective for the Portuguese land bank.

In NRW and Portugal land banking activities are mainly carried out within land consolidation projects while in The Netherlands, Flanders and Galicia land banking has operational independence.

## 1.1.4 HOW IT WORKS?

### 1.1.4.1 Width of the Law, Width of Practice

From the possible bundle of measures present within the law, often only a selection is actually applied in concrete projects as the demand for these measures is decreasing (e.g. 'traditional' ones in the case of the central partners, or 'new' ones in some of the others). Sometimes tradition keeps measures away from

land consolidation practice, as in the case of Galicia, where the law prescribes the use of land consolidation in case of construction of big infrastructures, but it has never been used. Often the reason is the lack of funding that, for instance, prevents Lithuania from extending infrastructure programmes within land consolidation.

Measures present within the land consolidation instrument in one country could be implemented either as single measures or under the umbrella of other land development instruments in other countries. The relation between the programs and the final objectives is not a direct one. In fact, this happens in most countries, but with varying intensity. Comparing Flanders for instance with Portugal, the former may reflect a more structured way of action.

The approach with a complete set of measures facilitates an integrated implementation of tasks at the project level and therefore also at the area level. Despite being a possibility for the coordination of separate and independent measures, this has not been the reality in Portugal or Galicia, and it is still a challenge for Lithuania and Hungary. In the latter countries, with the most 'simple' instrument available only, coping with fragmentation (i.e. voluntary parcel exchange) and integration at project level would require the complicated coordination of multiple single measures. One of the reasons is that each of the measures may have its own regulation that makes it difficult to include it in a multi-objective project. On the other hand, the opportunities to be more flexible and adaptable would increase with measures independent from each other and with no sector-oriented tools.

#### 1.1.4.2 Who is Who, Doing What?

The relationship between integration and flexibility appears strongly during the actual performance of the land development practice. The process has a lot to do with agents involved and the relationships between them, and also with the division of tasks and responsibilities.

Diversity and similarity appear again from the findings. Within the FARLAND project three situations relating to the responsible institution have been identified. In the case of Lithuania and The Netherlands, the main body responsible is an institution not primarily specialised in land development, i.e. the County and Province respectively. In Portugal and Galicia land development is carried out by specialised services within departments of the agriculture and/or forestry ministries. In the case of Flanders and NRW there are specialised and not sector-oriented agencies: the Flemish Land Agency and the Upper Land Consolidation Authority in NRW.

The first and the last options provide the most promising environment to achieve integrated solutions, although the first could lack technical and managerial capacities. But in both The Netherlands and Lithuania, support agencies exist: the Government Service for Land and Water Management and the National Land Service respectively.

The trend seems to be decentralisation in terms of government involvement, transferring more decision-making responsibilities to the Provinces in The Netherlands and to the Municipalities in Lithuania. In Galicia and NRW the main responsibilities are moving towards the local offices of policy implementing agencies. In Portugal the initiative can be equally taken by the State, by municipalities or by farmer's associations. What all partners have in common is the insight that land development and land consolidation are state tasks that can not be left to the private sector.

Private companies play an important role in the implementation of land development activities and take over much of detailed work. The plan preparation phase is done in most cases by the public agency, although some parts may be assigned to private companies. In Galicia even the complete plan design is made by hired labour. In Portugal all options are available and all phases can be carried out by the state, municipalities, farmer's associations and private companies. The participation of other groups during this step is more extended in Flanders, The Netherlands and in NRW, where institutions of public interest and NGOs have a strong position.



In the case of Portugal, Galicia and Lithuania, an important effort of surveying is needed to clarify the property rights and parcel boundaries as in many cases there is no previous information available due to insufficient performance of land administration systems (land registry and cadastre). In general, valuation of land is made with the participation of the implementation agency and local stakeholders (Board of body of participants, land consolidation commission, etc.) and with the support of experts in some cases (NRW). Normally the method follows the lasting gains, sometimes the market value, except in The Netherlands, where the surface basis is the reference now.

The transition from the planning phase to work execution is quite marked, although the possibility to split up the plan according to different topics and execute them separately does occur. Participation of different partners is also translated in co-financing in Flanders, NRW and The Netherlands, the latter being the country with broader possibilities for public-private cooperation. In all of these countries the owners would share a small part of the total costs, something that does not occur in Lithuania, Portugal or Galicia.

Finally, in Portugal a farmers' association responsible for the maintenance of the rural infrastructures has to be created after the conclusion of the project. This could be also the case in NRW for the Body of participants. In Flanders and The Netherlands agreements with NGOs are most common.



#### 1.1.4.3 Listen to Me! Connecting with Local Stakeholders

How do the other stakeholders engage in the process? Decentralisation processes also go from public to private and not only from higher to lower administrative levels. In the new Dutch legal framework – coming from the former program driven situation – almost everyone can make a request for a land development project and, although the Province has the last word, almost all phases along implementation could be performed by a broad range of public and private partners from various sectors.

In Flanders, the request for initiation depends on the instrument. Although established governmental organisations have in general the main role with possibilities for owners and farmers (only in case of land consolidation), the new demand driven approach opens the possibility of initiation to everyone.

The situation in NRW is a bit different. The Upper Land Consolidation Authority, mainly through the local authorities, is the body responsible for defining new possible projects as well as their suitability, based on conclusive and convincing concepts. Nevertheless, owners, farmers, municipalities, etc. have the opportunity to give opinions and requests during the preparation and implementation phases. A similar model of planning and implementation appears in government initiative projects in Portugal.

In Lithuania, because of the pilot character, the process must be demand-driven with all the responsibilities and tasks fulfilled by the Province. Here, the agreement of the owners is always needed.

But there are also opposite movements. The Galician government that in practice applied a demand-driven approach with municipalities, farmers, and owners as main requesters, seems now to deviate a bit from that system to a more top-down approach. Moreover, the new instrument for land use reorganisation in Galicia (FMU) represents a stronger kind of government intervention compared to the described trends in land development.

Associated with the encouragement of bottom-up initiatives, new operational strategies, as promotion and publicising emerge and communication actions become of great importance (i.e. for the VLM, DLG and NLS). The implementation agencies that are instrument-oriented develop these activities in order to make themselves recognisable to potential customers and to maintain awareness regarding land development practices. This attitude is also considered important for carrying out integrated projects.

In regions like Flanders or NRW, where so many actors play an important role, exerting pressure over land use and providing different kind of goods, services and also 'troubles', a broader consensus is needed for implementing projects. This is accompanied by more developed grassroots organisations that not only have the capability to 'manage' new responsibilities but are also actively exercising them. Good examples for this are the important nature NGOs.

Considering the land development projects, in some cases the agreement of the majority of owners is needed to proceed (i.e. Portugal) and in others a governmental decision is enough (i.e. NRW). Nevertheless, projects go on very rarely without at least a minimum of owners' support. Public participation at all levels is an increasingly fundamental requirement.

Sometimes the need for participation causes established committees, boards, etc. (constituted in order to gather different opinions) to result in an inadequate composition relating to the main objectives or measures accomplished by the project. Such a fixed composition is present for example in Galicia or Flanders while in Portugal it can be modified according to implementation and planning needs.



### 1.1.5 WHICH ROLE IN WHICH PLAY?

The way land development is integrated within 'the rural development and/or spatial planning framework differs in the FARLAND partner countries. NRW has introduced the 'ILEK' (Integriertes ländliches Entwicklungskonzept - Integrated Rural Development Strategy), that is elaborated in a separate process, apart from the more traditional land development instruments. The basic idea of ILEK is that it guides all land development actions in a coordinated way, together with other rural development measures and with an integrated territorial view for a specific area.

Given that its elaboration follows a bottom-up approach, this is also an example of decentralisation. In addition, land development practices are considered to be special spatial plans that facilitate the implementation of the country spatial planning system, either at municipal, district or state level. Thus, land development activities have to take into consideration all these administrative levels.

Similarly, the Lithuanian system recognises and considers land consolidation explicitly as territorial planning within spatial planning legislation, and municipal master plans are the basis for its implementation. Currently, master plans for the regions and municipalities are not developed and approved, which is a big obstacle for land consolidation.

Such a clear, legally based relation does not exist in the new Dutch approach and the interaction between spatial planning and land development is dealt with in a more practical way. As in Flanders, land development projects are based on the existing zoning plans. In principle, land development cannot change these zoning plans, but a zoning revision process may interweave with the preparation of a land development plan, and the other way around.

The situation in Portugal and Galicia differs, partly due to the distinct planning traditions. In both cases the existence of a municipal master plan is not a prerequisite. Portuguese land development focuses strongly on agricultural areas. In the case of Galicia, quite some conflicts appeared during recent years, resulting from the vague relation between land consolidation and the spatial planning framework, mainly in rural villages. The reason is that land consolidation plans include a land use plan that must be taken into account when developing or modifying municipal zoning plans.

### 1.1.6 SOME FINAL CONSIDERATIONS

Land development practices are broad and diverse throughout the FARLAND partners. These practices are not static and continue to evolve. Thus, land development is the answer of a state to permanently ongoing structural changes in its territory.

These changes arise as the consequences of general socio-demographic evolution; of dynamic processes in the economy; of the manifold claims to the open space; and the demand on land in the urban-rural relationship. Within this context, the fields of action of land development refer not only to peripheral rural areas but also to the catchment areas of large cities and agglomerations. More integration is claimed and needed when more and incompatible land use activities have to be dealt with. This is also connected to how the rural is perceived by the urban and which functions/services have to be provided. The extension of metropolitan landscapes force land development practices to innovate and adapt.

It is clear that land development interventions take place on the basis of the national legal system, the background of the respective social value systems, and the institutional framework of the state and government. These systems and frameworks are changing also depending on the political and social circumstances. It is clear that these circumstances are dynamic and trigger land use changes.

These land use changes always have economic, social or environmental components and are strongly shaped by property rights structure. But, even taking into account the differences, one thought is common: the way the land development tools of FARLAND partners deal with the spatial dimension of property

rights and land use in order to achieve a better solution for some or all of the mentioned components in a given area. With more or less depth, land development action complements and negotiates with market forces looking for spatial designs more balanced and beneficial for all involved agents.

Currently, the reallocation of administrative powers and responsibilities is guided by decentralisation and covers not only the initiation, but also the design, implementation, financing and maintenance phases of land development. In this sense, decentralisation needs a minimum of 'people-agents', in terms of both quantity and quality. With respect to these trends there are exceptions to the rule and some new instruments, mainly devoted to depressed areas, reinforce governments in rethinking the way they deal with property rights in rural areas. In this case, marginal areas also force land development practices to adapt.

In conclusion, adaptation needs different implementation tools, adjusting to the social and economic circumstances and challenges in the countries/regions concerned. An intelligent application of land development means integrated applied instruments that are flexibly adjusted to the national/regional/local demands. This proves that land development tools do not have a general standard and should not be uncritically transferred from one region to another. The comparison of the FARLAND partners allows a better understanding of this fact and we hope that it enables you to profit from the diversity of others to upgrade your own approaches. Part II illustrates this diversity through concrete appealing and useful cases.

## References

1. Bromley, Daniel W. (2006) Land and Economic Development: New Institutional Arrangements for the 21st Century. "Toward a 2015 Vision of Land - A Celebration of ICLPST's 100 Regular Sessions".
2. Derlich, F. (2002) Land Consolidation: A Key for Sustainable Development – French Experience. XXII FIG International Congress .
3. Eskildsen, K. A. (2002) Danish Land Consolidation. The International Symposium FAO, GTZ, FIG, ARGE Landentwicklung and TUM on Land Fragmentation and Land Consolidation in CEEC: A gate towards sustainable rural development in the new millennium.
4. Lenders, S., Lauwers, L., Vervloet, D. and Kerselaers, E. (2005) Afbakening van het Vlaamse platteland. Available in <http://www2.vlaanderen.be/ned/sites/landbouw/downloads/volt/38.pdf>
5. Magel, H. and B. Wehrmann (2006) It's all about land, Zeitschrift für Geodäsie, Geoinformation und Landmanagement, 131, 5, 57-61.
6. Magel, H. (2000) The change of paradigms in European rural development and land consolidation. 22nd Urban and Regional Data Management Symposium. Seminar: Land Markets and Land Consolidation in Central Europe. 2000.
7. Magel, H. (2004) Urban-Rural interrelationship for sustainable development. 2nd FIG Regional Conference. 2004. Geomatik Schweiz.
8. OECD. (1994) Creating rural indicators for shaping territorial policy. Paris.
9. Sonnenberg, J. (1996) The European Dimensions of Land Management - Policy Issues (Land readjustment and land consolidation as tools for development). Annual meeting of FIG Commission 7.
10. Steudler, D., A. Rajabifard, and I. P. Williamson (2004) Evaluation of land administration systems, Land Use Policy, 371-380.
11. Thomas, J. (1995): On Ingeniousness of Land Management for Rural Areas. Zeitschrift für Kulturtechnik und Landentwicklung. Issue 2/1995, volume 36, pp.293 – 299.
12. Thomas, J. (2004): Modern Land Consolidation: Recent trends on land consolidation in Germany. Proceedings of the FIG Commission 7 symposium 2004 in Volvic/ France. Frederiksberg/ DK, ISBN 87-90907-38-8.
13. Thomas, J. (2006a): Land development, Zeitschrift für Geodäsie, Geoinformation und Landmanagement. Issue 5/2006, volume 131, pp. 281-287.

14. Thomas, J. (2006b): Property Rights, Land Fragmentation and Emerging Structure of Agriculture in Central and East European Countries (CEEC). UN Food and Agriculture Organization, Rome. Electronic Journal of Agricultural and Development Economics – eJADE; issue 2, volume 3.
15. Thomas, J. (2006c) What's on Regarding Land Consolidation in Europe? [www.fig.net/pub/fig2006/papers/ts80](http://www.fig.net/pub/fig2006/papers/ts80).
16. Thomas, J. (2006d) Attempt on Systematization of Land Consolidation Approaches in Europe, *Zeitschrift für Geodäsie, Geoinformation und Landmanagement*, 131, 3, 156-161.
17. Uimonen, M. (2004) Actual developments of land consolidation in Finland. FIG Commission 7: Symposium on Modern Land Consolidation.
18. Van Dijk, T. and D. Kopeva (2006) Land banking and Central Europe: future relevance, current initiatives, Western European past experience, *Land Use Policy*, 23, 3, 286-301.
19. Vitikainen, Arvo (2004) An Overview of land consolidation in Europe, *Nordic Journal of Surveying and Real Estate Research*, 1, 19.

# CHAPTER 2

## Innovation: Expecting the Unexpected

Wim Timmermans, Alterra, Wageningen University  
Terry van Dijk, Wageningen University  
Pat van der Jagt, Alterra, Wageningen University  
Francisco Onega Lopez, University of Santiago de Compostella  
Zsuzsanna Flachner, Research Institute for Soil Science and Agricultural Chemistry  
Jeroen Reyniers, Flemish Land Agency  
Jens Niermann, Upper Land Consolidation Authority North Rhine-Westphalia  
Darius Liutikas, Ministry of Agriculture of the Republic of Lithuania  
Margarida País DGADR, Ministry of Agriculture, Rural Development and Fisheries of Portugal  
Cristina Zolle Fernández, Ministry of Rural Affairs of Galicia

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- 1.2.6 Conclusion



## 1.2.1 INTRODUCTION

When professionals discuss their work intensively, they share a lot of ideas. A very ordinary approach in one context can be part of the solution of a big problem in another. Usually a new approach cannot be simply copy-pasted from one context to another. To write this chapter, we asked the seven FARLAND partners to describe their own innovative approaches for us. This brought a lot of interesting information about new ideas emerging in Land Development all over Europe. But how can a strategy in Lithuania be compared with upcoming integrated planning in the Vouga delta in Portugal or to the new Public Private Partnership(PPP) in urban rural development in The Netherlands? What can we learn from each other's innovations?

The word "innovation" needs to be defined first. A theoretical study has been conducted on the concepts of innovation and complexity and their application into planning and land development (§ 2). Then for the seven FARLAND regions 40 innovative approaches have been analysed in the light of the life cycle phase of the partners, the level of organisation involved, and the level of the driving force (§ 3). As a next step, 14 innovations have been studied in depth and described from a complexity perspective searching for common features (§ 4). Finally some general reflections are made on cross cultural learning (§ 5).

## 1.2.2 THEORY

### 1.2.2.1 Innovation

The first thing that comes to mind concerning innovation is technical innovation. For example, cars have been continuously improving for decades. As a result, they become more reliable, more comfortable and safer. The change is not dramatic. However, the first vacuum cleaner replacing the broom is an example of a dramatic change.

Decades after the discovery of electricity, houses were cleaned in a totally new way. The new machine inhaled the dust, while before its discovery people had to use physical power. Until this break-through in technology, there had even been attempts to literally replace physical brushing power with electrical power.

In daily life, innovation is related to a warm fuzzy feeling of 'good', 'progressive' and 'making things better'. Marketing employs innovation for 'innovative solutions', creating the illusion that the advertised product is too complex to characterise in a one-liner. Literally, however, the word innovation does not give a qualitative judgment – it only says that it applies a concept that has not been applied before, whether for better or for worse.

Much of what we know about how processes of innovation work comes from the manufacturing industry; generating a wide literature where the words innovation and technology are rarely more than one line apart (the journal 'Technovation' even merges the two words).

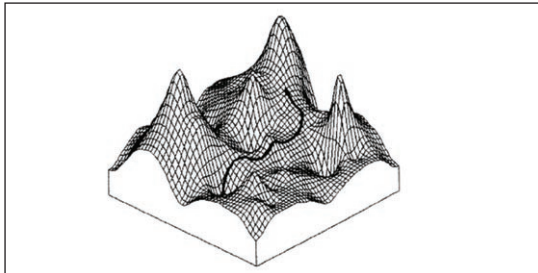
Ayres (1994) describes the process of innovation as non linear in five phases: technological change starts with a "breakthrough" when a new product is developed. Then it is rapidly improved and scaled up. After a maturation period the limits of the product become increasingly obvious and a new breakthrough can be expected.

But what if we are not talking about physical products or services, but about complex phenomena like land development systems? Let us take a look if the theory on complexity could be of any help.



### 1.2.2.2 Complexity

The meteorologist Lorenz, developing a computer model meant to forecast the weather, found that extremely small changes in data input could result in dramatic non linear changes in the expected weather. Lorenz discovered that this dramatic change was not his error or his computer's, but that he had discovered a new system function. Gleick (1986) describes that this kind of phenomena occurs in many scientific disciplines. This was the beginning of the development of a new knowledge based on Complexity Theory.



Survival landscape (Geldof 2001)



Due to Prigogine's hypotheses (Prigogine and Stengers, 1986), science has embraced the view that the world is composed of systems sharing a number of qualities. These systems often seem to be in a seemingly stable situation. The processes of development within a system continue in a linear way for a long time, remaining within the stability of the given attractor.

Certain developments, even if at the periphery, can lead to instability, causing the system to move. The shift is not arbitrary nor unlimited; in a phase of instability there are only a limited number of alternative states of equilibrium ('attractors') towards which the system may move. The emerging change can be extreme and often passes off chaotically and it is unpredictable what the new stable equilibrium state will be.

In this chapter the FARLAND experience in innovative practices is placed within the complexity perspective. The relevance here is that complexity theory is about the dynamics of unstable systems; as are land development systems that face constantly changing needs.

The central focus in complexity theory is on what happens when a system falls apart and has to find a new way of being. The theory was ground-breaking in its plea for acknowledging unpredictability, acknowledging that 'each individual action or each local intervention has a collective aspect that can result in quite unanticipated global changes'. However, 'the reasons for the amplification of a small event are a legitimate matter for rational inquiry'.

In a land development system there are numerous interactions between different groups. For instance there are interactions between:

- Ministries in competition over public money, publishing memorandums, negotiations over ministerial colours;
- Ministries and pressure groups (demonstrations, lobbying, public awareness);
- Ministries and their executive bodies (waves of reorganisation, budget cuts, decentralisation);
- Executive bodies and their employees (the discourses the employees prefer, the expertise present);
- Executive bodies and the people in the field (expressing discontent, suggesting alternative approaches).



All such interactions between components of the land development system are in the complexity perspective considered to be fluctuations that can or cannot shatter the pre-existing organisation. The more complex a system is, the more numerous are the types of fluctuations that threaten its stability (Prigogine and Stengers, 1984, p. 188).

The state of the system can differ from equilibrium to rapid change. In the state of equilibrium the system is stable and fluctuations will be unable to establish themselves and the innovators will not survive. When a system, due to all kinds of factors, moves away from the state of equilibrium, fluctuations determine the global outcome.

Several historic overviews of land development clearly show the subsequent phases and the relative stability within these (Van Dijk, 2006). During states of equilibrium, path dependencies create only a small range of future paths. The range of possible attractors can enlarge suddenly. A crisis causes a complex system to jump from one attractor to a previously unknown attractor, which is one out of many possible states of a new equilibrium.

### 1.2.2.3 Complexity in Planning and Land Development

Innovation in land development is not comparable to technological innovation due to the crucial influence of planning aspects - like time and culture - on the effectiveness of planning instruments.



De Roo (2007) suggests three kinds of complexity in planning types: simple, complex and very complex.

- Simple planning is based on a single fixed goal and can be executed by the central government. Usually, the result and the course of the planning process is clear to all participants.
- Complex planning processes have integrated goals and can fulfil the needs of more participants and participating bodies. In this governance context the result is not clear from the beginning as it is highly dependent on central negotiation processes. Thus, planning has a communicative rationale.
- Very complex planning processes have multiple goals and large networks of participants and participative bodies are involved. Negotiation is dispersed along the interconnecting networks. The results of the planning processes consist of many highly different possibilities. The outcome is unpredictable throughout the entire negotiation process as small or marginal events can have major consequences on the final outcome.

Land development can be classified as a complex or very complex system, innovation being inevitably unpredictable.

## Demand Driven Approach (Flanders)

**Approaching criticality:** The land development practice in Belgium has long been divided in three quite isolated legal instruments: nature development, land development, and land consolidation. Although VLM was the executive body for all three types, the financial resources came from different divisions within the ministry. Therefore, separate programs, planning, working agendas were made for each instrument independently. Optimisation of workload for the available labour was the main modus. This did not lead to objections, as projects passed on at a steady rhythm, leading on the three separate tracks to sometimes impressive results. In 1999 however, there was a change in government. The new government put a mortuary on new land consolidation projects based on the historic negative environmental image of these projects, which had to be assessed in detail first. Nature development continued, while no new land consolidation and land development projects were initiated. Because there were a lot of procedures running, this did not lead to immediate problems. When later on two running projects of land consolidation did not receive ministerial approval for execution, the approach of a crisis situation which would break the project rhythm was obvious.

**New attractor (first time):** The minister responsible for land development asked for an evaluation of the whole land development/land consolidation circuit. A working group with VLM and a number of divisions within the ministry, lead by the cabinet of the minister, conducted the evaluation.

The debate in the working group was sometimes heated, not at least because the whole administration was in a heavy reform phase. Much tension in the discussion originated from the dual feeling that on the one hand, VLM had too much executive power, casting a shadow on the working practice of others and on the other hand, the possible positive use one could make of this executive power. After much switching between plans for optimising old procedures or making new ones, the working group finally concluded that a modular law on land development would be the most interesting step forward.

**Aborted take-off:** The proposal was discussed in a commission of the parliament in mid 2002. This period was also a time when the public was growing sensitive on governmental interference with the private sphere, especially in the case of measures that did not hold direct benefit for land owners (for instance bicycle paths and nature protection and development). The debate culminated in a demonstration in Ghent in may 2003 where 20.000 people protested against all kinds of government interference in rural activities. It was clear that this was not a good time for new legislative actions and logically, the proposal to make a new and modular law did not survive and the original legislation remained in place.

**New attractor (second time):** However, the lessons from the evaluation of the instruments were not lost. VLM believed that executive power in the legal framework is good, but rigidity is not. Also, the need for more and earlier interaction with citizens was acknowledged. VLM thus investigated the possibilities of making better interaction with stakeholders within the framework of the original legislation. Simultaneously there were experiments to conduct projects that did not have to comply to the standard procedures, the so-called STIP-projects ("Strategische Inrichtings Projecten"). With the findings of the working groups' evaluation in mind, a focus group of experts debated on possible changes in land development and land consolidation practices and concluded that the effectiveness of the established practice should be preserved, but reason in the future should depart from the needs of the countryside and not the needs of the land development machine.

**Take-off:** This conclusion was also laid down in a so-called ministerial letter on land consolidation as instrument for rural development (dated May 25, 2004), and gave VLM and the responsible ministries the green light to make this concept operational. The idea was to make a pre-procedure phase, identical for nature development, land development and land consolidation, where it would be decided what the best procedure to follow was, considering the given problem. Real 'un-sectorising' of the separate streams of policy and money proved too complicated, however. From fall 2005 onward, every demand for land development action is first presented to the minister in an agenda-report, who then decides on further action.

**Stabilisation:** Unfortunately, the turbulent working context of land development practice did not sedate immediately. After the 2004 elections, the new government announced serious budget cuts. By then however, a steady stream of problems and demands for LD solutions were coming in and the new pre-procedure phase gave the minister the responsibility to react. Nowadays, the minister examines which spectrum of needs for LD is present in rural areas and starts to actively respond to them.

It is expected, that later on people might call for a well-founded Land development strategy instead of responding ad hoc to every problem that is flagged. The shift from people asking attention for problems instead of more top down initiation of procedures has made VLM work more interesting already. The agenda-reports give VLM a good image in the government because of their deep grounding in society. In 2007 a new assignment came from the responsible minister to prepare a proposal for a modular legislation for land development measures and projects.

**Coincidences:** The same situation would have developed eventually even without the major political shifts that started at the end of the '90s, but the political turbulences and the subsequent reform of the Flemish administration catalysed the process.

### 1.2.3 INNOVATIONS THROUGHOUT THE FARLAND REGIONS

All partners in the FARLAND project were asked to point out their most innovative examples in terms of projects or generic practices. The first phase in the data collection was to ask FARLAND members to select practices that are in their own context at the forefront of modern land development. The website of the project list all innovative practices that were submitted as a result of the call. About forty innovative practices were submitted by the executive bodies using a pre-defined template.

In-depth study was prepared on about fourteen of them in order to see if innovations in different countries can be compared.

All submitted innovative practices have been analysed from the point of view of three criteria plus the level of the driving force:

- The life cycle phase of the executive body refers to how well the land development practice in a certain region is established. We distinguished the following phases: starting off, growing, well-established, and state of reinvention.
- The level where the innovation took place refers to the planning level where the innovation has been implemented. We distinguished the following levels: organisations, procedures, and tools or measures.
- The level of driving force refers to the origin of the drive to innovate. We distinguished the following levels of origin: the European Union, national governments, regional governments, and bottom up.

Each pair of criteria shows a certain picture on how the elements relate. For instance: on what levels do the innovations submitted by countries from a certain life cycle phase occur? The relations between these three criteria are shown in Tables 1, 2, and 3.

#### 1.2.3.1 Types of Innovation

Innovations at procedural level appear to be the most common. This tends to decline at a starting-off nation (75%) but when a practice passes its growth phase, the procedural level becomes more important again (Table 1).

Organisations	-	22% (2)	20% (1)	-
Procedures	75% (3)	33% (3)	50% (3)	82% (9)
Measures	25% (1)	44% (4)	40% (2)	18% (2)
	Starting of 100% (4)	Growing 100% (9)	Well established 100% (11)	State of reinvention 100% (11)

Table 1: Level of the innovation related to the life cycle phase

### 1.2.3.2 Driving Forces

With respect to the driving forces behind innovations, the momentum seems to be at lower levels since innovative practices have a longer tradition there. In starting-off nations innovations have their highest share on the upper levels, due to the fact that the planning process has EU and National policies as points of reference. National policies also appear to be the main drivers of innovation in the growing practices, whereas well established and reinventing practices innovate due to regional and bottom-up reasons (Table 2).

EU	50% (2)	-	-	-
National	50% (2)	44% (4)	-	-
Regional	-	22% (2)	40% (2)	73% (3)
Bottom up	-	33% (3)	20% (1)	274% (9)
	Starting off 100% (4)	Growing 100% (9)	Well established 100% (5)	State of reinvention 100% (11)

Table 2: Level of the driving force related to the life cycle phase

### 1.2.3.3 Origins of Driver

The levels where innovations occur are most diverse when the regional government is the driver as all three levels are present in regionally driven innovations. National driving forces lead to innovations in procedures and measures. EU forces appear to generate procedural innovations only (Table 3).

Organisations	-	-	8% (1)	22% (2)
Procedures	100% (2)	33% (2)	58% (7)	78% (7)
Measures	-	67% (4)	33% (4)	-
	EU 100% (2)	National 100% (6)	Regional 100% (12)	Bottom-up 100% (9)

Table 3: Level of the innovation related to the level of the driving force

## Vilaverde (Galicia)

**Approaching criticality:** In the Vilaverde village, as in Galicia at large, ownership of agricultural land is fragmented and many parcels have been abandoned as young people leave the villages for the cities. Current local agricultural practices are very traditional and have no future. The remaining old population does not have the skills or tradition to change the trend. As a consequence, thousands of villages are under the threat of abandonment in the near future.

In Vilaverde only nine families were left, six of them engaged in economic agricultural activities, two of which intended to stop work in 2000. Every family had its own properties and the village as a whole had some, badly managed common lands.

**New attractor:** Antonio from Vilaverde was aware of this negative trend and was afraid of losing his job. A talk with a municipality employee gave him the idea of common use of village property. Antonio discussed this idea with one of the technicians, who knew about a similar initiative in Asturias, Spain. Antonio, the technician, and one person from each family visited two villages where people not only used their own plots but also shared one big common plot.

Antonio contacted the person responsible for the environmental program in the region. He knew him from a failed attempt to implement common land use ten years before. Subsequently skeptic, he first made sure that there was an economic drive in the families. He grew interested and became willing to help attract subsidies.

**Take-off:** After discussing several possibilities related to ownership and agricultural practices, they came up with a plan for a common farm using all the land. They decided to start a project with new agricultural practices but also using the old strong social structure of the village. Today each family owns a share of the joint company, both farm-owning families and the other families, so last year, the first real profits were distributed among all of them according to their share in the farm. People are now thinking of how to increase the profit, for example by selling meat to consumers directly.

**Stabilising:** There is a change in the government and the Ministry of Rural Affairs, which actively promotes similar initiatives related to rural development. A new and bigger program is being established and Vilaverde is one of the successful examples used to show the possibilities of rural development to other people and villages. For a village near Santiago where 300 families came up with more or less the same solution, Vilaverde became the roll model.

At the same time a new government was chosen in Galicia. They set up a new program called Singular Projects to invest in rural development projects. For this program Vilaverde was a very important example of a bottom-up, community based, rural development project. Nowadays, many conferences and visits are organised to show the project to the people. The new government is actively promoting these kinds of initiatives.

**Coincidences:** In Galicia there are thousands of very small villages like Vilaverde. However, a similar situation did not occur in any of them. Actually the role of Antonio was crucial: he was aware of comparable problems, solutions, and experiences outside Galicia. He was able to find the right people to help the village. As his own job was under pressure as well, he acted fast. The responsible for the environmental program had seen inspiring projects on international conferences. He knew about a project in New Zealand for example and was waiting for a suitable initiative to bring the idea into practice.

## 1.2.4 IN-DEPTH STUDY, DESCRIPTION AND COMPARISON OF 14 INNOVATIVE PRACTICES

As mentioned in the previous chapter, the differences between the seven FARLAND regions and the involved partners are substantial. There are big differences in the life cycle phase of the regions, the selected innovative approaches take place at very different levels and their driving forces can also differ highly. We studied fourteen projects in-depth and compared them using Complexity Theory.

### 1.2.4.1 The Unexpected

Cross-cultural cooperation between FARLAND partners was manifold. The Ministry of Rural Affairs of Galicia, for instance, was very eager on the problem of land abandonment and fragmentation. During the FARLAND Project, however, they got inspired by the NRW example of land consolidation as part of large infrastructure works.

In North Rhine-Westphalia (NRW) land consolidation was used to prevent the fragmentation of farms, nature areas, and towns as a consequence of infrastructure development. In Galicia the only tool used in such cases was expropriation, in spite of the fact that the use of land consolidation in the infrastructure development is available in Galician land consolidation law-but it was never used.



In another example NRW became very enthusiastic about the Flanders' approach of quick wins in the experimental integrated rural project 'de Merode'. Here, VLM combined a long-term strategic approach with short-term appealing and easily implementable concrete projects. Due to this strategy, people were convinced of improvements as a result of the rural development strategy. This idea did not solve a specific NRW problem, nor was it an innovation that NRW was desperately seeking. It just appeared unexpectedly and was very promising.

Learning experiences were unexpected and illuminating but sometimes seemingly obvious linkages between partners seemed to fail. The meeting on PPP in Groningen (Netherlands), for instance, revealed a key difference between Belgium and The Netherlands. Despite the similar situation in terms of population density and urbanisation, Belgium has scarce building lands - making the successful Dutch PPP processes not viable there, thus revealing the critical contextual frame in which the PPP concept can add value.

#### 1.2.4.2 Methodology

Fourteen in-depth interviews were conducted with the people who were intensively engaged in the process of innovation.

The interviews did not have a fixed set of questions. The issue of the particular innovation was raised and the people interviewed added their specific knowledge and insights to the discussions. The research was conducted as an investigation that had to find its own way via discussion and reflection instead of the systematic collection of objective data through surveys. Grix (2004) and Charmaz (2006) classify this as a grounded theoretical approach, using 'intensive interviewing' for acquiring 'rich data'.

Using inside information we made descriptions of the innovation process according to the complexity theory as developed by Prigogine and others. During the interviews we did not focus on the content but on the process of innovation. We described the process according to five aspects: approaching criticality, new attractor, take-off, stabilisation and coincidences (after Prigogine and Stengers). There are four examples in the boxes in this chapter. Most of them have been included in this book as appealing cases, so that the reader can compare them.



#### 1.2.4.3 The Composition of Innovations

Surprisingly, the results of the in-depth interviews showed that all innovations, even if incomparable in their content, have the same composition and structure.

There were always good ideas, at the right moment, within the right context, with the right persons supporting them at the right place. There was often a big external pressure on the organisation responsible for land development, which was thus forced to come up with new solutions.

The pressure was exerted by disasters like fires and flooding, dramatic changes in the political situation like new EU directives, a system change or new political parties coming to power, or by pressure groups. Usually these types of features came up in combination, like Murphy's law.

Choosing the complexity perspective therefore, is a logical choice. The interviews with key players addressed the reasons for the emergence and the persistence of a deviating practice. Interestingly, the stories were full of coincidences, sudden turns, local sparks igniting regional or even national processes of change.



The framework of complexity-elements chosen to structure the findings of the interviews made a seamless fit. Most innovative practices depended on various interdependent levels, that all play a role in the emergence and stabilisation of an innovation.

The cases prove that success depends on the appearance of a 'window of opportunity' on various levels simultaneously. The Flemish case on Hoegaarden for example is a combination of local and ministerial willingness for making non-agricultural considerations more important.

## Vouga Delta Area (Portugal)

**Approaching criticality:** Man, nature and water have lived together in a delicate balance for centuries in the Vouga river delta. There are 4000 farmers in the area, all working on small plots. Ecological diversity is extremely high due to landscape diversity and extensive farming practices. However, the balance is being disrupted and the number of floods is growing.

Harbor expansion in Aveiro in combination with stronger winds than before cause more floodings by the salty water of the Ria de Aveiro. Land use changes in the hinterland cause additional river flooding. To avoid land abandonment and ecological degradation, extra measures for water control are necessary.

EU directives (in particular legislation on Environmental Impact Assessment and the Directive on the Conservation of Wild Birds) as well as public awareness-urged integration of ecological and water management aspects with agricultural oriented measures in an integrated approach. IDRHa however, did not make use of integrated instruments. Moreover, traditional big investments only from the economic point of view are too expensive in the Vouga area.

**New attractor:** After a big flooding which caused a lot of damage to agriculture and nature, a decision was made to make changes. IDRHa decided to make an integrated plan together with Aveiro University and environmental protection organisations. The new plan had to combine flooding control with the continuation of agriculture and the preservation of the unique landscape and ecology of the area.

From the beginning, a new planning approach was set up by the new chief of IDRHa's regional office. His family roots were in the region and he knew the university professors and most of the environmentalists personally. The plan was established in cooperation between IDRHa, farmers, and environmental organisations. Although agriculture in the Vouga delta area is under considerable pressure, most farmers also have other jobs and are only partly dependant on their agricultural activities.

**Take-off:** Three different kinds of land use zones were defined within the scope of this land consolidation project: (1) mainly nature preservation; (2) both agriculture and nature preservation; (3) mainly agriculture. For these several types of land use, different kinds of interventions were planned. A big dyke has to keep part of the salty water out. A new agricultural practice reducing labor costs is being established. For IDRHa the result is a new approach in the field. This is the first time in the IDRHa history that interests of nature and agriculture have been integrated.

**Stabilisation:** At the time of the project, national environmental organisations made a claim to the EU Commission. The Commission came to the area and decided that the integrated plan was suitable for environmental aspects, which was a big success for the IDRHa approach. As a result, the Commission decided to cancel the claim. From that moment on, it was recognised that in the Vouga area nature and agriculture have the same interests and have to cooperate.

But even more importantly, the approach chosen by IDRHa became legitimatised to politicians and the public. Now the approach is seen by IDRHa as a new instrument with high potential for the future.

**Coincidences:** The new team leader in Vouga on one hand, with his local connections, open mind, was willing to leave bureaucratic safety and enter the risky pathway. On the other hand, the central IDRHa organisation's choice to facilitate and accept the experiment and its results affected change.



## 1.2.5 DISCUSSION AND REFLECTION: HOW CAN WE COPY FROM ABROAD?

Although there are similarities in regional innovation processes, the innovations cannot be simply copy-pasted.

### 1.2.5.1 Individual Perceptions

First of all, the implementation process has to be considered as a policy process in itself with often unpredictable outcomes. A government is not a machine. Jacobs (2006) states, that the appearance of our perceptions as direct and precise images of the world, even for physical objects, is an illusion. Thus, experiencing the need for innovation and finding a seemingly promising solution are very hard to formulate as undisputed facts.

The absence of a clear and uncontested ex-ante problem definition is a fundamental characteristic of exchange-for-innovation. We therefore cannot expect the model of information exchange to be as simple as: formulate what you are looking for and screen the donor on whether it can supply you with a solution.

### 1.2.5.2 Regional Cultures

Although we found that innovations in the different regions have many similarities, we must also conclude that there are still big differences. Some countries innovate because societal pressures are already codified in the national legislation and the changing of practices is a procedural or top-down necessity.

North Rhine - Westphalia is one of the regions where innovations were induced mainly by governmental policy. The examples of Portugal and Galicia are due to local initiatives. In The Netherlands the 'Schets-schuit' has been developed to organise creative design workshops to solve complex planning and development problems. These phenomena correspond with the cultural component in innovation theory as described by Tukker and De Butter (2006), concluding that innovation can be done using, among others, a hierarchic (NRW), individualist (Portugal, Galicia) or egalitarian (The Netherlands) approach.

### 1.2.5.3 Daily Changing Planning Practices

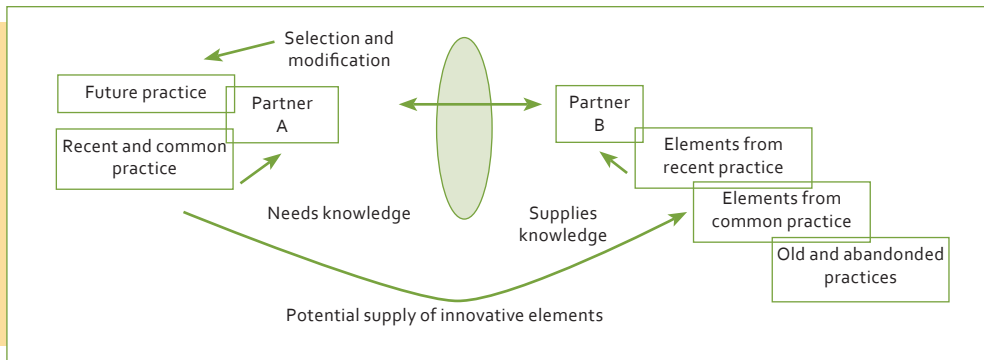
Attempts to adopt foreign land development methods stem from the tendency to avoid the possibility of 'reinventing the wheel'. Especially in countries where a managerial discourse prevails, copying is preferred over inventing for the sake of efficiency.

Indeed, in the case of technological innovations, in an underdeveloped country, the concept of mobile phones should be copied as it is the best communication technology available.

If institutional transplantation is a fast lane, it implies that, when doing 'exchange-for-innovation', demand and supply are to be linked, presupposing three ingredients. The receiver is aware of what is needed to improve a particular practice. Accurate and objective information on the potential donor-element can be provided by the donor. A newly identified useful idea can successfully be implemented. All three presumptions are simplifications of what actually happens in practice, changing our view on exchange-for-innovation into a less linear and less predictable process than it appeared at a first glance, nonetheless having the potential to render valuable outcomes.

The problem is that planning practices are constantly changing. We cannot refer to 'the' planning practice of a certain region. It is too complex and too personal to give an exact, complete and uncontested description. Furthermore, planning practices are constantly and officially or unofficially adjusted.

Formal frameworks will remain in place for several years or even decades, because a detailed land consolidation law exists. However, not every aspect of land development has a comprehensive legal basis, often running instead on customary tacit rules about how to use it. Even a planning practice codified in a special law may deviate from the formal basis already existing because elements from the law have become de facto, abolished or new legislation is being prepared and practitioners are allowed to anticipate this new legislation. Therefore, it is difficult for the donor to provide insight on what he has to offer.



#### 1.2.5.4 Innovations from the Past

The tendency in the FARLAND project was to have potential donors highlight their innovations. The underlying idea seems to be that what is outdated for the donor cannot possibly be expected to satisfy the innovation need of the recipient.

As innovation theory states, innovation generates a lot of trial ideas, most of which will be eliminated over time in an evolutionary fashion. So, making the donor put forward his innovations creates the risk that both donor and recipient end up with an eventually non-viable idea. The possibility that the innovation need of the recipient may be served with one decade-old donor elements seems to be an indecent proposal. Rationally, however, it is more logical since a country facing agricultural problems could benefit from elements that the donor was applying at the time the donor was also facing agricultural difficulties.

#### 1.2.5.5 Alternative Paths to Success

Another problem is that there is not a single isolated 'good' approach. It depends on the rest of the system whether the demand driven, the decentralised, the integrated, or the family cooperative approach enhances effectiveness.

As Mintzberg (1989) emphasizes, the success of organisations can be explained not by any single organisational attribute, but by how they combine various attributes. In other words, there are alternative paths to success, based on an organisation's ability to configure the attributes it uses. We therefore have to synthesize instead of analyse.

#### 1.2.5.6 Go Up by Leaps

Theory says that instead of trying to do everything well, the effective organisation can adapt by concentrating on a specific theme around which it can configure its attributes. Organisations, as a consequence, are known not to adapt continuously and gradually, in piecemeal fashion, but rather by engaging in quantum leaps from one configuration to another.

It may be more efficient to hold on to a form that is going out of synchronisation with its environment until a major transition can be made to a new, more suitable one. This way, internal configuration can be maintained, even if at the expense of external fit, and the costliness and disruption of organisational change can be concentrated into brief periods of strategic revolution. Meanwhile, smaller innovations – like the example of how cars are becoming more reliable, comfortable and safer – can be adopted.

#### 1.2.6 CONCLUSION

We cannot predict tomorrow's innovations in land development. But we can say how they will appear. They will be triggered by disasters, political or societal change, or directives from above. They will be developed fast. Sometimes they will succeed and sometimes they will fail.

The role of the people will be very important; especially that of the workers who will take the risk of applying something new but necessary. The process of innovation will differ in each of the regions. Partners will never completely copy-paste each others innovative practices. They will only use parts of them. They will even adopt parts of each other's long established practices. The parts will be used to compose new approaches to make them fit into each specific political, regional and organisational context.



## Bocholter Aa (North Rhine - Westphalia)

**Approaching criticality:** The Bocholter Aa area consists of five municipalities that are connected by a small river called the Bocholter Aa. The mayor of the municipality of Velen acknowledged the added value of making one joint spatial plan for the five municipalities together. However, from the regional level one cannot fully comprehend the problems in the field, because it has become too complex and too dynamic. The help of the locals was needed for successful rural development projects.

**New attractor:** LEADER was a concept that acknowledged this, but had only a limited spatial and temporal magnitude. To promote this way of working, the NRW ILEK model ("Integriertes ländliches Entwicklungskonzept", Integrated Rural Development Strategy) adopted the same philosophy. Drawing from LEADER as a source of inspiration, ILEK was officially established in 2004. ILEK combines financial flows, but, more importantly, aims to improve the participatory nature of problem-definition and allow the simultaneous employment of multiple instruments, not only from agricultural, but also from social and economic origins. The planning process is open to anyone interested, whether official body or individual. The process is completed within 12 months.

**Take off:** When ILEK became official it inspired the locals along the Bocholter Aa to make such a joint plan. They engaged in a participatory process, mapping the strengths and weaknesses of the Bocholter Aa area and setting targets accordingly. The preparation phase was subsidized with 50,000 Euros. The planning phase was subsidized with 10,000 Euros per participating municipality, making cross-municipal plans more interesting. This ambition toward cross-municipal plans emerges from tourism; a trend that specifically demands regional approaches. Currently, there are 35 ILEK projects running and it is still gaining momentum.

**Stabilisation:** The ILEK approach will probably be sustained in the upcoming EAFRD funding as it pursues similar targets. However, the actual projects flowing from the regional plan are not financed via ILEK, but have to be financed separately. Therefore, the administrative and financial fragmentation continues to exist at the project level. However, projects implemented within the framework of an ILEK regional plan do get more subsidy than projects without ILEK support. Many ILEK projects will eventually have to turn to LEADER money to be implemented. However, that will not be possible in each case.

## Read more:

- Altrrock, U., Güntner, S., Huning, S. and Peters, D. (2004) Innovationen und Planung. Planungsgrundschau Series. Berlin
- Artigani, R. (2005) Leadership and uncertainty: complexity and the lessons of history. *Futures*, 37
- Ayres, R.U. (1994) *Information, Entropy and Progress*. New York: Springer
- Byrne, D. (2003) Complexity theory and planning theory: a necessary encounter. *Planning Theory*, 2(3), pp. 171-178
- Charmaz, K. (2006) *Constructing grounded theory: a practical guide through qualitative analysis*. London: Sage Publications
- Cheng, Y.-T. and Van de Ven, A.H. (1996) Learning the innovation journey: order out of chaos? *Organisation Science*, 7(6)
- Deutsch, K.W. (1985) On theory and research in innovation. In: Merrit, R.L. and Merrit, A. (eds.) *Innovation in the public sector*. Beverly Hills: Sage
- Edquist, C. (ed.) (1997) *Systems of innovation: technologies, institutions and organisations*. Pinter
- Fisher, F. (1995) *Evaluating Public Policy*. Chicago: Nelson-Hall Publishers
- Geels, F.W. (2005) Processes and patterns in transitions and system innovations: refining the co-evolutionary multi-level perspective. *Technological Forecasting and Social Change*, 72(6), pp. 681-696
- Gleick, J. (1986) *Chaos*. New York: Viking
- Grix, J. (2004) *The foundations of research*. New York: Palgrave MacMillan
- Hargadon, A.B. and Douglas, Y. (2001) When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly*, 46, pp. 476-501
- Lundvall, B.A. (1992) *National systems of innovation: towards a theory of innovation and interactive learning*. London: Pinter
- Montalvo, C. (2006) What triggers change and innovation. *Technovation* 26, pp. 312-323
- Nelson, R.R. (ed.) (1993) *National innovation systems. A comparative analysis*. Oxford: Oxford University Press
- Prigogine, I. and Stengers, I. (1984) *Order out of Chaos*. New York: Bantam Books
- Rogers, E. (1995) *Diffusion of innovations*. New York: The Free Press
- Shapira, P. (2001) Regional planning and innovation: experiences in North America: introduction to the Special Issue. *European Planning Studies* 9, pp. 571-574
- Wonglimpiyarat, J. (2005) Does complexity affect the speed of innovation? *Technovation* 25(8), pp. 865-883



# CHAPTER 3.

## Future Approaches to Land Development

Frank van Holst, Government Service for Land and Water Management (DLG)  
Olga Jongeneelen, Flemish Land Agency  
Jeroen Reyniers, Flemish Land Agency  
Maggie Lodts, Flemish Land Agency  
Els Abts, Flemish Land Agency  
Andreas Wizesarsky, Upper Land Consolidation Authority North Rhine-Westphalia  
Rafael Crecente, University of Santiago de Compostella  
Vilma Daugaliene, National Land Service of Lithuania  
Henk Moen, Government Service for Land and Water Management (DLG)  
Margarida Ambar, DGADR, Ministry of Agriculture, Rural Development and Fisheries of Portugal  
Alejandro Vazquez, Ministry of Rural Affairs of Galicia  
Szabolcs Bíró, Research Institute for Soil Science and Agricultural Chemistry Hungary  
Adri van den Brink, Government Service for Land and Water Management (DLG)  
Marianna Pósfai, 4C Hungary  
Zsuzsanna Flachner, Research Institute for Soil Science and Agricultural Chemistry Hungary

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### 1.3.1. ARE WE HEADING TOWARDS COMMON APPROACHES?

European regions are developing to keep pace with the international economic arena. Structural changes are being made in society and along with them claims on land are changing.

In Chapter 1 an overview of the different approaches, instruments, and objectives in the field of land development was presented. Some regions have a very broad approach with different instruments, addressing various challenges, while others have a more limited scope and a singular instrument to deal with specific issues. This shows the rich variety of approaches to land development in Europe. However, it also raises questions, such as: Is there a reasoning behind this big variety? Or are these just different stages of the same evolution of approaches?

In Chapter 2 the point of learning and innovation was made, showing that innovation is not a simple mechanical process. Successful change depends on coincidences and personal interventions and not all innovations are improvements leading to regular practice.

Experience in FARLAND has shown that partners gain a lot of inspiration through intense review and exchange processes. However, innovation is not just a simple matter of copying each other's novelties and success stories. Differences in history, culture and institutional setting make the pace and direction of this learning process very divergent.

Supposing we are indeed part of the same evolutions, some additional questions arise: Are we heading towards the same set of instruments? Or are there major differences in context or way of governing that will sustain these differences? Is it

possible to draw joint conclusions for future approaches in land development?

This chapter will try to answer the above questions by 'turning the issue around'. We will not look from the perspective of the available approaches and instruments and see what they can do for us but we will analyse the issues at stake in European regions that have impact on land and the issues that cause land use conflicts.

Next, we will present what FARLAND has delivered in terms of learning for the various partners and how these partners will use new insights to utilise better land development approaches. Besides contents, an overview of the process of formulating 'future approaches' will be given, since the steps taken by the various partners are also an important indicator of how policies are developed. The differences between the various regions provide an opportunity to reflect on how governments develop in relation to market forces. Do processes of liberalisation and privatisation trigger a bigger diversity in approaches or do the various regulatory frameworks support a common direction?

## 1.3.2. CURRENT ISSUES IN LAND DEVELOPMENT

### 1.3.2.1 Economic Developments Put Pressure on our Living Environment

In densely populated European core zones or nearby economic and urban centres, continuous development puts pressure on land. Space is needed for new infrastructures such as highways and railroads, for residential areas or shopping malls, industrial zones and harbours.

The FARLAND study tours in Flanders, The Netherlands, and North Rhine-Westphalia showed some impressive examples of spatial development and illustrated the impact these projects have on land. The urban development of Lake-City Groningen, the extension of the port of Antwerp, brown coal mining or motorway construction in North Rhine - Westphalia, all put vast claims on the rural areas. But as the Portuguese Alqueva Agricultural Dam Project showed, such major projects are not necessarily always related to urban development.

Besides the bigger exogenous developments, rural areas and especially peri-urban zones are in continuous evolution in a more stealthy way. Traditional agricultural uses for example sometimes evolve in industrial scale or are pushed aside by hobby farming or horse riding enthusiasts.

In core European regions, the migration of city-dwellers to rural areas and the increased mobility that comes with it not only result in a functional but also in a mental urbanisation of the countryside. As the character of the area and its inhabitants transform, more space is also needed to meet the demands of the inhabitants for a nice and comfortable environment. Living comfortably also means a need for recreational opportunities (sports, relaxation, nice surroundings) and access to them.

However, the opposite is also true. A nice living and working environment is needed to attract enterprises to come to economically attractive regions. This is one of Europe's core objectives in the global framework. An attractive environment has become a major economic asset. It is clear that the limitation or availability of 'open space' near European economic centres is a crucial and common concern for the near future.

The effects of conflicting claims on open space are obvious. Although regulated by planning acts, developments not always lead to the spatial quality as envisaged. Land development approaches are means to pursue, plan and implement in a more coordinated and integrated way. Thus, the different functions of the land can be concentrated, 'red'(urban) and 'green' (nature) functions can be better tuned, and negative impacts on landscape, biodiversity, land use, and land ownership can be mitigated and compensated, coordinating public interests with private ones.

### 1.3.2.2 Protection of Natural Values is a Common Concern

The continuing deterioration of natural habitats and the threats posed to certain species are one of the main concerns of European Union (EU) environment policy. For this reason the EU wants to ensure biodiversity by conserving natural habitats and wild fauna and flora through the development of the Natura 2000 ecological network. This network is a high level completion of the diverse national systems of networks, parks and reserves that cope with the challenge of protecting and developing our natural heritage.

The establishment of this network is an important step. First, the network has to be ecologically viable. In highly fragmented and deteriorated regions, this means that separated zones need to be connected by creating new natural areas or building ecoducts, for example, and to create new physical conditions in which nature can develop.

In The Netherlands large nature development projects go together with residential projects in a joint venture of public and private partners. In North Rhine-Westphalia major public works as the construction of new motorways are always accompanied by compensation measures for the environment.





Second, the values are to be protected within a liveable socio-economic environment. This means that attention has to be paid to affected landowners and land users and a set of accompanying actions developed. In Flanders, for example, land banking activities are used to offer farmers alternative parcels when they are affected by nature development projects.

Last but not least, the networks also have an important function in the community. They form an important part of our collective space. Where possible, access to parks and reserves should be provided in a well-considered way so people can enjoy the richness of Europe's nature.

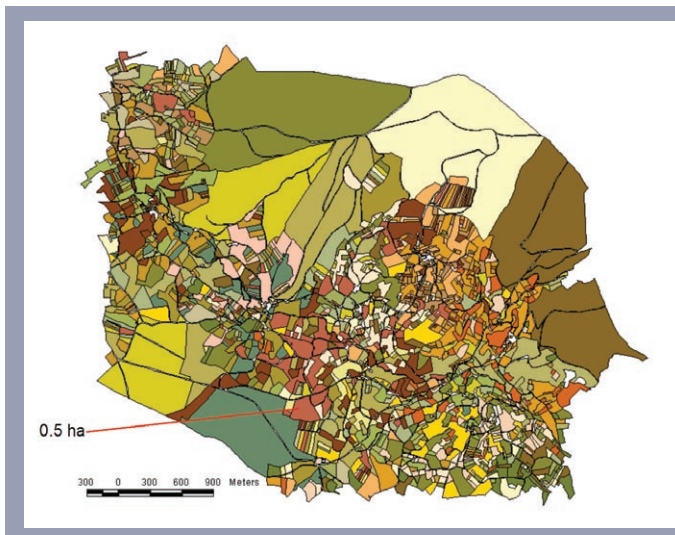
All of these actions go beyond the nature protection framework and affect other stakeholders in the rural areas. Therefore, a land development approach can help to implement our common goals of protecting and safeguarding biodiversity, while at the same time other interests can also be promoted.

### 1.3.2.3 Structural Problems in Agriculture and Forestry Hamper Rural Development

Structural problems such as small scale and fragmented land ownership are another issue at stake. Fragmentation can take many forms. The fragmentation of ownership in small land parcels is the most obvious. This problem can be remedied by land tenure, a process through which a land user can rent different plots from neighbouring owners to form larger fields.

Another problem can arise in the form of fragmentation of use. Land use fragmentation can be hardened by physical fragmentation when land use plots are separated by persisted borders as walls and roads or, more commonly, by hedges. A third type of fragmentation is fragmentation at farm level, when a large number of scattered parcels are exploited by one user.

In some regions fragmentation can take extreme forms. In Galicia, for example, the average size of agricultural and forestry plots is minimal. In central European countries fragmentation is becoming an important issue after the land reform. In other regions, such as Flanders, fragmentation is partly overcome by high land tenure rates and land use exchange between individual farmers, but remains an issue regarding efficient and future oriented farming.



Parcel fragmentation in a Galician parish

About 60% of the people in Galicia are rural land owners. The average size per owner is 1,7 hectare, divided over more than 7 parcels for each owner. The average plot size is 0,23 ha. The land registration system is unclear, hampering the functioning of the land market. Besides this, Galicia has one of Europe's lowest average land lease rates.

In many European regions structure and scale of land use and land ownership are hampering their development. General developments in agricultural production such as increased use of machinery, methods of production, harvesting, and marketing cause additional demands on access to parcel shape and to the fields by rural roads. Decision makers acknowledge that land fragmentation is a problem, but the impact on economic growth and social stability in rural areas is largely underestimated (FAO).

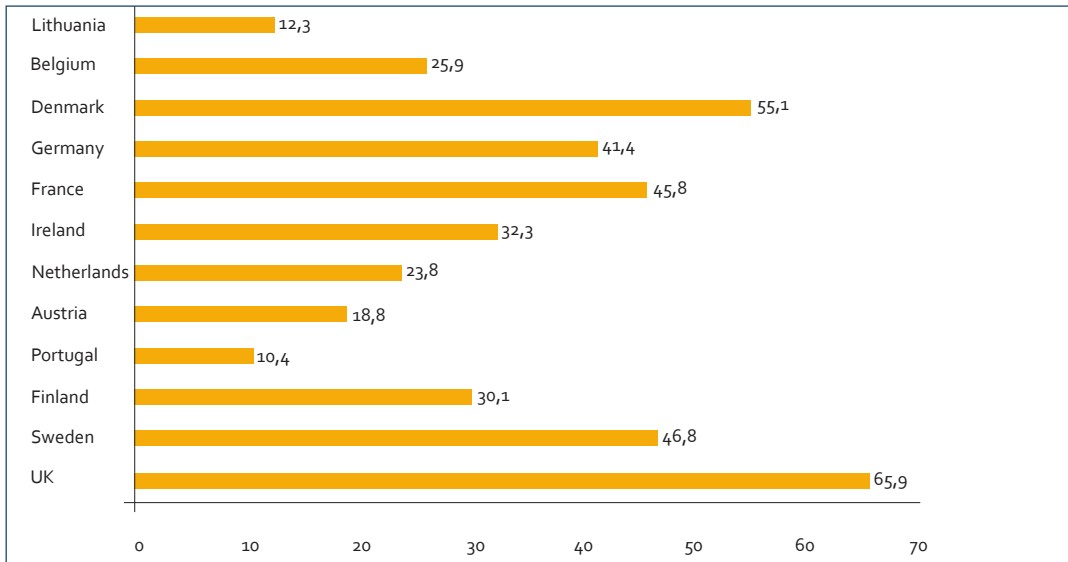
However, fragmentation may not merely be interpreted as a negative condition. On one hand, there are indeed numerous drawbacks from fragmentation. Larger scale farming is more efficient in manpower and equipment use, and in the use of pesticides and fertilizers. Fragmentation also leads to less willingness to invest by private and public stakeholders. In a context of free market and with less financial support from the government, it is crucial to run a profitable and competitive agricultural business. The EU and many European countries are formulating policies to reduce greenhouse gas emissions and become less dependent on fossil fuels. Biofuel production will involve large scale rational farming. This will be realised by changing the production of existing farms but it will also claim additional space.

On the other hand, landscapes with a fragmented agricultural structure can have a higher ecological value, for example because of the borders between the parcels. They are less prone to erosion and are typically rated higher as attractive visual landscapes.

Sometimes it is even argued that more fragmentation gives more people income possibilities, however, it raises the question whether this is not under the poverty level.

Both situations are very different in nature and demand varying physical and ownership structures but both must comply with increasing agro-environmental preconditions. It depends on the local situation and the method to be followed. In both cases, upgrading of rural infrastructure is a relevant issue.

Land development instruments such as land banking can support the process of scaling up and improving land structure. In areas where maintenance and preservation of small scale cultural landscapes are an issue, land development can also play an important role through creating more viable units, restoring landscape elements, or making space for elements like stone walls and hedges.



Average size of farms of some EU countries

### 1.3.2.4 Forest Fires in Southern Europe Force to Action

Forest fires took a high toll in recent years. Rural areas are most affected by them but urban centres have been increasingly in danger in recent years. Portugal was hit severely especially in 2003 and 2005 and Galicia, Spain in 2006. The year 2007 also challenged several countries with the danger of forest fires.

Lightning-induced fire is a natural part of the Mediterranean ecosystem and therefore forest fires have always been prevalent. However, other reasons such as climate change (longer dry periods), economical interests, vandalism, careless behaviour, bad management and spatial aspects dramatically increase the risks of forest fires.



NASA image of 22 May 2005 of Forest fires

“Portugal’s biggest problem is the lack of a central registry of land ownership”, said Domingos Cartaxo, a forest engineer with the Quercus environmental group.

“Land registration is the key,” he said. “Many laws can be introduced, but if this structural question is not addressed, the fires will continue to burn.”

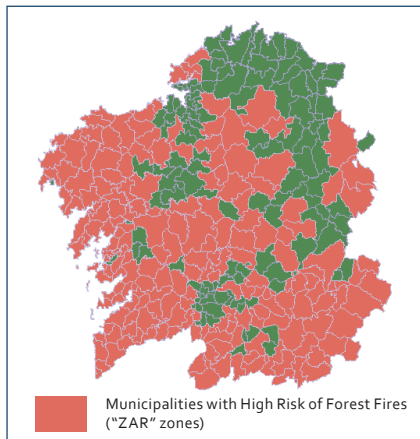
“If there was a central registry, authorities could identify forest owners and compel them to create fire walls of cleared land or plant belts of fire-resistant tree species, making it much easier to prevent or control fires,” he said.

Uncertainty over who owns land is made worse by the fact that many Portuguese are abandoning their own land in rural areas, meaning that there is no one to monitor many of the country’s forests.

The planting of large areas of eucalyptus for paper and pulp in recent years has also contributed to the spread of forest fires because they burn more easily than many other species. (Reuters, 22 May 2005)

Land development approaches can help achieve the objective of improving the management and structure of forest areas. The problems of huge ownership fragmentation of forests in Portugal and Galicia; unclear ownership and parcel boundaries; bad or insufficient infrastructure both for fire fighters and forest managers; abandoned areas; inadequate or nonexistent forest spatial planning and forest management; and inefficient fire prevention measures can be treated in an integrated way, using several instruments and policies.

This can be realised by a combination of activities to scale up and improve management via increased cooperation such as the Galician Forest Management Units and the Portuguese Zonas de Intervenção Florestal (Forest Intervention Zones or ZIF), especially considering that more than 80% of Portuguese forest is private. A development package of re-allotment and property clearance, the execution of the necessary infrastructures, and land banking with lease promotion (like the Galician Land bank) can structurally improve the layout and management of forest areas. This will not rule out the occurrence of forest fires but it will definitely lower their intensity and frequency.



Forest fire risk at municipal level in Galicia

In Portugal, a total area of 425.726 hectare was lost in 2003, the worst year since 1980, and another 338.262 ha burnt down in 2005, the second worst year. In the past 15 years, 16,3 % of Galicia's territory (480.000 ha) burned down as a result of more than 150.000 forest fires. In 2006 42.000 hectare of forest was destroyed.

## Mobilisation against forest fires

During the summer of 2006 more than 90.000 ha of forest burned in Galicia. Villagers were in danger, but also fire fighters and people from the extinction service were taking huge risks. All Galician equipments were mobilised which included about 500 professional brigades, 270 firepowers, 31 air equipment, and even equipment from other parts of Spain and Europe. The whole society was mobilised and groups of civilians fought the forest 24 hours a day.

This social mobilisation is still active. Almost a year after the wave of forest fires, a network of 6000 volunteers are still carrying out controlling tasks such as reforestation and sowing etc. in the high risk areas. ([www.voluntariadomontegalego.org](http://www.voluntariadomontegalego.org))

### 1.3.2.5 Flood Control Puts Claims on Agricultural Land

European policy makers are very concerned about flooding. "In recent years Europe suffered over 100 major damaging floods, including the catastrophic floods along the Danube and Elbe rivers in 2002. Since 1998, floods have caused some 700 fatalities, the displacement of about half a million people and at least 25 billion EUR in insured economic losses.

The value of assets at risk of flooding can be enormous. For example, more than 10 million people live in the areas at risk of extreme floods along the Rhine, and the potential damage from floods amounts to €165 billion.

In addition to economic and social damage, floods may have severe environmental consequences, for example when drinking water captation facilities or waste water treatment plants are inundated or when factories holding large quantities of toxic chemicals are affected. Floods may also destroy wetland areas and reduce biodiversity. Two trends point to an increase of flood risk in Europe.

Firstly, the magnitude and frequency of floods are likely to increase in the future as a result of higher intensity of rainfall and rising sea levels caused by climate change. Secondly, there has been a marked increase in the number of people and economic assets located in flood risk zones. Hence, the risk of floods will continue to be present in the European Union and may increase considerably during the coming decades. The challenge is to anticipate these changes now and to protect society and the environment from the negative effects of floods (source: EU DG Environment).

It is becoming clear that the combination of more erratic rainfall patterns and differences in land use lead to frequent and larger floods in many parts of Europe. It is expected that especially the rivers draining the mountainous regions as the Rhine, Rhone, Po, and the Danube will suffer higher flood risks in the future (European Environmental Agency).

In low areas near the sea, like The Netherlands, the flooding risk by rivers is combined with the risks of rising sea level. This may also be an issue for countries with long coastal boundaries such as Portugal.

Human activities have impact on flooding risks as well. In Flanders for example, dredging of the river Scheldt for the accessibility of the port of Antwerp makes sea tides on the river higher and pushes them further upstream.



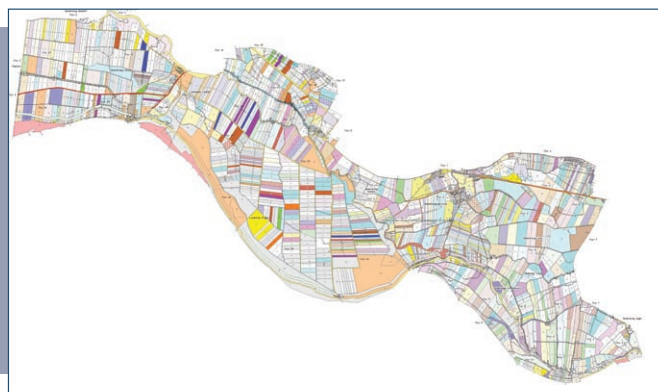
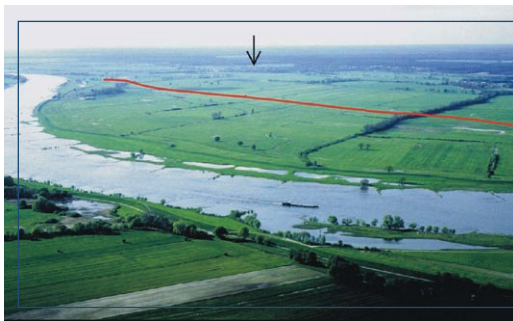
The traditional ways to protect people and property against flooding are not sufficient anymore. Nowadays there is a general understanding that building higher dykes causes quicker water drainage and more problems downstream. Government policies increasingly use the concept of 'room for the river' and controlled flooding to lower the risks of flooding. But more room for water means less room for people. This will lead to considerable claims on land along the river.

Land development activities are increasingly applied all over Europe to support flood control measures, to make them bearable for all users or even add extra value to the projects by integrating further objectives. By creating new land uses, such as less intensive farming, and converting agricultural land into valuable wetlands, several objectives are achieved.

In The Netherlands, water retention is combined with large housing developments, water recreation infrastructure, and nature development - as demonstrated by the Blue City project and Lake City Goningen. North Rhine – Westphalia showed the re-meandering of the Kleine Aue river at Espelkamp. Here nature development, landscape restoration, recreation, and water retention go hand in hand and a land consolidation procedure is used to find solutions for the affected farmers. In the Bodrogeköz area in the NE part of Hungary, much attention is paid to matching future land use to soil types and inundation effects - all in an open planning process.

These examples are of different scale and type but all contribute to lowering flood risks in their own way, while integrating broader objectives and taking into account the mitigation of negative impacts on the current land users.

Land development has proven to be a very useful tool for rearranging land ownership along rivers. The images reflect the starting point of a land development project along the river Elbe near Lenzen in Germany (Source: Drees, A, Suenderhauf, R, 2006).

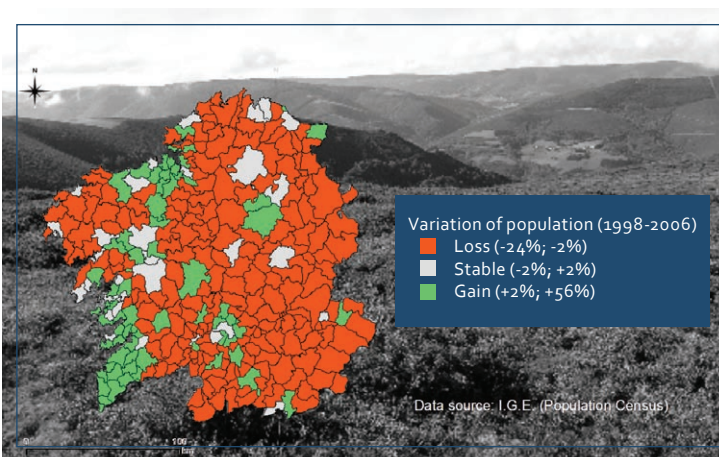


### 1.3.2.6 Land Abandonment and the Quality of Rural Life

Abandonment of land is a serious and growing problem in several parts of Europe. It takes place in areas with physical handicaps like the Spanish and Portuguese mountainous regions and in large parts of Central and Eastern Europe. Many farming regions have been affected by adverse economic changes reducing the viability of established forms of production.

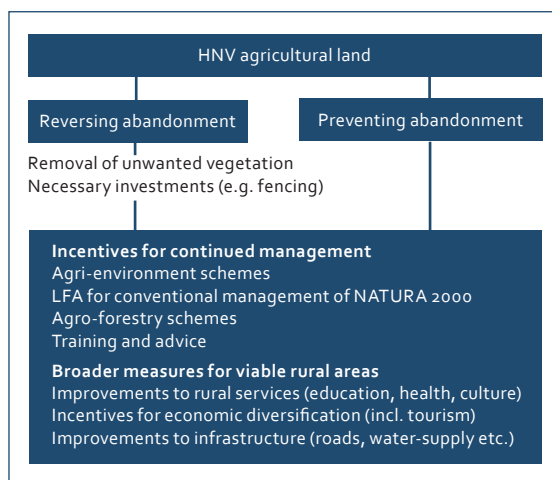
These changes have been more severe in Central and Eastern Europe than in the Western EU. Transition was accompanied by major changes in agricultural structure in most countries, generally involving the break-up of large collective or state farms and the privatisation of land. Often this occurred over a considerable period of time leading to unclear situations and bad land management.

All over Europe, abandonment has been accelerated by the retirement of an older generation of more traditional farmers and by the migration of younger people to urban areas.



Loss of population in Galicia

Land abandonment can have several effects. It can lead to a loss of semi-natural habitats, like high natural value (HNV) farms. It has consequences for cultural landscapes, leads to more homogeneous landscapes, and to the loss of structures of cultural value (terraces, historical buildings). It also increases the risk of forest fires in the Mediterranean countries and leads to higher erosion rates. And finally, the loss of agricultural use can further increase the process of migration and marginalisation.



Schedule reflecting the interaction between different measures  
(Source: background document IEEP / Vein Ecology 2004)



Land abandonment is caused by a combination of reasons such as physical characteristics (relief, soil quality, and climate), social issues, lack of facilities and opportunities for young people, and attraction to urban centres. The structure of the farms (farm size, plot size, and the possibility of access to the land) is also an issue. Finally, legal matters also play a role: difficulties in ownership and processes of restitution of land rights to absent owners can also be causes for abandonment.

Land development approaches are not able to stop entirely the migration and further marginalisation of agricultural regions. A combination of different tools like land banking, formation of larger units by cooperation, land re-allotment, and the promotion of other land uses can help regions find a new balance between commercial farming, nature and landscape preservation.

### 1.3.2.7 Main Common Factors

The main current issues in land development have a broad diversity in terms of themes, location, causes and effects, and perspectives. However, all of them have a common factor, a parcel, as a unique piece of land determined by property rights, use, location, and shape. Land development with all its different tools – neither static, unique, nor universal – addresses the issues at the level of a parcel. This is essential for the management of the issues at stake.

Land is inevitably connected to property and use. The use of land is increasingly dynamic since changes occur more rapidly due to socioeconomic and environmental forces.

Claims on land for diverse uses will increase in the future however, land is finite. In addition, land property rights are part of the foundations of our political and socioeconomic system. Currently, this is particularly evident in Central and Eastern European countries.

In the 'era of information' both society as a whole and individuals are increasingly aware of the topics of land use and property and they are empowered to discuss them. Availability of spatial information and technologies stimulate this, Google Earth for example is more popular than ever.

Land development tools give society the opportunity to modify the spatial configuration of property rights in order to optimise land use, with guarantees for all parties involved in a democratic process. The activities and outputs form the level of action needed to effectuate spatial planning and regional/rural development plans. The toolbox of land development provides an excellent opportunity to create the impact intended by these plans.

## 1.3.3. PREPARING FOR THE FUTURE THROUGH JOINT LEARNING AND INNOVATION

### 1.3.3.1 How Did FARLAND Prepare for the Issues at Stake?

The issues at stake lead to a number of challenges: How to respond to a deteriorating living environment near the economic centres? How to scale up land ownership for easier adaptation to international developments? How to re-arrange land ownership structures and land functions to be better protected against natural hazards like forest fires and floods? How to re-direct the process of land abandonment? How to manage the relation between use and property?

All these questions do not have one unambiguous answer. The answers however define how land development instruments will be used in the future and which new instruments are needed to be developed.

In FARLAND the basis for this is joint review and exchange in order to inspire each other. This joint work was organised in the form of different activities.

FARLAND partners have organised **study tours** to show the others a cross section of their work. By means of presentations, field visits, workshops, and discussion panels the specific regional challenges were investigated and best practices and innovations were discovered.

Each of the countries prepared a state-of-the-art land development paper and together with an inventory of 'appealing cases' a comparative **review study** was performed (Chapter 1). The highlighted cases reflect recent innovations of the partner organisations. To create more innovative capacity, a number of these cases were studied more deeply to get an insight to the mechanisms that trigger innovations (Chapter 2).

A more in-depth investigation was performed during **technical exchange visits** on specific themes, based on the demands of the partners. Some of these themes tackled the use of instruments that deal with specific challenges such as how to use land development for:

- village renewal and village ecology
- development of nature reserves and ecological corridors
- fitting in big infrastructure
- scaling up small scale fragmented agriculture
- better structuring of forest areas
- making space for flood control measures
- reverting the process of land abandonment

Other themes were more tool oriented, like:

- how to evaluate land as a base for the exchange of parcels?
- how to assess the costs and benefits of land development?
- what project procedures are useful and how to improve project management?

Referring to land development as part of a bigger institutional framework, the following topics were assessed:

- how to link land development approaches to European policies?
- funding mechanisms
- relation of land development to different levels of spatial planning
- public private cooperation in land development

Finally some general themes were assessed:

- what happens after completion of land development projects?
- how to set up a system of continuous learning?

Joint review activities focused on the rich experience of FARLAND partners. A lot has been learnt about different instruments, tools, and ways of working. To avoid 'tunnel vision' when looking at new approaches, FARLAND explored the future by using the technique of **scenario analysis**.

**Expert panels** discussed different scenarios and sketched possible changes in the future. Additionally, FARLAND explored the different regional contexts because of the differences between regions and countries. The future approaches for land development in the different FARLAND regions are elaborated in parallel regional processes, resulting in regional discussion papers. Examples are given in this chapter regarding the topics that FARLAND partners will explore in the near future.

In addition to these regional discussion papers, FARLAND partners have learned to work in a more future oriented way. A joint ambition is formulated to sustain and strengthen the innovative power through joint cooperation.

## Future Land Development in Flanders, the Rurban Area in Search of Allies

The spatial morphology of Flanders is characterised by a far-reaching urbanisation of the countryside. To indicate this phenomenon, terms such as "urbanised peripheral", "peri-urban landscape", "the fog city", "the scattered city", "overpressure", "junk areas" or "rurban areas" are being invented. These areas are typically under high pressure because of the demand on land for private and public urban functions.

'Horsification', 'gardenification', cutting and fragmenting by infrastructure, loss of readable landscape structure and qualities, visual pollution, lower general accessibility through privatisation of the space, are all typical trends in those areas.

Besides physical impacts, the loss of regional identity on the social level can also have negative consequences on regional feeling and identification. People become alienated with their living space and social networks decline as the countryside urbanises mentally. At the same time, traditional rural sectors such as agriculture and nature conservation receive lower attention and thus have difficulties in coping with the dominant mechanism of urbanisation.

Current instruments of spatial planning, as zoning, also fail to tackle the decline of spatial quality because they focus mainly on general uses and do not deal with the detailed filling-in by the 'tyranny of small decisions'.

During an expert workshop organised in the framework of the FARLAND project by the Flemish Land Agency (VLM), experts saw this evolution as one of the major challenges in land development to be tackled in the near future. The experts share the opinion that urbanised spaces require new alliances between public, private, and even individual stakeholders and subscribe to the viewpoint that the alliances should be tested in strategic experimental integrated projects.

Given the complex situation in these areas, it is apparent that there is not a single solution or instrument to be used. A combination of physical measures, with high attention to land ownership, social-economic actions, and innovative spatial plans have to be considered. Developing new accessibility such as recreational and functional walking, bicycle routes, nature development and landscaping measures and village renewal are some of the possible actions through which Land development can contribute to the success of the projects. An integrated development plan, as the Integrated Rural Development Strategy (ILEK) in North Rhine - Westphalia or as the Flemish de Merode project that combines and fine-tunes different actions of stakeholders, can be an interesting activation instrument.

As also discussed in FARLAND during the visit to the development projects 'Meerstad Groningen' and 'Blauwe Stad' in The Netherlands, one of the prerequisites for the success of strategic projects is a strong regional coordinator – be it a person or an organisation- who initiates and coordinates new actions. During the workshop experts did not unanimously agree with VLM's taking this role.

A multisectoral oriented land development agency that has the know-how for implementing concrete actions in the field and the instruments for the necessary land use-landownership related operations, has an important executive and supporting role to play. VLM can play this role due to its long experience in integrating projects and its broad field of knowledge.

In these areas special attention should be given to a well thought-out financing structure of the projects. During the Flemish study tour discussion, FARLAND partners noticed that in Flanders the link between the realisation of 'hard' or 'red' functions and the realisation or financing of accompanying 'qualitative' or 'green' measures is not always as well organised as in other regions. A new challenge for the VLM then is to experiment with new ways of cooperation with private actors (PPP).

### 1.3.3.2 Learning in Different Dimensions

Each of the FARLAND activities was evaluated from two main perspectives:

- what do we learn in view of our own regional or national approach?
- what are common conclusions and challenges for future land development?

The three main principles of FARLAND directed this towards:

- more integrated approaches
- a more decentralised planning and implementation
- more flexibility.

This section will deal with the most important learning points following the main principles. Last but not least, it will reflect on learning about different cultural backgrounds.

## Integrated Planning and Implementation: Accepted as Concept but Difficult to Realise!

The subject of integration received attention in almost every exchange activity. Finding a good balance between economical, ecological, and social aspects is a key-issue in many of the areas where land development is used. In some cases, land development plans serve broad territorial objectives while in others one single objective is pursued.

The critical review of approaches and projects from different perspectives has taught the partnership to think 'big' and to be more ambitious while formulating future objectives. After all, it is not the instrument that requires planning but the quality of the area itself.

The liveability of an area is the common point of departure and the common goal. All the issues at stake revolve around this. Achieving broad objectives for a demanding civil society in the 'pressure cooker' of urban areas is not the only case. At the other end of the spectrum, abandonment of land in marginal areas is not an isolated technical problem as it is related to the structure of land ownership, the level of access, and it is about using the broader opportunities of the area.

Many issues in FARLAND regions are 'complex' in the sense that they are results of a set of technical, physical, and human conditions that reinforce each other, sometimes even ending up in a vicious circle. They are common in the sense that there is not one solution to the problem. A package of mutually supporting activities is needed to deal with the root causes.



FARLAND partners have realised that this objective oriented view, compared to an instrument oriented one, opens the mind. In The Netherlands such visionary thinking led to the building of a new city, Lake City Groningen, with the use of land development. By cross-financing the 'green' functions, such as ecological corridors and recreational infrastructure, with the more profitable urban investments, a successful example of integration was witnessed. Although this example, given its scale and complexity, will not be repeated easily, the moral is that land development should be well embedded in wider rural or spatial development programmes.

Integrated planning and implementation is accepted among land development experts as a planning concept, but many regions struggle to put it into practice. Some regions struggle due to lack of proper instruments. Partners have inspired each other by sharing their established approaches. Typical regional contexts deliver new instruments such as the instrument of land banking and land use in Galicia that is used to fight problems of abandonment and small scale.

Each region has both good and bad examples of integration. Many administrative systems manage to come up with broad rural development strategies but they are not prepared to implement integrated activity packages because these involve the competencies of different ministries and sectors. Often, planning and financing systems are completely separated.

Compartmentalisation of policies by sector and lack of cooperation and coordination hamper the fine-tuning and implementation of plans. The EU Rural Development Programme does not sufficiently promote the financing of integrated land development packages as it is based on a division in axis and measures. This leads to a focus on singular activities instead of broad programmes. In principle, a combination of measures even across the axis is possible but, in practice, the accountability of these packages leads to extra operational burdens. This is an important factor since the majority of FARLAND partners depend (for rural and land development) on European co-financing.

The 'institutional fragmentation' in many of the European regions presents a challenge. Some FARLAND regions have rather independent coordinating agencies for land development such as in Flanders and The Netherlands. This can help achieve the different objectives of land development but there is still a need for broader cooperation. Inspiring examples of cooperation like the Alqueva Dam Project in Portugal, the harbour extension near Antwerp, and the brown coal areas in the German left lower Rhineland have stimulated the partnership to be pro-active in promoting cooperation.

Land development provides the implementation matrix for integrated action involving various measures at different levels of planning, both in sectoral and hierarchical terms.

Integration is not only about physical measures or themes, but is also about reaching different groups of people from young to old, from land owner to business manager and different organisations (governmental agencies), and border territories. Land development as a process affects social environment and a proper linkage between these can enforce community sense and responsibility.

Village renewal activities in North Rhine - Westphalia for example strike a good balance by taking government actions and at the same time stimulating local actions. Activities reinforce each other and can multiply investments. As the mayor of Milchenbach very proudly said that 'the land consolidation procedure has actually influenced the liveability of the whole village'.

## Future Land Development in The Netherlands: Broadening to Socio-Economic Objectives

The experiences of the FARLAND regions stimulated DLG in its effort to be a learning and innovating organisation.

An important learning point is **to strengthen the socio-economic chapter of land development**. Economic developments in urbanising societies lead to new challenges. Relations between communities and the surrounding countryside become weaker and spatial developments put the quality of the living and working environment at stake.

Presently, land development in The Netherlands focuses mainly on the countryside. Although implemented in good cooperation with the local residents, plans have an overriding technical nature. DLG was inspired by its European partners to strengthen the socio-economic objectives.

In North Rhine - Westphalia village renewal/ecology in an integrated development approach is seen as a very good way to reorient villages to a changing economic environment. The quality of the areas have improved by new use of buildings, redesign of public space, and ecological concepts that connect residential areas to their wider environment. It further involves residents in the planning and taking-care of their environment.

Flanders offers good examples that take into account social aspects, such as finding alternative living and employment possibilities and by implementing land development as part of a wider approach of strengthening

regional identity. These and other examples lead to a stronger social, economic, and spatial connection between residential areas and the countryside.

DLG intends to explore this approach with its natural partners like the Dutch provinces and municipalities. This fits very well in the implementation of the 'socio-economic vitality' within the new policy framework for land development in The Netherlands. DLG hopes to find enthusiastic partners to start pilot projects and to develop a working approach.

Continued broadening of land development also leads to **the ambition of attracting more and other sources of EU land development funds**. The EU offers a range of funds for the period 2007-2013. Existing opportunities of rural development co-financing are mainstream nowadays but they are still not applied completely. Other EU funds offer new opportunities to realise the broader objectives of land development. DLG intends to further explore the European regional development policy and to realise socio-economic objectives via the European Social Fund and the EU Culture Programme.

The broadening of the Dutch approach will result in an **improved information flow about the benefits of land development towards responsible politicians and the general public**.

DLG experienced that FARLAND partners deal more spontaneously with political and public attention. Study tours or exchange visits within the framework of FARLAND are often used to get political attention. The press is invited to press conferences, exchange activities, and field visits. Inspired by its FARLAND partners, DLG sees further challenges in professionalising its PR/Communication approach. DLG will continue to educate and train its project leaders to develop a proactive PR-attitude. Land development will be more successful if the mutual cooperation between the media and politically responsible persons is used to better inform people about its success stories.

## Towards More Decentralised Planning and Implementation: A Multitude of Opportunities!

The theme of decentralisation has a broad meaning in FARLAND. It touches on the role of the different government levels but it also refers to public participation and stakeholder involvement. In this meaning, decentralisation is more than the (EU-) principle of subsidiarity.

The question on how and who initiates new land development projects was an important starting point. The initiation of projects and the use of land development as a tool of the government reflect the attitude towards governance. Governance is the exercise of political authority and the use of institutional resources to manage society's problems and affairs.

Politics has clear goals and uses institutions, structures of authority, and collaboration to allocate resources and coordinate or control activity. But as FARLAND showed, the institutions (agencies) themselves have an idea about 'problems and affairs' and the way to govern them. In other words, how they, as institutions, should be used by politics. This leads to tension, especially in the area where new projects are initiated.

The cross section of FARLAND regions shows some common tendencies. In the first generation of agricultural land consolidation projects, initiatives usually came from agricultural organisations. With the transformation of land development approaches to more integrated projects, a shift towards government initiatives was made. With societies becoming more demanding and with governments aiming to shorten and make more effective policy cycles, a shift is again made towards more demand-driven approaches. Most FARLAND partners have more or less the same main division between:

- local initiatives for smaller scale, rather sectoral initiatives,
- government initiatives for larger scale – often integrated projects which go beyond the interest of the area itself.

However, there are more shades of grey. Following the LEADER principle, North Rhine - Westphalia strongly supports local organisations to formulate their own integrated rural development strategies. The Netherlands now experiences a wave of voluntary, though integrated, land development projects on a smaller scale than the former, legislation based projects.

'It was interesting for the FARLAND members to see the quantity and diversity of demands for land development in Flanders. VLM was advised by FARLAND to formulate decision criteria when initiating new projects. The present approach is ad hoc. VLM puts each demand on the agenda of the Minister who then makes a decision. This approach involves the risk of losing quality control in open space projects. It is not easy to decide on which approach is the best. In each country there is a variation between plan orientated approaches and demand driven approaches. Probably a balance between the two is the most suitable.'  
(source: Evaluation of Technical Exchange Visit 'Project Initiation', January 2007)

As many land development projects across Europe showed, involvement of local organisations and people is essential. In the land consolidation project of Luz, in the Portuguese Alentejo, IDRHa installed a team in the village and technicians actually lived there for ten years.

As the evaluation of one of the technical exchange visits commented: "We have to support creative local people! But we also need creative, innovative and pro-active staff to facilitate community processes!" Processes of negotiation with different groups of local stakeholders are sometimes difficult but they are the key to the success of projects.

The de Merode project in Flanders provided an excellent example of a project that goes beyond the usual public participation approach. A very open and participative process, land development contributes to the strengthening of regional pride and sense of identity.

Concepts of decentralisation and broad public support are not only important during project planning but also during implementation. The strong community approach in Galicia goes further than this. By a form of cooperative farming, units are merged and advantages of scale are created. The same principle was followed in the Portuguese Zonas de Intervenção Florestal, where bigger and better manageable forest units were formed. Although not literally applicable to other countries, such a group approach has inspired other partners.

The management of facilities is a common concern. As one of the technical exchange visits concluded: "In Galicia, the municipal governments are responsible for the maintenance of the infrastructures after a land consolidation project. This is also a problem because usually municipal governments do not have enough economic resources to fulfil this task. We think that the most rational process (according to the principle of decentralisation) should be to establish, before the approval of the land consolidation project, the direct beneficiaries who should be the responsible agents for the maintenance of the infrastructures."

Another FARLAND visit ignited the following ideas: "In Portugal, farmer associations are responsible for the maintenance of infrastructures after a land consolidation project. This unusual solution is a good example of decentralisation during the exploitation phase. It works better when the association (and its





partners) has personal interests in the facilities built during land consolidation - as in irrigation projects. The problems arise when the beneficiaries are not clear (who are the concrete beneficiaries of the new rural roads?) and when the 'performance' of the infrastructure is not so important for them."

FARLAND experience clearly illustrated that the division of tasks between different layers of government and the public and private sector is not a static issue. FARLAND partners are continuously confronted with new ideas on decentralisation. The newly introduced land consolidation programme in Lithuania has promptly anticipated ruling ideas of decentralised government functions while regions with established approaches react slower due to the effect of the 'law on diminishing returns'.

## Future Land Development in North Rhine - Westphalia: Stimulating Local Stakeholders to Join Hands

"If the IRDS Process did not exist, it would have to be invented now," was the statement made by the head of the Institute for Country and Urban Development North Rhine - Westphalia, Dr. Rainer Danielzyk, during the national FARLAND Conference at Düsseldorf (NRW) in June 2007.

And indeed the process, which is based on the LEADER idea and was initiated in North Rhine - Westphalia at the beginning of the EU- funding period 2000 – 2006 is a success story, second to none in Europe.

The targets of a so-called Integrated Rural Development Strategy (IRDS) are:

- mobilising regional development potentials,
- well adjusting of hitherto existing isolated single measures,
- reaching significant synergies, and
- employing them in the development of rural regions.

An integrated rural development strategy (IRDS) consists of a SWOT analysis of a region. Based on this survey, development strategies are tailored to the specific regional situation. It is a comprehensive concept for the territory of two or more municipalities.

The IRDS is developed in cooperation with organisations, associations, administrations and inhabitants. The design of projects is also a part of the strategy. The planned projects have to afford contributions for reaching the regional development strategy, to be sustainable and realisable, and to achieve profit at an early stage.

The regional development strategy is versatile and can include:

- the improvement of the village periphery or agrarian conditions,
- the development of sustainable use of energy resources, or
- the creation of new job opportunities in the regional marketing and rural tourism.

An IRDS has to be developed by adequately qualified persons from outside the administration. The process is funded depending on the number of participating municipalities.

In the FARLAND Project, national as well as international experts have pointed out that: "The formulation of 'Integrated Rural Development Strategies' is a very good approach to bundle regional development processes. The integrated approach and the participation of the citizens are innovative examples in Europe. This approach is well supported by the organisation process during the planning phase and affords a 'monolithic' rural development. The existing knowledge is optimally used because of the high participation level of the local stakeholders. The IRDS-process describes a nearly ideal realisation of the academic 'counter-flow principle' and is the classic form of the modern regional structural policy."

In North Rhine - Westphalia 149 of the 396 municipalities have teamed up into 33 IRDS. Another 26 IRDS have already been finalised. Participating municipalities are successful in their development processes and advise other municipalities (without IRDS) to join one as soon as possible. An overlapping cooperation between municipalities is essential in the future and offers advantages for the municipalities' development by an exchange of experiences as well as the intensive participation of the inhabitants.

## Flexibility: The Ability to Adapt

“We have to be flexible” was a statement often heard in the FARLAND project when unforeseen events affected the proposed planning of a meeting or field trip and schedules had to be changed accordingly.

Flexibility is the ability to adapt to change. More scientifically analysed, the flexibility of a system is related to its adaptability to a new environment or its resilience in recovering from disturbance. It refers to the ability to re-organise and still have the same identity, the same basic structure, and ways of functioning. It includes the ability to learn from the obstacle. Increasingly, attention in our dynamic society is shifting from growth and efficiency to flexibility. Growth and efficiency alone can often lead systems into fragile rigidities, exposing them to turbulent transformation. Resilience and flexibility open the eye to novelty and new worlds of opportunity.

Besides the flexibility necessary in the organisation of the FARLAND project itself, it was also one of the main topics of exchange and discussion. FARLAND showed flexibility in land development approaches in multiple ways.

A look into the history of land development shows how flexible land consolidation, and later the broader land development approaches, adapted to the needs of society during the past decades. This is nicely illustrated by the cross section of measures and objectives that were aimed for in regions with a long tradition in land development and land consolidation. There was an evolution from sole agricultural structural improvements, to improvements in forestry via introduction of landscape and nature measures, water management and the introduction of recreational and tourism measures to projects working on the improvement of regional economy.

It is very interesting to see that during this evolution, major changes in legislation occurred rarely. For example, in Flanders integrated land consolidation projects are still realised in a legal framework which has not changed in 30 years. This indicates the flexibility of the applicable legislation, and also the flexibility of the institutions dealing with land development. This institutional flexibility can also be noticed in the organisational reform that most of the FARLAND partners experienced during the project. Continuous learning and updating through exchange of experiences and knowledge have proven to be an effective way to be flexible.

Today, in an increasingly complex and changing society, legislation should be made more flexible. The tension between the concept of flexibility and the need for procedures – which are almost by definition fairly rigid – is believed to be solvable with a modular toolbox approach in which only the necessary procedures are put into action. In North Rhine – Westphalia, this idea is put to use in all kinds of land consolidation projects (ranging from voluntary to comprehensive).

While this search for optimised legislation continues, the flexibility of approaches is becoming obvious in all regions:

- First of all, there is a tendency for flexibility in timing, when projects are phased and implemented in different time tracks. It is strongly felt that the previously long duration of the larger integrated projects for example in The Netherlands and Germany did not provide the level of flexibility needed to respond to a changing environment.
- Secondly, there is a growing flexibility in surface, such as a wide variety of project area sizes or of solutions that contain small scale actions or sub-projects that fit into bigger programming frameworks. Such ‘modular approaches’ are believed to strike a proper balance between the need to achieve quicker results in government investments while the cohesion between measures in different parts of a wider territorial unit is maintained.



- Land development covers the complete spectrum of projects – from relatively mono-sectoral to complex-comprehensive. The most important aspect however is flexibility in the use of different instruments, that is, the use of tools and mechanisms that best fit the given problem. A general principle is to work on a voluntary basis if possible and compulsory basis if necessary.
- Finally, there is an increasing need to have flexibility in financing. Often, projects do not exclusively rely on traditional governmental land development funding sources but combine financial streams of different ministries and even from private partners in public private partnership projects.

All these different flavours of flexibility result in land development approaches that are constantly adapted to the actual needs of society. However, it is only possible to put them into practice when the people behind the instruments and approaches are also flexible in their thoughts and actions. In FARLAND this prerequisite was fulfilled entirely.

The meaning of land consolidation procedures in reference to the social requirements									
goals	measures	programmatic primary goals							
		increase of production		increase of productivity		development of the rural areas			
		EG-VO 1257/1999							
		FlurbG 1953		FlurbG 1976		FlurbG 1994			
		1950	1960	1970	1980	1990	2000	2005	
improving the production and working conditions in agriculture and forestry	land readjustment								
	consolidation of scattered parcels								
	building parcel units of a more favorable shape and size								
	providing ways and roads								
	increase of number of farms								
	solving of land use conflicts					XX	XX	XX	
	eliminating of public measures' disadvantages								
	restore of proprietary (Eastern Germany)								
promoting the general use	cultivation of fallow land / forest clearing								
	cultivation of moor								
	dehydration of wetlands								
	drainage								
	water bodies								
	- straightening of water bodies								
	- allocation of riparian land								
	- renaturation of waterbodies								
	soil conservation								
	- measures of soil improvement								
	- measures of soil conservation								
	nature protection and landscape conservation								
	- landscape development								
- allocation of areas for nature									
- implementation of landscape planning									
development of land and rural areas by re-arrangement of agricultural land	rural settlements								
	- settlements for refugees								
	- relocation								
	- settlements for farm workers								
	decongestion of villages								
	readjustment of village parcels								
	development of communal settlement								
	village renewal								
	village development								
	rural tourism								
diversification									
legend	XX	special importance							
		high importance							
		medium importance							
		low importance							
				land consolidation					
					integral land consolidation				
						integrated			
							rural development		

Source: Thomas, J. (2005): Zur Bedeutung und zum Bedeutungswandel der Flurbereinigung in Deutschland. Flächenmanagement und Bodenordnung, 4/2005

## Future Land Development in Galicia: Towards a Flexible Multi-Tool Box

Land development instruments gather and adjust in the different strategies and measures that come from upper levels of planning. They work as filters between economic policies and the territory. They work with land property and land use rights, the environment, the landscape, the people. They implement specific policies or measures from an integral and/or sectoral point of view but, at the same time, they adjust the conditions and land structure of local areas for future policies.

This is the land development view, a new approach to land management as learnt from FARLAND. But to materialise this view, land development instruments must be considered as a flexible multi-tool box adaptable to the objectives of each area, as in Flanders and North Rhine - Westphalia. This approach to land development is new in Galicia. Up until now, land development was mainly based on a single instrument: land consolidation. With a situation of extreme land fragmentation at different levels (parcels, use and property), this instrument was used since the 1950s with a well established legal framework and with an agrarian objective.

A lesson learned from this experience and from the Dutch FARLAND partners is that land consolidation is not the only way to solve structural problems and is not enough to get a sustainable development of rural areas. Taking this into account as well as the changes occurring in rural areas in the past years (depopulation process, land abandonment, abandonment of agrarian activities, etc.), two new instruments are being developed: the Land Bank of Galicia (Bantegal) and the Forest Management Units.

The land bank of Galicia will work mainly to promote land mobility in order to prevent land abandonment, especially land with agricultural attributes. To achieve this, a public entity (Bantegal) will be created to promote land mobility through renting contracts between landowners and farmers. Bantegal will work as a mediator and catalytic element, as well as give support and guarantees to the renting process.

The Forest Management Unit (such as the Zones of Forest Intervention in Portugal) will gather forest properties, abandoned or not, in one single unit. This unit will have a specific tool at its disposition for the sustainable management of the forest.

To achieve land development success in Galicia, these instruments have to work in an integrated and coordinated way with other rural and regional development instruments.

In the private sector, innovative initiatives are being developed without a specific legal framework based on a joint use of land which is managed by a professional association in which each landowner participates with a contribution of land and/or capital.

Galicia is in the process of developing this toolbox. Innovation and the search for new solutions will continue also due to fundamental reflection and "think tank" discussions – techniques learnt from VLM and Flanders.

## Learning from Cultural Differences

The FARLAND kitchen is equipped with a wide range of cultural flavours. Culture in this context is perceived in the broad sense of the word, as a set of knowledge, behaviour, and customs that people in a group share. The way people work, dress, communicate, eat, perform are all parts of a certain group identity.

Basic ingredients in FARLAND were for example groups with a specific background in practice: groups with a research background, groups from Central Europe and from Western Europe, groups of people sharing the same language or sharing the same climate. Learning about these differences took place during intensive project visits where the exchange of explicit and implicit information was served spiced with bratwurst and bacalhau.

Language is of major importance in review and exchange projects. Sharing experiences and exchanging knowledge require common understanding and a common language. It appeared useful to explicitly examine the definitions used in the project. For example, an analysis of the different meanings of the word 'land development' was needed in order to be able to start discussing its tasks. This was particularly useful

since none of the FARLAND partners is of native English origin while the very concept of land development is not known in Anglo-Saxon countries. In some FARLAND countries the word has been used for decades and represents a large amount of information, while in others the word does not exist in a proper translation. In Flanders, land development is connected with green and nature but in Galicia it is difficult to translate because even the concept itself is a novelty.

International cooperation projects need to invest effort to bridge these language gaps. The terminology used in national approaches and practices needs to be translated and explained in order to make the essentials transferable and applicable to a broader public. The Portuguese 'Zonas de Intervenção Florestal' could serve as an example. The 'Forest Intervention Zones' literal translation is not difficult but still it hardly says anything about the specific meaning in a specific context. The gap between research language and language of practice triggered both sides to construct a common path of communication.

Besides language, other issues are directly linked to cultural background. There are various ways of decision making: are we heading for a common agreement or simply voting on majority decisions?

Planning processes in more centrally organised countries are different from those of more decentralised countries. Some partners are more used to and experienced with working in less structured, open planning processes while others prefer pre-structured ways of working. Is an executive body allowed to organise its own structure and process or does it depend on a legal framework or higher-level approval before taking action?



The role of politics and power in land development differs in each country. While in one country the minister actively participates in the project, it takes much more effort to get the minister of another country involved in project affairs. Some countries have easy access to the press at conferences and project visits while others do not even try to involve the press. Doors of beautiful town halls were opened to FARLAND but it also experienced people living without electricity.

Recent history also influences the do's and the don'ts. A remarkable resemblance appeared in problems of small-

scale farming and land abandonment between two far reaches of the European Union. While Vilaverde in Galicia shows a very effective way of organising small-scale farmers in more viable cooperatives, the opposite situation exists in Lithuania, where there is a drive to finish with the past of forced collectivisation. Interestingly, Galicia's ambitious land banking programme stimulates Lithuania to reconsider this possibility.

During the regional study tours, each partner tried to present a complete picture of the region visited. The illustrations took place in official meeting venues with PowerPoint presentations but also during dinners and intensive bus trips or field visits to meet local practitioners. FARLANDers have proved to be sensitive, open, and respectful towards other cultures. The process of this exchange even created a new culture, a FARLAND family was born, where ties and suits have disappeared, where heated discussions do not lead to anger but only to a new couplet in the FARLAND song.

The visits of FARLAND representatives, their questions, comments, and discussion have promoted among local people a sense of pride about their projects.

## Future Land Development in Lithuania: Careful Steps in a Very Sensitive Environment

Since ancient times, land was not only the means of survival but also the way of life for the majority of Lithuanians. The history of Lithuania reflects numerous land reorganisation processes.

After regaining independence in 1990, a new period of re-establishment of self-dependence and national legal system started. One of the biggest reforms was the land reform, based on the restitution of land ownership rights and land privatisation. Restitution of land ownership rights is at its final stage (96 percent of land and 3.82 million hectares have been restored in rural areas) but the most difficult applications still need to be solved. According to the Government Programme, restitution of land ownership rights should be accomplished by 2008.

As a result of the present land reform it became evident that the farms are small (average 12,3 ha) and scattered into several remote land parcels. The dominance of small and fragmented land plots in the agricultural sector and undeveloped infrastructure in rural areas lead to the need of defining a new policy for land management. This comes together with the adjustment to EU Common Agricultural Policy and the need of the Lithuanian farmers to create well functioning and competitive farming structures.

After several pilot land consolidation projects, legal basis for land consolidation was established in 2004 and the first fourteen land consolidation projects were started in 2005. The first steps showed that the land consolidation instrument should be further developed to become more flexible and better integrated into other related instruments.

Through exchange of experience with numerous international experts during international projects and in accordance with the Governmental Programme, a **National Land Consolidation Strategy** is being prepared. The objective of this strategy is to create assumptions and foresee the measures for successful land consolidation so as to ensure the rational use of land in rural residential areas and to allow the solving of the complex needs of the state, public, and individuals.

**Specific objectives** of the Strategy are:

- to ensure the relation of land consolidation with rural and regional development;
- to create conditions for the optimisation of the land consolidation process.

A public awareness programme is being prepared within the framework of the Strategy, and guidance for education and training regarding land consolidation is being developed. Upon approval of the Strategy, certain changes in the existing legislation for land consolidation (regulating the process itself, its coordination with the other development processes, including the administrative and institutional issues) will be introduced. It is expected that the second round of land consolidation projects in Lithuania would be started in accordance with the improved legislation. These projects will be more efficient and flexible.

The best experiences of FARLAND countries were used and modified for the development of the above mentioned National Land Consolidation Strategy – in particular the integrated approach (the actors and activities used) in the land development process, the attraction of various financing sources, using land banking and other instruments to facilitate this process. The FARLAND project has contributed a lot to raising public awareness of the integrated process of land consolidation and land development in general.

### 1.3.3.3 Upgrading Approaches as a Joint and Participatory Process

Subchapter 1.3.3.2 shows that the FARLAND learning process had different dimensions. One such dimension was the development of the so-called "Discussion Papers" - one for each country or region, including the lessons learnt and the planned future activities for upgrading the approaches to land development. This step was crucial since it bridged the often experienced gap between learning and application.

By including the seven discussion papers and their presentation to and discussion with policy makers in the project, the partnership had an impact on policies via international learning. Partners had the freedom



to organise these processes while FARLAND provided support through common workshops, training, and orientation on how to design policy reformulation processes and how to present the results with the active support of the member knowledge institutes.

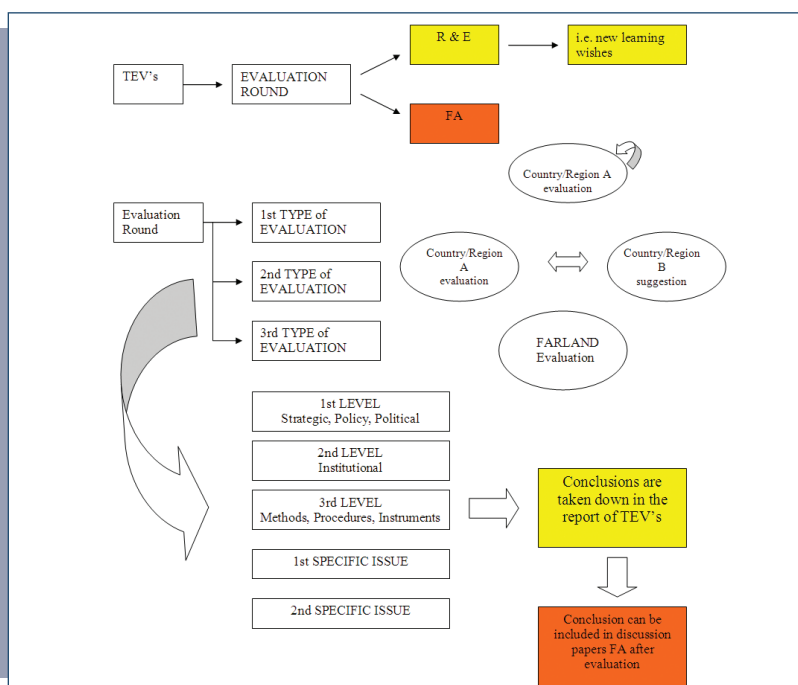
## From Learning to Applying

The input and the output (seven discussion papers and seven events to present them) were defined first, but the process was still to be designed by the partners. A proper evaluation structure proved to be vital for documenting the inputs.

Each of the exchange activities was evaluated in three ways, using three different levels. The figure below illustrates the structure and the purpose of the outcome.

Nevertheless, the process was a typical learning process with ups and downs. The kickoff was eager, almost euphoric. After starting with a bunch of information in the form of nearly 20 reports with proposals and recommendations for future approaches to land development, the partners reached a phase of searching and orientation, which is natural in learning processes. External support proved to be helpful for entering a highly productive period.

The first ideas about the content and the development process of the “National Discussion Paper” were presented and discussed in the framework of a FARLAND project-supported interactive workshop. It became clear that land development is not an end in itself and shall attend to other laminar forms of ongoing planning processes. The future cooperation between partners was founded by including external experts from crucial organisations already in this early phase of formulating future approaches to land development.



The support of external moderators from Pantopicon, a Belgian company for supporting organisations by stimulating future-oriented thought and action, during the workshop was particularly helpful as an external guide during the ‘ascent of a steep learning curve’. They introduced the group into the possible types of participation, which are:

1. informing (lowest level; only informing relevant target group)
2. consulting
3. advising
4. co-producing
5. co-decision making (highest level; target group can make co-decisions about future approaches)

After realising the need for the participation of external experts, the challenge became how to best mobilise them. How can partners raise the interest of their relevant target groups to participate in the process of formulating future approaches to land development? How can future needs be jointly developed?

As a response, the partners were introduced to the utilisation of scenario analysis, an auxiliary tool to orient present instruments and approaches to future demands. Scenario analyses are mental exercises to analyse perspectives on the future and how they might unfold by developing discerning storylines and future images. Scenarios are about long term societal dynamics but they are meant to inspire decision-making today.

They are learning machines, sketching alternative futures. Typical questions are:

- What might happen in the future?
- How are these developments and events intertwined?
- How can we influence the future?

It is clear that the future cannot be predicted, but the impacts of possible changes can be influenced by today's decisions. And the possibility to shape the future inspires and mobilises people.

All partners were stimulated by these inputs and got new ideas on their way to (regional) future approaches to land development. The next step – the execution of the discussion paper process – had to be done by the partners themselves. This was necessary because strategic, institutional, or instrumental preconditions were too diverse between the partners to have a uniform process in every country or region.

The partners had and used the possibility to ask each other for help (“distant coaching”) during this period of formulation. All reached the common target and developed their individual “national discussion paper” in order to be able to update the regional approaches to land development. Every partner proudly presented its process and result in the frames of the second workshop. Moreover, partners got deeply involved in the process of working out suggestions for future process improvement.

Participation	Flanders	Galicia	Hungary	Lithuania	The Netherlands	NRW	Portugal
Type	Co-producing	Co-producing	Informing	Informing	Consulting	Advising	Advising
Way	Workshop	Workshop	Conference	Conference	Interviews Workshopping	Discussion meeting	Discussion meeting

## Observations and Conclusions

Achieving the outputs in limited time within a multi partner network like FARLAND required well structured planning and development processes. Through careful process design and management the aim was to standardise, synchronise, and improve certain actions in order to make them more effective and the results comparable. The manufacturing industry, like the automotive industry, uses process management as an important tool but is it possible to standardise, synchronise and therefore improve the European learning and development process?

In the FARLAND project internal processes like the evaluation of Study Tours and Technical Exchange Visits proved to be standardisable. By performing the evaluations in a structured and disciplined way,

partners were confronted repeatedly with the question 'what are we learning here that we will be able to apply in our work?' This stimulated the partners to have a learning attitude, to be curious, and to ignore differences in context or situation.

On the other hand, regional activities like the development of the Discussion Paper needed flexibility for the consideration of political, institutional, and legal preconditions. This was required in order to deliver substantial and not superficial results for the country or region at stake. By synchronising the processes in time, partners stimulated each other in questions on how to involve other stakeholders.

For some partners the Discussion Paper process forced the organisation to take action and lead to more results than expected. The reasons were clear: the inputs from the study tours, technical exchange visits, and the discussion papers from the other partners had enriched the internal debate and provoked and engaged people to take part in this process.

This open process required strict management and brisk exchange between the several groups for the efficient synchronisation of the different processes. Even though process design was different between the partners, the overall result required partial results at fixed dates.

The progress of the process had to be secured by a monitoring system (queries, etc.). The partner responsible for the core process had to build up a strict management as VLM had done. By the common definition of targets and milestones in the working group "Future Approaches" and in the National Action Plans, a more or less latent controlling system was developed. The process was sometimes hampered due to several reasons but because of the intensive exchange, for instance during the workshops and by distance coaching, the partners got new ideas to gain momentum.

This exchange within the project was expanded to external experts and local stakeholders, to get more information and new perceptions for future approaches. Doing so helped reach another target: the administration could raise the awareness of concerned persons by giving them the chance to participate, to contribute their ideas, and to jointly shape the future.

## Future Land Development in Hungary: Setting the Preconditions

In the absence of an existing approach, emphasis will be put on setting the preconditions needed for sustainable land development. Land consolidation is considered an efficient instrument of land policy, which can help achieve the general objectives of rural development.

Three main priorities were set:

**Strengthening awareness of the issues of land development.** The competitiveness of agricultural production, the state of the environment, and the development of rural areas make it equally necessary to determine the policy of land development for the longer term. The harmonised formation of development programmes (national and regional) ensure social agreement on land development issues. The wide-ranging communication of objectives and measures for land development ensure the information and involvement of stakeholders. The communication campaign can also convince decision makers about the importance of land consolidation.

**Preparation of the legal and institutional background for land consolidation.**

The Land Act No. LV of 1994 appropriately regulated the procedures for voluntary land exchanges with the aim of land consolidation. However, this procedure can only be implemented on a small-scale. A fully voluntary participation can never be reached. There is no accepted land consolidation strategy on the national level and there is no act on the regulation of land consolidation. As land consolidation is an indispensable tool for achieving the objectives for rural development, it is necessary to adopt immediately the law on land consolidation and the required amendments of certain related regulations (heritage, land lease, right of pre-emption, Civil Code).

The institutional background of country level coordination and local implementation should also be set up. In fact, the administrative institutions of land management are already able to perform the tasks of land consolidation. The National Land Fund(NFA) together with its county offices manages a part of the land in state ownership and through its land acquisitions and sales has access to information on the Hungarian land market. Therefore, a lot of information and many information systems are available aerial and satellite photos, land registration and network, Land Use Registry, Land Parcel Identification System of IACS that can also be applied during the process of land consolidation.

**Integrated realisation of land development with other development programmes via pilot projects.**

The realisation of land development in harmony with development programmes helps establish a direct connection between agriculture, rural development, regional development, and regional policy.

Project fields are:

- construction of surface linear infrastructure (road, railway) close to countrywide centres of logistics;
- programmes related to certain rural development measures (especially LEADER and village renewal);
- designated NATURA 2000 protected areas;
- Water Framework Directive measures;
- and the further development of the Vásárhelyi Plan (protection against the floods on Tisza river - emergency reservoirs, and flood plains) in the surroundings of agricultural farm(building)s (especially in the case of new ones), in settlements affected by Regional and Territorial Development projects initiated by the National Land Fund, and in settlements, where the share of State property is significant.

### 1.3.3.4 New Governance: Challenges in a Changing Institutional Context

The issues presented in section 2 all deal with change and conflicts about land use and property. These processes are not static but change gradually over the years depending on variations in economy, society, and environment. At the same time, the way governments perceive their role and function also changes as the liberal influence (less protective) of the European and world market grows.

The general trend is to regulate less by government and leave more to market forces. International agreements in WTO context lead to the reduction of trade barriers and to the trimming of EU production support system. National and regional governments tend to decentralise public tasks and to leave the initiative or the implementation to businesses or citizens.

Both decentralisation and liberalisation reinforce each other and lead to organisational restructuring programmes all across Europe and organisations dealing with land development are part of this process.

## The Dynamics of Organisational Change

The experiences of FARLAND partners in the project illustrate the increased dynamics of organisational change in Europe. During the past two years all of our seven implementing partners faced some kind of change. DLG in **The Netherlands** is still the main responsible body for implementing land development and continues to operate nationwide but from a very different position. From a legally defined entity for implementing land development for the Ministry it now is a potential implementer for each of the 12 provinces. Its position has become more independent.

In **Portugal**, a major reorganisation in all ministries was implemented with the purpose of rationalising their function and increase efficiency in their management. Several government organisations ceased to exist and a

few were merged. IDRHa was merged with another organisation, forming DGADR. This new organisation has a wider set of tasks and continues to have the competence of land development within the scope of the Ministry of Agriculture, Rural Development and Fisheries but with less staff available.

In **Lithuania** the National Land Service continues to have the coordinating and guiding role in land development. However, ongoing decentralisation is moving primary responsibility for land development initiatives from county level to municipality level, bringing along a major challenge for future coordination.

In **North Rhine - Westphalia** a major reorganisation of all state government organisations was performed with the objective of reducing the number of administrative levels from three to two and reducing government intervention to the minimum required. Consequently, the Upper Land Consolidation Authority was integrated into the Ministry, while the local agencies have become part of district governments and became even more competent in rural development.

The same major reorganisation is happening in **Hungary**, leading to a huge staff reduction in the Ministry of Agriculture and Rural Development.

In **Flanders** the Flemish administration finalised a reform phase. The land development department of VLM itself, however, remained unchanged.

In **Galicia** new entities related to land development will be created under the Ministry of Rural Affairs. This is the case with the land bank, which will be managed by a public company specifically created for this task, and with the forest management units that will have to create an entity or association to operate.

New approaches to land development will need to take this institutional environment into account. It is not only a matter of 'how' to deal with new land development issues but also 'by whom' or 'with whom'? This can even be taken a step further: 'can't we leave the solution of land use/land ownership conflicts to the market?' This is not an imaginary situation since Anglo-Saxon countries already follow a market approach.



The different issues at stake show that the answer to this question is negative. Experiences in many countries show that the issue of fragmented ownership is too large to be solved by the market. The same counts for dealing with natural hazards and the urban sprawl. Free democratic societies benefit strongly from a statutory land readjustment instrument. Such a legal instrument is the means for 'bridging' the discrepancy between the constitutional guarantee of private (real estate) property and the regulatory task of the government to influence land use for public demands. Land needed for maintaining the infrastructure

ensuring public wealth, such as a new motorway or flood protection, can be delivered in a cheaper and non-traumatic way by voluntary acquisition and parcel exchange instead of painful processes of expropriation. Governments continue to feel responsibility to avoid negative influence on the living environment and eventually the quality of life itself.

The FARLAND partners experienced some common institutional developments and challenges. Establishing integrated approaches with different sectors working together face the pressure of retreating governments, acknowledging that proper coordination and cooperation between the sectors has always been a huge challenge.

In the case of land development policy, this effect is reinforced by the fact that land development approaches are not very well known. Land development on national and regional level is insufficiently present and visible in the planning system (rural development, regional development, spatial planning). There is insufficient knowledge about the contribution of land development to a variety of policy goals. Land development planning practice is too limited to the group of involved experts. Creativity is needed to invent new methods of coordination with new partners that operate in a more market oriented way.

Besides the composition of the 'team', the pace will also be different. Planning and policy implementing agencies are not accustomed to reacting promptly to changes in society. In a less protected and more competitive environment, the needs of society change more rapidly. Land development policies deal with the present while policy (re)formulation cycles take too long. Frameworks for implementation often contain legal procedures that take too long and do not have enough tools for swift tailor-made solutions. There is a need for courage and capacity to engage in and to promote future vision and perform innovative experiments to face the new needs of society.



All these developments are happening in a European policy context that increasingly influences the arena in which land development is implemented. Many countries and regions depend (for rural and land development) on European co-financing. Although the policy and financing framework accommodates land development measures, what FARLAND partners are experiencing is that the EU in its rural development framework has a modest attitude in promoting structural improvements on land use and property.

In many cases this leads to national rural development plans that put too much emphasis on individual problems instead of collective (structural) problems related to land use and infrastructure. Processes to develop new approaches to land development need to be accompanied by building trust and sharing information and promoting transparency at all levels.





## Future Land Development in Portugal: Reinforcing Cooperation Between Sectors

It is important that Land Development approaches become supported and implemented in Portugal in order to promote effective integration. Multi-sectoral projects should be implemented involving different goals that, in classical procedures, have been field of distinct interventions. We need to promote and develop territorial approaches instead of instrument demand-driven projects.

The DGADR learned from the FARLAND partners the Land Development concept, which provides a box with adapted tools to act in each specific territory, providing tailor-made solutions.

In Flanders, in The Netherlands, and in NRW, DGADR witnessed the use of several tools such as Land Consolidation and Land Banking, in projects that are multi-purpose and, thereby, are applying the concept of integration in practise. DGADR was also encouraged by implementing organisations, such as DLG and VLM, that act as vehicles towards integration as they deal with a wide range of fields - from nature and landscape conservation to recreational or cultural issues - besides agricultural purposes.

If one intends to develop multi-sectoral, integrated approaches, suitable partners are needed to combine efforts in order to obtain better and more sustainable results and take advantage from increasing synergies. Therefore, cooperation between several sectors, ministries, and organisations operating in rural areas need to be further encouraged and reinforced.

The idea is to develop programmes and projects that are “constructed” from the start with the cooperation - as in team work - of several partners which are suitable and needed to achieve the multi-sectoral aims.

For instance, rural development is managed by the Ministry of Agriculture, Rural Development and Fisheries and territorial planning and nature related issues belong to the Ministry of Environment, Territorial Spatial Planning and Regional Development. These two ministries have clear and close ties in influencing rural areas. Therefore, it is important to promote the integration of territorial policies within rural development policies.

In Portugal, conflicts in land use and the need to coordinate public and private interests are a reality. Additionally, property structure is still a major problem that has several implications. All these issues are tackled by the land development scope.

One of the “hottest topics” nowadays in Portugal is forest fires. Forest fires have become a top priority for the government as they affected the country severely in the last 4 years. This problem deals with private (more than 80% of Portuguese forest is private) and public interests (forest fires have serious consequences on landscape and nature and its fight consumes huge amounts of public money).

Forest fires have several causes related to property structure, bad or insufficient infrastructures, land abandonment, inadequate or inexistent forest spatial planning and forest management, and inefficient fire prevention measures. Additionally, the problems are reinforced by climate change. All these issues are related to several sectors and, therefore, should be dealt with an integrated approach, as it needs a cross sector intervention – a land development approach!

## CHAPTER 4

# Conclusions: Converging or Diverging Approaches?

The Farland team

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  - 1.4.2.4 Enhancing the Capacity to Innovate in the Field of Land Development
  - 1.4.2.5 FARLAND, Near Future: Act Now!

### 1.4.1 COMMON DIRECTIONS

The overall objective of the FARLAND project was to upgrade national and regional land development policies. To reach this objective a network was created in which professionals from seven countries and eleven organisations were brought together. They reviewed and exchanged the existing knowledge in the field, gained new insights and turned these insights into new approaches of land development. They also learned about the differences of land development in various regional and cultural settings.

The continual exchange of knowledge underpinned the enthusiastic cooperation between the consortium partners. The FARLAND working method has been a fruitful one. The attention paid to discussion, reflection, and learning from each other contributed greatly to the successful outcome. Another important factor was that the knowledge exchange was about real life land development issues. As the project partners are all rooted in their own national and cultural contexts, they were able to study a broad range of examples of new approaches to land development that represent a rich sample of European realities.

The joint learning and developing process will not lead to the same unified approach in all of the FARLAND regions but there is a clear common understanding among the partners that land development in the future will be an important approach facilitated by governments to restructure land use (both public and private) and property. All partners have expressed intentions and developed ideas to broaden objectives, to create more extended tool-kits, to create tailor-made solutions, and to enhance implementation capacity.

In this common direction, land development is considered most effective when done in an integrated way in which:

- different interests of sectors and organisations are balanced during project preparation;
- interventions react on current and future needs of society, broader than agriculture;
- activity packages are diverse and well-coordinated during project implementation;
- funding flows are combined.

And when done in a decentralised way in which:

- regional and local administrations take responsibilities;
- interest organisations and local stakeholders are actively involved during the initiation, preparation and implementation phases;
- a good balance is found (depending on the issue at stake) between the responsibility of the government to safeguard public interests and local private interests (combination of top-down and bottom-up).

And flexible frameworks for implementation are available that:

- contain various instruments and tools that mutually support each other;
- enable to produce quick results (win-win situations).

The FARLAND project showed that there are many issues at stake in the participating countries for which land development is an appropriate instrument to deal with. Examples are the transformation of agriculture, depopulation and loss of landscape diversity; adaptation to the consequences of climate change; protection against natural hazards; and safeguarding the overall quality of life.

These issues are by no means restricted to the countries of the consortium partners, but occur also in other European countries. The importance of the FARLAND project and its results, therefore, is not just applicable to the specific circumstances in the seven countries of the consortium partners, but has a more general appeal that calls to the attention of politicians, decision-makers and professionals at the European and national levels.

The FARLAND network might be continued and extended to provide a platform for further exchange of knowledge and experience, because learning from each other, learning new approaches, and reviewing what approaches work in different situations has proven to be a fruitful method.

Differences in land development are due to differences in social, economic and cultural conditions; differences in legislative traditions; and differences in the regional performance of the issues at stake. It is therefore indisputable that future approaches to land development must deal with these factors. In other words, future approaches are context dependent.

In the FARLAND project, each of the partners prepared a regional discussion paper in which they presented what they had learnt from other partners and why this might enrich their own land development practice. These regional discussion papers were discussed with various members of the public, and in some cases also with private stakeholders. As a result, these stakeholders got involved in FARLAND and showed interest in its results, opening the way to innovate land development instruments and practices at the regional level.

The lessons learned varied among the partners. Hungary, for example, focused on the preparation of the legal and institutional framework for land development, whereas in Portugal there was a need for promoting integration, developing new tools and improving the compatible use of land for both public and private benefits. In The Netherlands results were achieved by incorporation, of socio-economic objectives in land development plans as practised in North Rhine - Westphalia. In Galicia coordination of land consolidation with regional development and other new instruments, such as land banking, was one of the main issues.

But there were also a number of common themes. One of these was the emphasis that was given to the importance of an integrated approach, combining different sectors, goals and interests. Integration is considered to be important because the issues at stake are multi-faceted and the instruments and approaches of land development must deal with these issues in order to be effective.

Another common issue was the need to strengthen awareness for the opportunities provided with land development. This has multiple facets, such as the communication with and involvement of public and private stakeholders and the implementation of land development at strategic as well as operational levels. It also offers help in dealing with the consequences of governmental reorganisations and new forms of financing land development measures.

As a result of decentralisation, throughout Europe, regional governments take up tasks and responsibilities that they did not have before, including tasks and responsibilities in the field of land development. This means that new and, in some cases, renewed attention must be paid to the dissemination of knowledge on how land development 'works' and what are the benefits for the different stakeholders.

All FARLAND partners shared the idea that there is a need for a strategic vision on land development that deals with both the more general themes and the regional specifics in their own country. Such a strategic vision would help address the issues at stake and the use of land development. It would also be an appropriate framework to discuss and implement different forms of land development, the stakeholders that need to be involved, the operational aspects of an integrated approach, and new forms of financing land development projects.



#### 1.4.2 COMMON CHALLENGES

Each of the regional discussion papers contains several ideas to take steps in this commonly supported direction. Differences in institutional context, history and culture lead to a variety of regional flavours. These regional differences are caused by regional priorities in the issues at stake but also by variety in cultural and political background. To establish and develop these approaches, some common challenges are defined.

### 1.4.2.1 Recognising the Power of Land Development

FARLAND partners strongly feel that the role that land development can play is not well-known among policy makers and non agriculture sector-related experts. Land development can be used for the implementation of various regional, rural and territorial development plans, complementing and supporting already existing instruments. Land development is one of the few approaches that deal with multi-sectoral objectives in a single process. If the different area-specific plans would be defined and applied in better cooperation and coordination, this would lead to an optimal effect on land development. Consequently, land development requires new partnerships with public and private partners and collaborative ways of working.

### 1.4.2.2 Promoting Land Development in Strategic Planning

Next to recognising land development as a powerful policy implementation tool, is the need to better embed instruments in the different rural, regional and spatial development strategies. For this, the communication and 'marketing' of land development are needed.

Countries and regions will need to take explicit action if they want to mainstream land development in their policies. For example, strategies can be developed on how to use land development for various policies affecting land use and property. Such strategies are preferably set up in open planning processes with different ministries, interest organisations and other stakeholders involved. This will lead to increasing involvement of different policy makers and more awareness about what land development can do for achieving their own objectives.

Making land development more visible is the challenge at the European level. Some land development measures are part of the EU Rural Development Programme but they are sometimes hidden between the rich 'palette' of rural development measures.

Putting more emphasis on the structural improvement of land use and property in regulations and guidelines would help direct national and regional governments to take more and firmer actions. Allowing programme financing instead of providing EU co-financing on the basis of single sectoral projects would also encourage national and regional governments to work in a broadly integrated way. In achieving the best land development results, integrated plan development and funding have proved to be the most effective way.

### 1.4.2.3 Improving Operational Capacity for Land Development

To work in a tailor-made way, the availability of a range of instruments is important. Such a range of instruments is necessary to be able to choose the most effective way of dealing with area specific problems and opportunities. It would help if national and regional frameworks would allow the use of land development for different objectives (e.g. agricultural development, nature development, improvement of forest management, recreational development, fitting in big infrastructure).

It is also important to have a choice between simple voluntary land consolidation and parcel exchange and forms of sovereign, legally regulated, complex land development. Land banking in its different forms (exchange land banking, financial land banking, land banking on the basis of lease) can be used as a separate instrument but also in combination with other instruments. The establishment of less formal tools, such as stimulating farmers to form bigger units via cooperative farming, is a further enrichment of the approach.





FARLAND partners have experienced that creating capacity for proper coordination and facilitation between sectors is needed for integrated land development programming and implementation. This can take different forms, such as a unit in a coordinating ministry or a separate agency for land development. Last but not least, in order to implement integrated activity packages, systems for combining funding flows of different sectors and administrative levels are needed.

#### 1.4.2.4 Enhancing the capacity to innovate in the field of land development

FARLAND has clearly shown that land development organisations need to invest in capacity for strategic planning, visioning and innovation. The environment in which we live and international developments currently are more dynamic than in previous decades. To respond timely and properly to these dynamics, quick thinking and innovation are essential.

The regular task of land development agencies and experts to adjust administrative and legal frameworks for land development is not a desperate search for 'new tasks' but a self-evident responsibility of experts. It is a constructive attempt to 'shape the change'. By working in international and national networks for review, innovation and continuous learning, local governments, regions and countries can stimulate each other. These networks should preferably contain mixes of organisations dealing with policy development, implementation and research & innovation.

One of the challenges is to form a more solid research and educational base as a foundation for these innovations.





#### 1.4.2.5 FARLAND, Near Future: Act Now!

The FARLAND project has demonstrated that it is possible to make considerable progress in the creation of a vital network of land development professionals in different European countries within a short period of time.

In this network the project members learned from each other, adopted each other's concepts and working methods, and actively shared and discussed their learning experiences. Although there are – and will always be regional and cultural differences, knowledge and experience in each of the countries is enriching and could serve as a source of inspiration for future approaches to land development in other countries. This book offers evidence that land development is on the point of taking new roads. We hope that it will inspire many others to travel these roads and contribute to the future development of Europe.

To be able to create a continued exchange of knowledge and experience and a firm institutional framework, it is important to act now. The next EU programming period will be crucial in its addressing the Gothenburg Agenda and the Lisbon Strategy. Therefore, land development can have a crucial role. Having an effective and current set of instruments will contribute to improved living and working conditions in rural and peri-urban areas which will eventually lead to increased cohesion between European regions.

All countries, regions and local governments should start more pilot projects in specific areas related to the Gothenburg Agenda and Lisbon Strategy. Showing the concrete outputs of land development is the best way to convince policy makers across Europe about its usefulness.

Let's head for a 'European Union Community Initiative' for land development!

# PART II



# Living Case Studies

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## 2.1 Land Consolidation Project of the Luz Parish (Portugal)

### “THE PROJECT TEAM’S VIEW”

#### Introduction

Due to the construction of the Alqueva dam and the flooding of its reservoir, the Luz parish - a village in Mourão municipality, was almost completely submerged. Almost 62% of the previous area of 5000 ha was flooded, including the former village. Therefore a new village had to be built and a new agricultural system implemented. Agricultural conditions had to be improved in order to keep the population in the parish.



#### The problems

The initial idea of the dam was born 40 years ago. The decision to construct the dam was a big and difficult step and people were undecided during all those years whether to stay or leave. Finally, it was decided by the authorities to help the people who wanted to live there. The inhabitants expected significant compensations for the loss of their houses, lands, and the social and psychological disturbances they were forced to face. Thus, the decision was very much a political one. The dam was a big national investment.

#### Margarida Teixeira, project leader of IDRHa:

“My job as a project leader was to manage the environmental impact in the context of a new village and to rebuild all the agricultural activities. We simply tried to rebuild the former way of life there but in a better way. We had to compensate the smaller farmers who lost parcels and give them new land in the area.”

“Two big farms were expropriated to construct the new village and reallocate these small parcels. Vineyards and new olive orchards were planted as compensation for the loss of income.”



“Responsible for the Alqueva Project is a public enterprise called the Enterprise for the Development of Infrastructure of Alqueva (EDIA), which asked IDRHa (presently DGADR) for land consolidation assistance.”

## Explanation of the innovation

Two farmers decided to keep their old olive orchards while the others had new orchards planted. All these new orchards and vineyards were planted so that they could be treated and worked as a single entity, even though they belonged to different owners.

This was a new approach for the farmers. The idea to plant vineyards so that they can produce more and better quality wine was new in this area. Olive orchards became more dense and with new varieties. Irrigation was introduced both in vineyards and olive orchards. More intensive and profitable crops compensate the farmers in a way for the loss of surface and the reduction of possibilities for extensive systems, i.e. the switch from cereals and cattle breeding to a new agricultural activity.

## Focus of the innovation

The idea of people working together in a communal farm was the core of the innovation. People could voluntarily join the "farm" concept. IDRHa explained to them that it would reduce costs if they worked together: "We helped them acquire the necessary skills as they were not used to managing such vineyards. We gave support to farmers and we helped them by offering technical lessons."

## Innovation put into practice

IDRHa has 83 ha of vineyard for 83 farmers as compensation for the loss of the smallest parcels (approximately 1 ha/person). This area was supposed to be worked as one.

In the re-allotment plan the spatial relationship between neighbours was maintained. Making this detailed plan was a bit like 'copy-pasting'. Houses and parcels from the former village were "copied" and "pasted" into the new one. This helped maintain the original social structure. However, it was also possible to change the old structure if anyone wanted to."



## Relevant Data

### Project name:

Projecto de Emparcelamento Rural da Freguesia da Luz

Portugal, region of Alentejo; LC project area: 1.913 ha; types of land use: agricultural, forestry, and other uses (urban, for collective equipments and for infrastructures).

### Innovation:

a land consolidation project as a compensation for big infrastructural intervention

### Status of the project:

in execution.

### Type of area:

agricultural.

Objectives of development: to improve the income obtained from the agricultural activity and fight against depopulation process.

### Implementation bodies:

planning – IDRHa, along with farmers and land owners, EDIA;  
execution – IDRHa and DGADR, with the collaboration of regional services of the Agricultural Ministry and EDIA.

### Contact:

DGADR  
Av. Afonso Costa, n.º 3  
1949-002 Lisboa  
PORTUGAL  
Tel. +351 21 844 22 00  
[dgadr@dgadr.min-agricultura.pt](mailto:dgadr@dgadr.min-agricultura.pt)

Flexible

Decentralised

Integrated

Agricultural area

Environmental sensitive area

Metropolitan area



José Oliveira (Luz technician): "Because of the close contacts with everyone it was important that I lived in the village, both as a project team technician and as an inhabitant. Since farmers were very much involved, I always had to be there for them. By actually living there and being their neighbour and technician at the same time the population trusted me. I lived there for 10 years. Now I only go there twice a week because the project is almost finished."

### Working with local parties

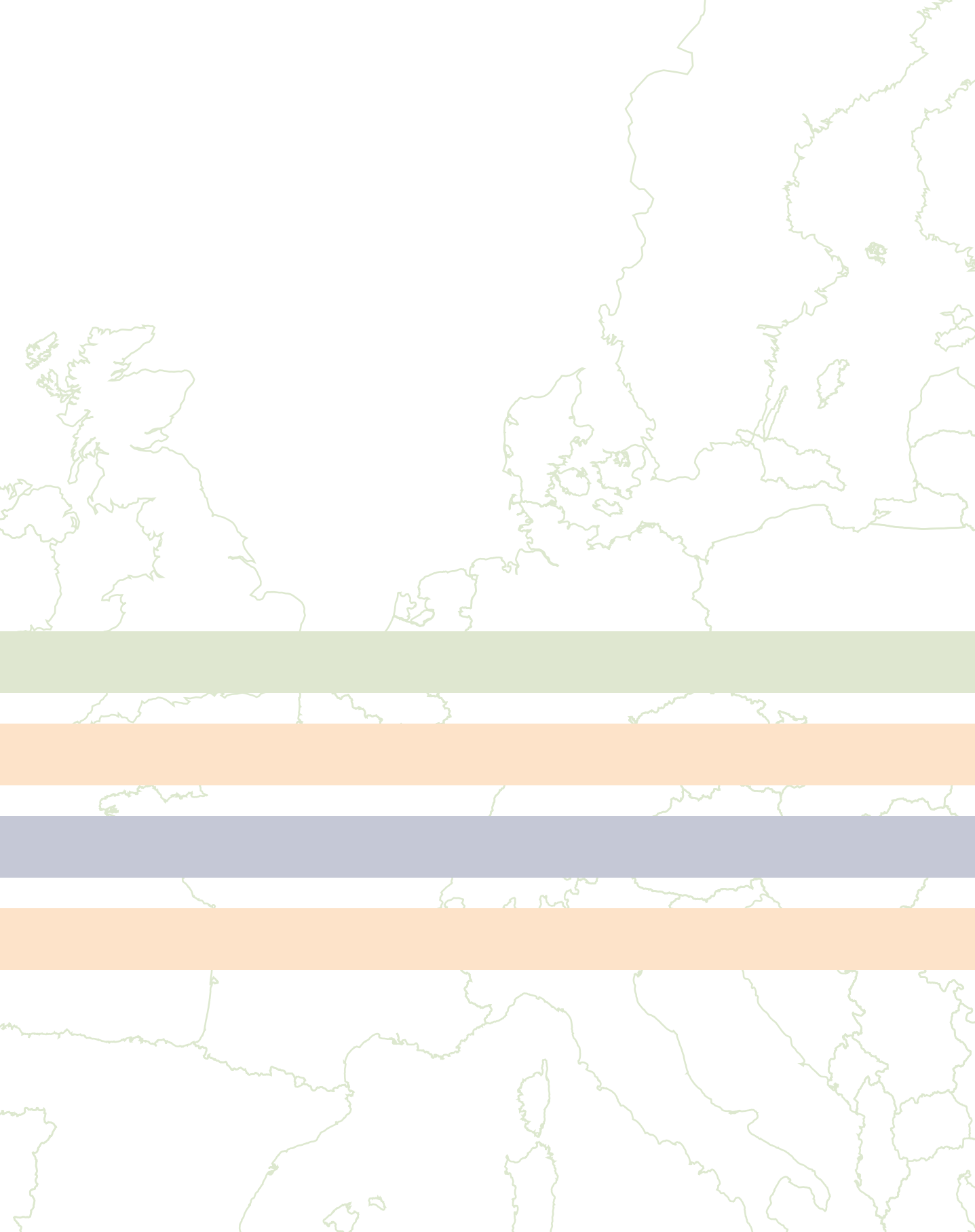
Margarida Teixeira: "The role of EDIA in this project was interesting. Referring to the concept of the project, EDIA's President told us: "We asked you for fish, and you gave us lobster!". He was so pleased with the project that he lobbied for it at the Ministry of Agriculture for financing.

The ideas and developments of the project came from different organisations. The regional services of the Ministry participated through offering technical advice and support. The farmers' association that was created as a result of the project is now collaborating with DGADR, the former IDRHa.

"As EDIA asked us to organise only the non-urban area, we could concentrate on re-allotment in order to be able to implement a better use of the land available. Our aim was to safeguard the environmental values and generate more profit. "







## 2.2 Land Development in Higher Education – Curriculum Development and Applied Practices in Hungary

### “THE EDUCATION OF FUTURE GENERATIONS IN LAND DEVELOPMENT IN HUNGARY”

#### Introduction

Fieldwork has a long tradition in the Hungarian higher education. However, economic changes in the 90s had negative impacts on this tradition. The growing number of students increased the workload of teachers, therefore the financial and human resources for field-based education were reduced. Just a few institutions, such as Landscape Planning at Corvinus University in Budapest and Soil Sciences at St Stephen’s University in Gödöllő choose to continue combining theoretical and practical education with case study-based field work.

Land development as a university major does not exist in Hungarian higher education. However, land development courses are being taught in subjects like geodesy, geography, cartography, and landscape planning.

#### The problems



The Hungarian team saw the participation in the FARLAND project as an opportunity to introduce FARLAND related issues into higher education. MTA TAKI is responsible for curriculum development at different levels of higher education, including the PhD level.

Together with the other participating university partners, they incorporated new methods, instruments, and examples from the case studies and projects covered during the technical exchange visits and study tours.

Zsuzsanna Nagy, an assistant lecturer at the Corvinus University, incorporated the ideas into the present curriculum of horticulture and landscape architecture. Curriculum development during the first test year was used to deal with issues of integrated river basin management at different scales. During a recent land development project at Bereg floodplain, attention was already paid to the role of land development in an effective implementation of integrated land and water management.

The Water Framework Directive emphasises the need for effective, flexible and integrated measures. However, there are no necessary tools needed for the creation of such a river basin management plan.

## In search of innovations

Our objective was to introduce the results and lessons learned on integrated land development during the FAR-LAND project to different levels of education, mainly into the curriculum of horticulture engineers and landscape architects.

We follow a flexible, step-by-step approach to incorporate issues of land development into different disciplines by (i) launching field work using land development tools and measures and (ii) initiating team work for solving issues at small scales (farm, municipality, small landscape).

The latter activity has two different phases: a desktop study and a 2-week practical summer course. Based on lessons learned, a new MSc major will be launched in collaboration with other universities.

## Results

Land development has been introduced at three levels of education (BSc, MSc, and PhD) at Corvinus University as a first step in water management related issues. In the pilot year we worked with students with the following courses:

Level	Scheme	Subject
BSc	Horticulture, I. year	Water management
MSc	Horticulture, Environmental manager specialization, IV-V. year	Water management EU Environmental policies
MSc	Landscape architecture, III. year	Spatial water management Territorial water management
PhD	Landscape architecture, II. year	Landscape planning

Team work was launched for third-year landscape planning students to teach them how to develop an integrated landscape plan using land development measures. The best students have the opportunity to work with municipalities and other authorities to implement their plan and thus gain field experience.

A one-week field trip in the Czech Republic has been organised to study planning and implementation practices, with emphasis on the use of land development measures.

## Relevant data:

**Innovation:**  
implementing integrated land development in higher education

**Status:**  
in process (2006 - 2007 study year and further on)

**Type of area of action:**  
education

**Number of students:**  
in the year 2006/2007: 127, PhD students: 4

**Objectives:**  
Introducing integrated land development into higher education in a form of theory, developed, processed case studies (including FARLAND case studies) and field trips to learn from practices about flexible, decentralised and complex tools of land consolidation, land development in different scales (spatial) planning. The majors selected for first testing: horticulture engineer, landscape architects (in the frame of water management), ecological resource management subjects, and in the training of PhD students at Corvinus University, Faculty of Horticulture.

**Costs:**  
2 thousand Euros

**Involved partners:**  
The Corvinus University, Faculty of Horticulture and Landscape Planning – students, teachers, PhD students; the MTA TAKI to support educational process; the local partners (municipalities, authorities and local experts in Bodrogköz and Nagykörű region).

**Contact:**  
Zsuzsanna Flachner,  
[flachner@rissac.hu](mailto:flachner@rissac.hu)

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Metropolitan area

## 2.3 Land Banking Bantegal, Galicia (Spain)

### “GETTING USE RIGHTS INSTEAD OF PROPERTY RIGHTS”

#### Introduction

Thousands of parcels are being abandoned in the rural areas of Galicia partly due to the fact that land property is not an easily transferable asset. As a response, a new land bank system, based on use rights instead of property rights, was developed by the Ministry of Rural Affairs. How did this happen and what made this a success?



#### The problems

The depopulation process of rural areas was accompanied by very low land mobility rate. Galician farms are not only small and highly fragmented but the enormous amount of abandoned land causes additional problems. Maps look like a scrubland jigsaw. A solution is needed for this situation not only from the perspective of efficient land management but also for forest fire prevention.

Renting land to other farmers in most European regions is a possible solution for abandonment. However, this is not the case in Galicia. Owners are reluctant to rent their land for fear of losing their property



rights. Additionally, farmers or future farmers have difficulties in finding land with adequate characteristics because of the difficulties in obtaining information on the availability of parcels. Fragmentation, abandonment and absenteeism are the reasons behind this problem.

### In search of innovations

According to Xosé Carballido Presas, DG Agrarian Structures and Infrastructures:

“The idea of creating a new land bank already existed in former Governments, but it is very difficult to accomplish from a social point of view because of the sensitive issue of property rights. However, the present Government is willing to take the risk even if it is an unpopular measure.

In the beginning we looked for similar legislation from other regions, but we could not find any that really fit our situation. Therefore, we started brainstorming about what we wanted to achieve and proposed new legislation. We believed that the main problem resided in the supply side so we wanted to stimulate it. Then I proposed a mechanism that would be based on a new tax on all farm land, for instance €300 per hectare. The owner could avoid this tax, or 99% of it, if he put his land in the new land-bank. It was not necessary to sell the land but only to let it to the land bank.

My colleagues did not like the idea much, because the tax would be very difficult to manage and collect, but they agreed with the general idea. We decided not to tax the land, but to create a new fee for land that was abandoned. This is easier to manage and more selective. In this case, the owner can avoid the fee either by ensuring that the land will be used in a proper way from agro-environmental point of view or by putting the parcel in the new land bank. The land bank will rent the lands.

### Relevant data

**Project name:**

Bantegal

**Country:**

Galicia

**Status of the project:**

plan

**Innovation:**

land banking based on land use rights instead of property rights

**Type of area:**

agricultural areas

**Objective(s) of development:**

to encourage land mobility with the aim of extending farm size besides achieving a better land management ensuring the proper maintenance of environment, mainly regarding the prevention of forest fires.

**Costs of the project and finance structure (in Euros):**

for the first year, it is expected to have a budget of 2 million Euros.

**Implementation parties**

a new body is proposed: Public Corporation for the Management of Galician Land Banking (BANTEGAL) (under the Ministry with agrarian responsibilities, but with autonomy)

**Website:**

<http://www.bantegal.com>

**Name of organisation:**

Ministry of Rural Affairs

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Environmental sensitive area
Metropolitan area



The Government made a first rough draft of the law and we designed the general idea during five meetings. The next steps were to present the elaborated draft to the farmer's associations and other organisations, ask for their reactions, and make modifications accordingly.

One of the key aspects of the law was that no expropriation system will take part in the land bank process. We paid special attention not to include the word 'expropriation' in the text because, as learned in previous attempts to create land banks, this makes people very suspicious. The land bank will be based on two concepts: first, the owner will keep the rights over the land after the renting period and will recover his parcel in good conditions. Second, there will be stimulation by the amount of rent.

The urban people who still had rural roots and rural properties would be satisfied with this solution. In spite of the fact that they need guarantees that they will maintain their property rights, they do not like to see rural areas becoming abandoned and destroyed by forest fires.

Last summer we had fires that burnt almost 100.000 ha in 10 days. This disastrous situation helped the government convince the people of the necessity of such measures."

## Results

"The Law for the Creation of the Land Bank and the Maintenance of the Utilised Agrarian Area was passed by the Parliament in May 2007 and it established the new Galician Land Bank, the Bantegal, as an independent but public entity. The Land Bank will try to encourage the transfer of land from the owners to farmers by means of renting. Nevertheless, buying and selling will also be allowed.

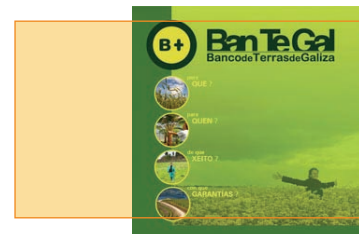
Once the owner concedes the use right, Bantegal is responsible for finding a farmer to rent the parcel. The owners have the guarantee that they will receive rent (in cases where the parcels are renting) even if the tenant doesn't pay, and that the parcel will be recovered in good conditions after the renting period.

All these things pursue two goals: giving an alternative to buying and selling as part of the land transfer mechanism and mitigating owner mistrust in renting. Another aim is to facilitate information flow and create a new GIS-Web system.

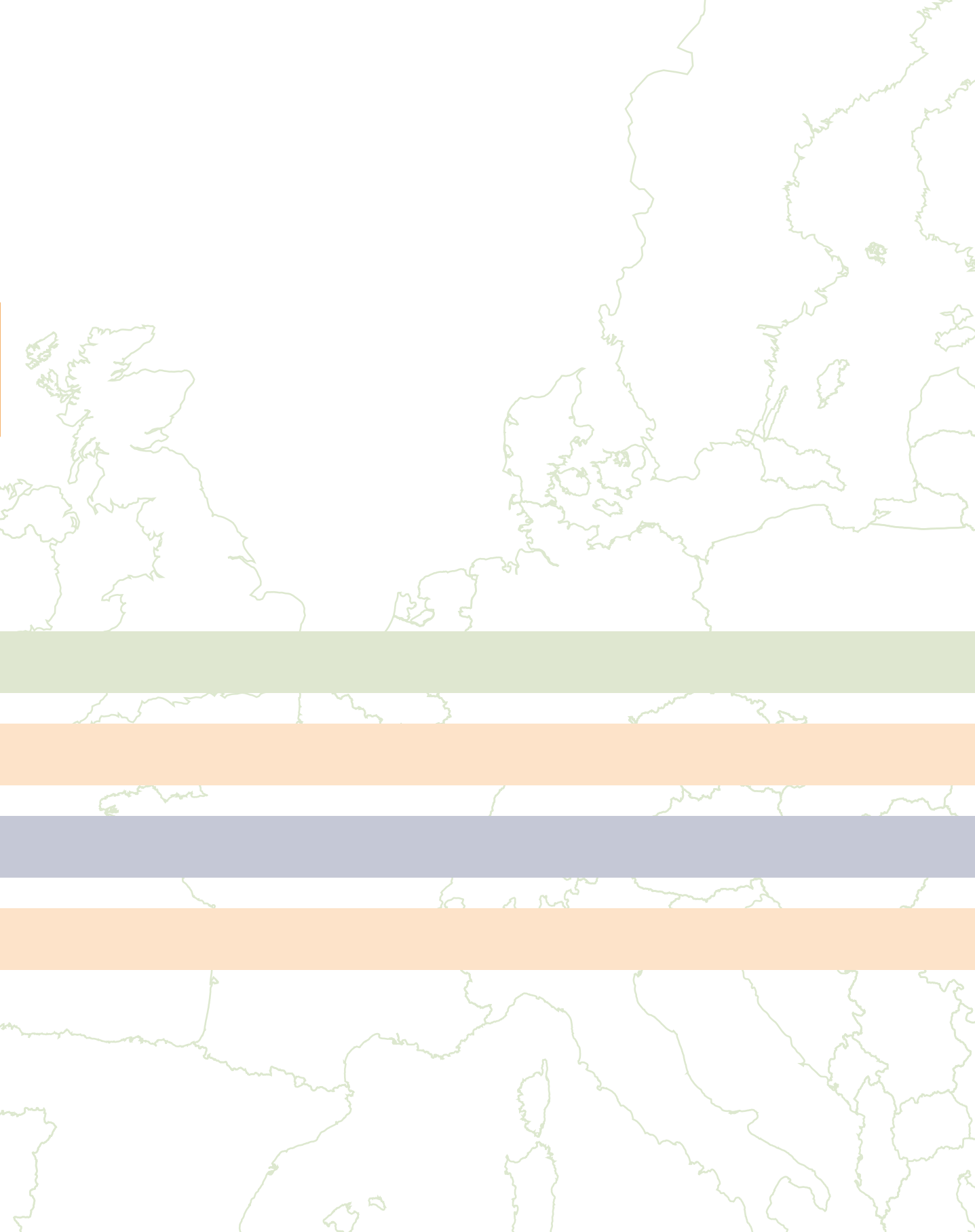
People have strong feelings for property and they do not like their parcel being abandoned and neglected in spite of the fact that they cannot take care of the land themselves. However, if they have a guarantee that their property rights are maintained, they want their parcels to be managed in a proper way. Additionally, if the land is productive, its value may also grow or at least maintain its value and if the parcel is maintained in a proper way, the boundary marks are clearly visible and the owners can see where the parcel is and how big it is.

These ideas could be implemented in other regions, but sociology and people's feelings towards their property have to be taken into consideration. As this is a totally new approach, there are no guarantees that it is going to work. Therefore, pilot areas have been chosen and this year four districts will participate in the project.

The instrument deals with agricultural land but the government does not reject the possibility of adapting it for other types of land, such as scrubland or forest land, or of expanding it with other objectives such as nature conservation."







## 2.4 Bocholter Aa, North Rhine – Westphalia (Germany)

### “LOOKING OUTSIDE THE MUNICIPAL BOX”

#### Introduction

The Bocholter Aa area consists of five municipalities connected by a small river called the Bocholter Aa, it is situated close to the Dutch border, and has great touristic appeal.

#### The problems

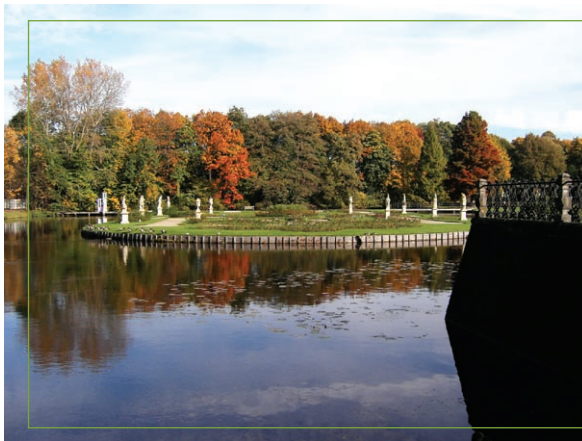
Challenges for the area were mainly demographic changes, such as aging and elderly housing. But generating local employment and mobility issues also posed problems to the region. The available legal measures need a regional plan to be effective and consistent. However, the problems in the field have become too complex and dynamic and cannot be fully comprehended from the regional level, thus the help of the locals is needed for successful rural development projects.

#### In search of innovations

The mayor of the municipality of Velen acknowledged the added value of creating one joint spatial plan for the five municipalities. LEADER was a concept that acknowledged this, but had only a limited spatial and temporal magnitude. To promote this way of working, the NRW “Integrated Rural Development Strategy” model adopted the same philosophy. Drawing from LEADER as a source of inspiration, “Integrated Rural Development Strategy” (IRDS) was officially established in 2004.

The Bocholter Aa region seized the opportunity as IRDS explicitly addresses regional responsibility for making consistent plans drawing together different strands of financing and instruments. Village renewal, land consolidation and agricultural support planning are combined, enabling concentrated and more effective planning.

IRDS aims to improve the participatory nature of problem-definition and allows the simultaneous employment of multiple agricultural, social and economic instruments. The planning process is open to anyone interested, whether official body or individual and is completed within 12 months.



## Results

When "Integrated Rural Development Strategy" became official it inspired the locals along the Bocholter Aa to make such a joint, inter-municipal plan. They engaged in a participatory process, mapping the strengths and weaknesses of the Bocholter Aa area and setting targets accordingly.

The preparation phase was subsidised with 50,000 Euros. The planning phase was subsidised with 10,000 per participating municipality, making cross-municipal plans more interesting. Citizens were invited to use the website to add their comments and recommendations to the process.

A total of 13 projects have been initiated in the Bocholter Aa area. One of the projects is a 50 kilometre bicycle trail - an investment of over half a million Euros, 70% of which is subsidised and the remaining 30% paid by the participating municipalities. There is, however, a competition between the projects for subsidies.

Currently, there are 33 IRDS projects running in 149 of the total 396 municipalities throughout NRW and it is still gaining momentum.



The actual projects flowing from the regional plan are not financed via IRDS, but have to be financed separately. Therefore, at this project-level, the administrative and financial fragmentation continues to exist. However, projects implemented within the framework of an IRDS regional plan get more subsidy than projects without an IRDS background. Many IRDS projects will eventually have to turn to LEADER money to be implemented.

## Relevant data

### Formal framework

Integrated Rural Development Strategy (IRDS)

### Municipalities

Isselburg, Bocholt, Rhede, Borken, Velen

### Supervision

District Government Münster, Unit 69 (Rural Development, Land consolidation) County Borken

### Participation

Kick Off meeting Sept 2005:

110 participants

Mid Term meeting March 2006:

80 participants

Closure meeting June 2006:

110 participants

### Contact

District Government Münster  
– Unit 69 (Rural Development,  
Land Consolidation)

Domplatz 1-3

D-48143 Münster

0049-(0)251-411-0

postelle@bezreg-muenster.nrw.de

[www.region-bocholter-aa.de](http://www.region-bocholter-aa.de)

Flexible

Decentralised

Integrated

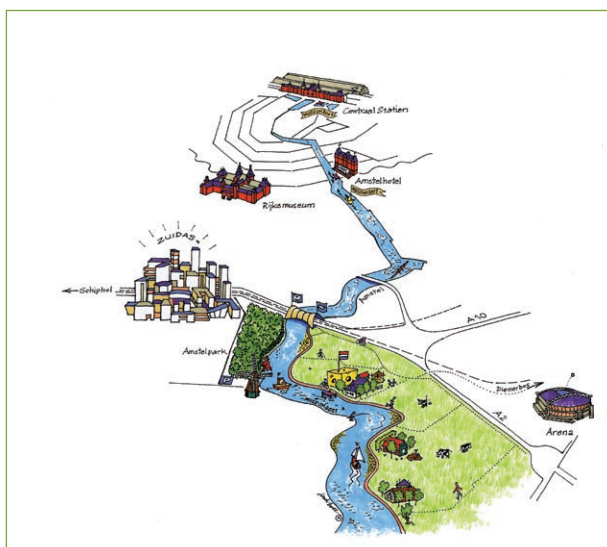
Agricultural area

Environmental sensitive area

Metropolitan area

## 2.5 Care Estate Klarenbeek (The Netherlands)

### “CARE AND GREEN MEET IN NEW ESTATES”



### Introduction

Until recently, the Care sector had its impact mostly in the urban areas. It is however a proven fact that a green environment promotes health and well-being.

The Netherlands is a densely populated country and land is scarce and expensive. DLG studies the feasibility of a new type of estate that combines green environment and care. The client in need of special care will find space, peace and quiet, meaningful therapeutic work and probably more on the estate. On the other hand, the client lends a hand to manage the agricultural land, nature and recreational fields on the estate, either by doing the work or by paying a fee to support the exploitation of the estate. Different care concepts are possible such as children with behavioural problems living with foster families on the estate, therapeutic work for rehabilitating ex-drug addicts, equine therapy, etc.

Under the authority of the Ministry of Agriculture, Nature and Food Quality, DLG has started three pilot studies of so-called Care Estates. Klarenbeek is planned to become one of these Care Estates and is located on the urban fringes of the city of Amsterdam.

## The challenge

On the borders of the river Amstel, just before it enters the urban area, an open agricultural landscape is the home of a few farmers who struggle to survive the agricultural reforms. The public sector aims to preserve the landscape as it was originally painted by Rembrandt and later by Mondriaan. The landscape is well-suited for recreational purposes but the land is very expensive.

The challenge is to design and build cooperation between an investor, a Care Centre, farmers, a nature conservation organisation, and a recreation service. The objective is to buy the land and farm houses and develop and exploit the estate.

DLG owns some of the land on the location. Cordaan, a Care Centre has been found, and Principaal /De Key, an investor, is interested in the concept of the Care Estates. One of the farmhouses, called Klarenbeek, has been recently purchased and will be the launching model for attracting customers.

All parties cooperate in the study on how to develop this new estate in a way that it serves the clients of Cordaan and the people of Amsterdam, and is financially sound, and accepted by the planning department of the city and the province.

## In search of innovations

The goal of DLG is to learn from the process of making new Care Estates. Are these types of estates feasible? Is it possible to use private money to reach, among other, public goals? What role of the Government is needed to facilitate this process?

In this particular pilot project, DLG owns part of the land needed for the estate and could play a role in purchasing the rest of the needed land. Due to their vast experience in the rural area and their contacts with the parties and institutes involved, DLG plays a coordinating role in the planning process. As in the "Meerstad" example, DLG is using their experience in public private partnerships.

## Results

At the end of the process, the three pilot projects will be evaluated. If the Ministry of Agriculture, Nature and Food Quality and other public organisations can play a role in the development of Care Estates to achieve public, green goals, in symbiosis with financing private parties, the concept of Care Estates might be enrolled for the whole of The Netherlands.

## Relevant data

**Project name:**  
Pilot project Care Estate Klarenbeek

**Innovation:**  
Care Estates with private investors to achieve public and green goals

**Country:**  
The Netherlands, province of Noord-Holland

**Status of the project:**  
Pilot project, started in 2006

**Involved parties:**  
Cordaan  
Municipality of Amsterdam  
Principaal/de key  
Staatsbosbeheer  
Province of Noord-Holland  
Dienst Landelijk Gebied (Government Service for Land and Water management)

**Project leader pilot projects:**  
Carla Roghair;

[C.J.Roghair@mjinlv.nl](mailto:C.J.Roghair@mjinlv.nl)

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## 2.6 City Forest Ghent, Flanders (Belgium)

### “A NEW FOREST FOR THE CITIZENS OF GHENT AND BEYOND”

#### Introduction

Flanders is one of Europe’s least forested areas. However, forests play an important function from an ecological point of view and fulfil the population’s growing need for a green environment where to relax.

#### The problems

The Flemish government is aware of the need for more forest areas. Therefore, in 1997 they decided upon an ambitious plan of 10.000 ha forest expansion. This goal should be reached in 2007. Special attention was paid to new public-accessible forests in the urban fringes, the so called ‘city forests’.

For the province of East Flanders the coverage of forest is less than 6%, 80% of which is privately owned and often not open to the public. Ghent, the provincial capital with 225.000 inhabitants has no public forest. People from the city have to travel a long distance to reach a free accessible forest which is the reason why the creation of a city forest in the vicinity of Ghent was one of the first projects approved by the Flemish government.



As in all urban fringe areas, the 1200 ha spot south of the city that was suitable for the creation of the forest was under high pressure of urbanisation but, in accordance with the zoning plan, still under agricultural use.

#### In search of innovations

In 1999, the Provincial government of East Flanders, the agency of Nature and Forest of the Flemish government, and the Flemish Forestry Organisation joined their forces to create a new forest of about 300 ha, interwoven with a park-like landscape. During the development of the project, more and more partners contributed to the success of the project.

The achievement of a broad support on political, administrative, and social levels was an essential part of the project from the very beginning of the planning process. The project tested new strategies to involve the target groups (e.g. website, popular newsletter, individual visits to farmers, field trips, social events) to create broad public support. Participation of and communication with the residents and future users of the urban forest was given ample attention, focusing on the expectations of all social actors. The target groups were involved to take initiative but also bear responsibilities.





From the technical point of view, a new zoning plan needs to be adopted. Currently, the department of spatial planning is developing this plan in accordance with the general spatial plan of the city area

that is under construction. At the same time different detailed development plans are being drawn up that fill in the zoning plan using the legal framework of Land Development. The Flemish Land Agency (VLM), the agency of Nature and Forest, the Flemish Forestry Organisation, and the department of Cultural Heritage and Landscapes all contribute to these plans within their own competencies.

A crucial point of the project is the availability of land to be used for afforestation. Not the whole project area will be transformed into forest. In most parts, measures of accessibility and landscaping created an open park-like landscape in which well-considered agricultural land use has an important role to play. This implies that not all owners and users are evenly affected. VLM and the agency of Nature and Forest use a variety of acquisition strategies to best fit the local user- and ownership situation.

Initially, the zoning plan contains an expropriation zone for the core forest area. However, no expropriation is done without offering a solution for the affected farmers. For this, a local land bank with voluntary land exchange has been established as a central tool to accompany the expropriation. However, simple land banking and plot exchange is not always the proper solution and can create another suboptimal situation in the new location for the farmers. Therefore, by the end of 2007, the start of a modern land consolidation procedure was considered for a larger area to complete the gaps of acquisition and to optimise the displaced properties.

## Results

On the first plot of land bought, the first trees were planted in the autumn of 2002. Children from several local primary schools were helped by the Flemish Minister of the Environment and Agriculture, Chief Raoni of the Kayapo Indians, the Belgian prince Laurent, and the local authorities' representatives.

It was clear from the start that the creation of the forest in the urban fringe of Ghent was not going to be an easy overnight project. Even five years after planting the first trees, the search for land and solutions for the affected farms is still ongoing. But the well considered communication strategy keeps the "city forest idea" alive and growing.

## Relevant data

**Project name:**  
City Forest Ghent

**Location:**  
Flanders, Belgium

**Land use/landscape:**  
Agricultural land in urban fringe and castle sites.

**Innovation:**  
Different strategies of land acquisition are put into action to free land and find alternatives for farmers in a high pressure urban fringe

**History:**  
1997: aim of creating 10.000 ha new forest was stated by the Flemish government.  
1999: the Province, the Flemish Communities' Forest and Green division and the Flemish Forestry Organisation joined forces to create the urban forest of Ghent.  
2002: first trees were planted on the first land that was bought for afforestation.

**Status:**  
In execution

**Project partners:**  
Agency for Nature and Forest of the Flemish community  
Province of East Flanders  
Flemish Forestry Organisation  
Municipalities  
Flemish Land Agency

**Project size:**  
Total project area: 1200 ha  
afforestation area to be acquired: 300 ha

**Contact:**  
Head of the VLM division of East Flanders:

[Roland.Vancauwenberghe@vlm.be](mailto:Roland.Vancauwenberghe@vlm.be)

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## 2.7 Integrated Water and Land Management Jánd – Bereg Pilot Project (Hungary)

### “LAND CONSOLIDATION AND VILLAGE DEVELOPMENT PILOT PROJECT”

#### Introduction

In 2001 a dramatic flood on the river Tisza caused enormous damage to property in Bereg, a rural area in the Upper Tisza region. The Hungarian government rebuilt the villages but the flood risk remains and increases with the years. Local citizens are aware of the flood risk and fear the weather extremities that cause large fluctuation in the water levels.

The municipality of Jánd is in a unique situation, having three oxbows with high potential for water retention, nature protection, and rural development in its territory. Nevertheless, current ownership structure; land use patterns; and water infrastructure of the target area did not provide the basic conditions for implementation. Moreover, a 240 ha grazing area in the village could not be utilised by local farmers, due to unfinished land privatisation that blocked grazing development.



#### The problems

The general aim of the project was to elaborate feasible plans for sustainable land use, water management, and rural development in an area endangered by natural disasters. Thus, the project contributes to the livelihood of the rural population concerned.

The project intends to introduce a new approach and propagate the experiences about sustainable land management, the related integrated water management, environmental protection and regional development.

The FAO TCP project is closely connected to the national framework of future land consolidation. The pilot project at Jánd includes one oxbow with the aim of creating a community area (village renewal) there and a sustainable grassland management part on a grazing area. Implementation was organised within the existing legal framework (voluntary land exchange).

#### In search of innovations

The project aims to apply different means and alternatives in a combined way such as institutional development, organisational development, planning of participation, change of land use for the purpose of better land management, nature conservation, income raising, extension of employment facilities, and



village development. Land consolidation activity is closely related to the project's land use strategy and the pilot project reveals new approaches in sustainable land management.

## Results

Based on the first outcomes of the pilot project, sustainable grazing is solved through settling ownership rights and land utilisation and by creating a grazing association involving former land users.

On the other site, the project reached an agreement on water retention in the oxbow but this only refers to keeping the existing water level. Further development is needed to enhance the area of the oxbow, to create a community area, and to apply compulsory participation of those owners who refused co-operation.

The implementation of the pilot project can serve as an example for organising landscape rehabilitation and water retention projects. During the implementation of the project it was researched whether certain procedures can be implemented. Difficulties of organisation were identified, and recommendations were made for required modifications in the legal framework (law for land consolidation) as well as for subsidies to be provided. Landscape rehabilitation should serve the long-term interests and development of the whole society.

During landscape rehabilitation, the options corresponding to natural conditions of the area have to be determined, the parcels involved have to be identified, and the potential transition of land use have to be planned. In land use planning, special attention needs to be paid to applying traditional land management methods.

## Relevant data

**Innovation:**  
sustainable land management by combining institutional development, organisational development, planning of participation, nature conservation, and village development

**Size:**  
250 hectares

**Type of Land:**  
areas with environmental values

**Status:**  
in process (2005 April – 2007 October)

**Type of area:**  
Grassland and wetland

**Objectives:**  
Planning and elaborating a land use strategy that is widely accepted and supported by the society and economically sustainable with respect to the regions stricken with its natural risks (flood, inland waters, drought) and having a high natural value. Improving the skills of the people involved in the region and the forming of regional affairs with special attention to the disadvantaged rural population.

**Costs:**  
50 thousand Euros

**Location:**  
Settlement of Jánd, Tisza River Bank, South Bereg, North East Hungary

**Contact:**  
Márta Konkoly National Project Director,  
MoARD  
[konkolym@fvm.hu](mailto:konkolym@fvm.hu)  
Tamás Cselószki, E-Misszió Association,  
[cselo@t-online.hu](mailto:cselo@t-online.hu)

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Metropolitan area

## 2.8 New Land Management Strategy in Mação (Portugal)

### “TOGETHER AGAINST THE FIRE IN MAÇÃO”



#### Introduction

In Mação, as in many other Portuguese municipalities, forestry production of eucalyptus and pine is the main purpose of land use. The depopulation process during the past decades has caused most of the population to move abroad. In addition, the local inhabitants are becoming increasingly older and strong land fragmentation makes farming very difficult for technical and economical reasons.

In the past afforestation with eucalyptus had been a popular choice among landowners. However, during recent years, most of those forests were almost abandoned and a large portion of them were destroyed by fires.

After a disastrous fire in 2003, the municipality of Mação decided to change its strategy and to completely innovate the way the territory was being managed. Dealing with land property and land use was fundamental to this change.

## The problem to solve

Due to the demographic situation in Mação and small property sizes, a large portion of the woodland is abandoned and maintenance activities do not exist. This can be further highlighted by the fact that in Mação, where the population is only 8.000 inhabitants, 15.000 people own a piece of land.

Both agricultural activities and livestock have almost disappeared and the landscape has become minimally fragmented. The whole municipality is covered by a "continuous blanket of biomass" mainly formed by a forest of eucalyptus and shrubs. Goats no longer control the growth of those shrubs!

Paradoxically, an extreme parcel and property fragmentation resulted in a dangerous homogeneity in landscape, and climate conditions had greatly increased the risk of forest fires. Indeed, fires have become quite an usual phenomenon affecting broad municipal areas. After each fire, the vegetation growth created renewed conditions for fires.

This has pushed the municipality to considerably extend and modernise its fire fighting capabilities, causing expenses to soar. During the disastrous fire in June 2003 more than 50% of the municipality (21.000 hectares) was totally burnt in just a few days. Buildings and villages were also affected.

## In search of innovation

During that time, Antonio, a councillor of Mação, and some of his technicians put together an action plan, which was presented to the president of the Portuguese Republic during his visit of the affected area.

Immediately a working group was created which included Antonio. On the day the working group began its activities, two forestry engineers arrived in Mação with the idea of launching a new forestry business. While the timing was not right, Antonio decided to enrol them in the working group anyway and later on in the Association that was created. In addition, the working group consisted of external experts such as an old friend of Antonio who had an important role in idea definition and strategic structuring.

After two months of hard work, the group presented its conclusions to the council board. Surprisingly, all the councillors accepted the analyses and agreed that the recommendations be implemented. One of the main recommendations was that an effective fight against forest fires should be supported by structural changes at property and land use level instead of merely increasing fire fighting capacity.

## Relevant data

**Project name:**  
New land management strategy in Mação

**Innovation:**  
Owners' associations as an innovative strategy against forest fires and in favour of sustainable land management

**Location:**  
Municipality of Mação

**Size of project:**  
40.000 ha (the whole municipality)

**Land uses:**  
eucalyptus and pine forests, shrubs

**Status of the project:**  
in process; started in 2003.

**Type of area:**  
Area with high risk of forest fires. In the past, the biggest pine grove of Europe

**Objective(s) of development:**  
To promote new land management practices in order to prevent big forest fires

**Implementation parties:**  
Municipality of Mação and Aflomacção association

**Contact:**  
<http://www.aflomacao.pt/>  
[aflomacao@gmail.com](mailto:aflomacao@gmail.com)

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Given that most of the proposals needed to be established by higher authorities of the Portuguese government, the municipality of Mação decided first to present them to neighbouring municipalities in order to reach a consensus. However, Mação did not find any support from the other municipalities.

So they decided on trying other ways and contacted some organisations at national level (such as General Directions) to get support for their ideas. One of the most important and also a more contentious one was the so called "Núcleos" (nuclei). These are a type of owners' associations which aim to overcome extreme fragmentation by being responsible for the management of all the properties of its members and main infrastructures. This required a specific legal framework of the national government. Mação was too small, they thought.

Meanwhile, the working group in Mação decided not to wait for government action. At the beginning of 2004, the local government decided on the constitution of AfloMação, an owners' association of the municipality of Mação.



AfloMação aimed from the very beginning to establish the pre-conditions for better and faster implementation of the expected reforms that would be carried out by the national government and to promote the idea of associations among the owners. The demographic situation made an autonomous movement without clear guidance by the authorities impossible. Thus they decided to act themselves and not to wait for the national government, and the popular initiative.

By that time, during 2004, many areas of Portugal were also devastated by large fires. The timing was right and after several meetings, their ideas reached the right persons in the government.

Two years after the first proposals at the council of Mação, the Portuguese government finally approved a new law creating something similar to the "Nucleous" that Antonio had previously proposed: the Forest Intervention Zones (ZIF's).

At that time in Mação there were already almost two hundred owners willing to incorporate their properties in such innovative entities. The association AfloMação had done its work. Those owners held together more than 1.300 ha allocated in more than 1.600 parcels. The constitution of two ZIF's meant changing the situation into only two new forestry units of production. The fact that during the previous two years the association had been proposing to the owners an alternative quite similar to the one that was finally approved by the government was an important trigger.

## Results

At the municipal level, there was a new and completely different strategy against the fire that created the sustainability of land management as the main objective. There was a new land management plan for Mação and many of its proposed actions to be implemented in private properties had been executed



without any opposition from the owners, such as the clearance of forests and improvement of rural infrastructure, etc.

The association AfloMação was constituted by the municipality to carry out the fundamental task of revitalising the owners and promote enrolment in the association. By the end of the process, only 31 management units would be responsible for the exploitation of 40.000 hectares, including some 80.000 parcels and more than 15.000 owners. Each one would have more than 1000 hectares.

Another important achievement was the strong partnership that was created between the municipal authorities and the owners. Although at national level the ZIF's were supposed to be executed through owner initiative, in this case the municipality assumed an important role justified by the population conditions (dwindling headcount, ageing, absenteeism etc.). The reaction of the owners in general and of the local inhabitants in particular were very positive.

At a national level many of the proposals made by Mação have pushed and/or inspired new instruments and policies. The new Law that regulates the ZIF's is a clear example, but also other actions in the fields of forest planning, fire fighting capacity etc. were also influenced.

During this time, a change of government caused a temporary disruption when the new authorities did not participate directly in the discussion process. Currently, the municipality of Mação is proposing to continue the ZIF's approach by considering their specific kind of ZIF as pilot projects in Portugal.

## 2.9 De Merode, Flanders (Belgium)

### “DE MERODE, PRINCELY COUNTRYSIDE!”



### Introduction

“De Merode” is a pilot project of regional and integrated rural development where different instruments will be applied with regard to a sustainable countryside.

### The opportunity to take

In January 2004, the VLM had the opportunity, with the support of local partners (municipalities, nature associations, nature and forest administrations etc), to buy the 1.250 ha forest and 250 ha farmland of the noble family de Merode. The de Merode domain is a vast green area in the vicinity of densely populated areas and surrounded by large infrastructures. This acquisition gave the opportunity to start an integrated rural project to boost the natural, cultural and landscape quality of the region.

The decision to start a pilot project of integrated rural development in the area is mainly due to a number of important positive aspects. The Merode and its wide surroundings are characterised by the presence

of rich and diverse landscapes marked by vast forests and nature areas, of which parts have been incorporated in the Flemish ecological network and Natura 2000. There are a lot of historic and cultural heritage sites in the area. Examples of this are two important abbeys, Averbode and Tongerlo; the castle of the family de Merode at Westerlo; the basilica of Scherpenheuvel etc.

Farming activities here are incorporated and in balance with the original landscape more than in other regions of Flanders, with a clear relationship between the landscape and the historical agrarian activity.

Moreover, the area strongly distinguishes itself from its surroundings. It is delimited by pronounced urban and economic structures, like the economic network of the Albert Canal in the north and the Flemish urbanised area between Antwerp and Brussels. The important presence of relict landscapes and of historic and cultural monuments and small towns gives the area important tourist potential. The basis of the broad political support on several administrative levels for the development of an integrated rural project probably lies here. The Interreg IIIB project – LIFESCAPE your landscape - showed the possibilities to generate new pulses for regional and local economy by revaluing nature, landscape and cultural heritage in the area.

## The problems

The first problem to tackle is the complexity of the web of interest groups and partners. The project area is situated on the territory of three provinces and six municipalities, and involves areas where private nature organisations and other groups have high interest. All these partners have their own responsibilities and tasks and a high level of independence in working. Thus, working on agreements is a key success factor.

The second central problem is the complexity of the project itself. Developing and realising integrated projects take time, while public support has the habit to decline when there are no quick tangible results. Moreover, there is not one single legal instrument to fit the broad spectrum of measures to take in the area.

Project partners together with the VLM found a solution in developing an approach which is broad in application and flexible in timing.

## In search of innovations

After this acquisition in 2004, all the partners signed the Charter of "de Merode" in which they engaged to preserve the unity and to improve the accessibility of the region for the broad public. They recognised the basic values of the

## Relevant data

**Project name**  
de Merode

**Location**  
Flanders, Belgium

**Land use/landscape**  
forests and nature areas, agriculture, cultural elements.

**Innovation**  
Integrated rural development using different instruments on different time tracks (e.g. quick wins)

### History of the project

- 2004 January 28: permission for the acquisition of the domain.
- 2004 May 16: family programs to create overall public awareness
- 2005 November 30: sale of the properties to the partners
- 2006 January 25: Minister of rural development as chair of the steering committee de Merode
- 2006 June 19: start of the rural development project
- 2007 start of the execution of the project

### Project size:

Total project area: approx. 25,000 ha

### Costs:

Estimated investment is approx. 19,000,000 Euro

### Contact:

Flemish Land Agency  
Cardijnlaan 1  
2200 Herentals  
Belgium  
Head of the VLM division of Antwerp  
[Ria.Gielis@vlm.be](mailto:Ria.Gielis@vlm.be)  
Project leader  
[Erik.Verhaert@vlm.be](mailto:Erik.Verhaert@vlm.be)



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area, such as sustainable agriculture, valuable nature and the rich natural and historical cultural landscape and engaged in taking optimal measures for the development of these values. Furthermore, all partners gathered in a steering committee to guard the general rules of the project and to ensure that individual actions fit in the general framework.

The steering committee, the local partners, the VLM, and the involved ministers then approved a set of “quick-wins”. These are small projects which can be realised in the short run without having to go through lengthy procedures. Eight of these quick wins also came out of an open call for ideas from the public. Examples are the embellishment of farmsteads and the creation of an educational trail for children.

On a second and longer track, legal procedures of land development, land development for nature and land banking started to complete some bigger actions with more physical impact, like the transformation of a monotonous spruce forest to a varied and open heath landscape with high nature values, accessible to the public.

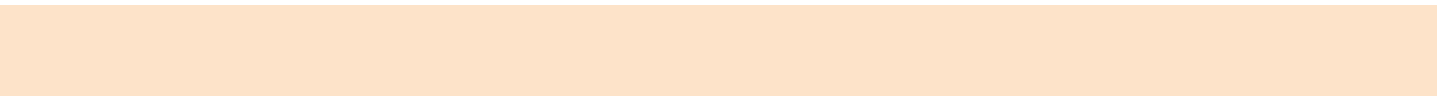
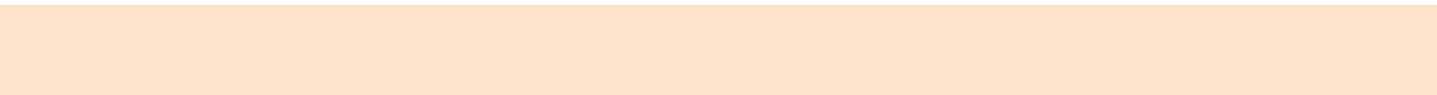
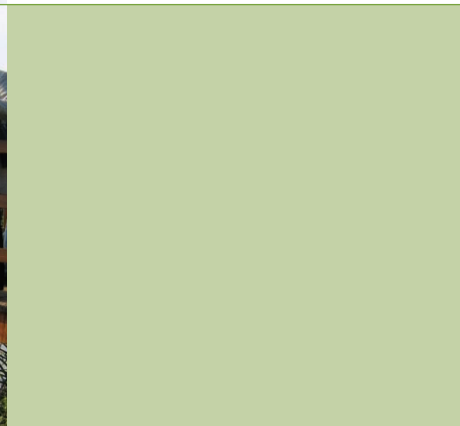
On a third track, an integrated plan was drawn up in a collaborative way by the partners, in which nine strategic missions were developed, realised by a set of 26 sub projects. These range from nature development, water management, land consolidation, to actions of regional branding, organising social events and developing educational kits.

## Results

In an early stage attention was paid to traditional legal instruments such as land development and land development for nature to get the project started. Later, new ways to protect the natural and cultural landscape, such as farming for nature, involving children through education and stimulating social projects were started to realise the deeper and broader scope of the integrated plan.

Results have already shown quick wins. De Merode is an experimental application of the tool-box idea where a wide range of actions are taken by a variety of instruments while working on different time tracks but fitting into a general vision. Here, much attention is paid to a bottom-up approach, which is believed to be a critical success factor to get things going in the region.

Nowadays, it is apparent that the projects' framework increasingly serves as a structuring agent for all sorts of actions and events in the region. The region starts to act as a whole and more importantly, starts to feel as a whole.





## 2.10 Public Private Partnership, Meerstad, Groningen (The Netherlands)

### “HOUSING, GREEN AND BLUE IN A JOINT (AD)VENTURE”

#### Introduction

If you add up all the spatial functional needs in The Netherlands like traffic, industry, agriculture, public green, etc. there is a lack of space. Spatial actors nowadays are forced to cooperate in all possible ways. Public private partnerships (PPP) are an example of integrated cooperation and a rather new instrument for green areas. Meerstad is the first example of PPP on a large scale.

#### The problems

Until recently, urban development and ‘rural’ (or rather ‘green environment’) development in metropolitan areas have been planned ‘back to back’ by both Red and Green, with separate flows of money. Profits from urban development ended up in the pockets of private investors and the government was trying to guide this development in the landscape with little available money.

In addition, agricultural land prices around cities are booming. Only a small part of the price is determined by the agricultural value of land. The driving force in these areas is land as a speculative investment. That is the reason why farmers can sit and wait until a big buyer comes along and they are no longer willing to sell land at low prices for green purposes.



#### The private sector as a partner for green areas

Public partners realised that combining strengths with the private sector could pay off and solve the problem of speculation.

Making the assumption that a green surrounding results in a surplus value of houses leads to the question: why not use this surplus value for promoting the surroundings? This is where private actors and the need for spatial development strategy aimed at coalitions between stakeholders and shareholders comes in.

In 2005, the Dutch Government adopted a new National Spatial Strategy that creates more space for private initiatives and urban activities in rural areas. Coalitions with public and private partners had already existed in urban areas, but not yet in relation to the realisation of green.



The concept of PPP for green areas was tested in small pilot projects in estates while a philosophy and a process architecture was under development by DLG, Habiforum and private parties.

A PPP comprises long term cooperation from commencement of a project between public and private actors associated in a relatively high risk operation. The cooperation is registered by a contract or a joint venture regulating investments and risks.

The advantage of this construction is a better integration of spatial functions because the plans are developed irrespective of the initial property boundaries.

The input of land is effectuated at one fixed unit price to create a neutral playing ground for the starting search of the best project plan. Both private and public partners assign one representative to play the game. They start a process of designing and calculating, and every phase ends with a contract.

About 15 % of the green projects of DLG currently take place via PPP constructions. The expectation is that within the next few years 1/3 of the turnover will be determined by the private sector. PPP is even surrounded by a perception of trendiness while certainly not a panacea for every situation.



One of the disadvantages is the financial risk of investing at an early stage in realising blue or green functions that can only be compensated at a late stage by surplus value of houses.

Another consequence of PPP is that DLG, in order to enter and stay in negotiations for the realisation of the national ecological network, should actively participate as land owner to enhance its position.

## First example at large scale

In Groningen there was a need for extension of housing capacity. A new lake (600 ha) surrounded by 10.000 new houses was foreseen embedded in a green area. At an early stage DLG and the public bodies decided to start a cooperation with municipalities, the province, the Ministry, water boards and private partners. It took two years to investigate the financial and legal feasibility of a joint exploitation. It resulted in a joint venture and master plan in 2005. Meerstad acts as a learning-by-doing pilot for PPP at large scale projects. In more densely urbanised areas the PPP will encounter higher land prices and a more complex administrative and managerial context.

## Relevant data

### Project name:

Meerstad

[www.meerstad-groningen.com](http://www.meerstad-groningen.com)

### Country:

The Netherlands, province of Groningen

### Innovation:

Public private partnership for green areas

### Status of the project:

Master plan & joint venture defined in 2005, finalised in 2026

### Type of area:

2.340 ha, metropolitan landscape

### Objective of development:

A new lake (600 ha) surrounded by 10.000 new houses, embedded in a nature area of 830 ha

### Implementation bodies:

Province of Groningen, municipality of Groningen and Slochteren, water board Hunze and river Aa's, Ministry of Agriculture, AM Development company, Koop Holding, Heijmans IBC, Real estate developer and BPF Bouwinvest, DLG (Government Service for Land and Water Management)

### Contact:

Peter Wichman:

Process manager PPS:

[p.wichman@minInv.nl](mailto:p.wichman@minInv.nl)

Paul van Bruggen:

team leader PPS:

[c.p.van.bruggen@minInv.nl](mailto:c.p.van.bruggen@minInv.nl)

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Environmental sensitive area
Metropolitan area

## 2.11 Milchenbach, North Rhine – Westphalia (Germany)

### “VILLAGE DEVELOPMENT AND INTEGRATED LAND CONSOLIDATION: BETTER LIVING AND WORKING CONDITIONS FOR THE RURAL POPULATION”

#### Introduction

Milchenbach is a charming German village, built in traditional style and situated in a valley surrounded by meadows and hilltop forests. But it was also one of the first successful projects for ecologically sound land consolidation, considering all aspects of an integrated land development.



#### The problems

The Milchenbach project started out with the problems on forestry and agriculture. Farm sizes were too small and plots were fragmented. Simultaneously, with the initiation of the project and in response to a social demand for ecologically less intrusive land consolidation projects, NRW legislation was changed in such a way that the project became one of the first to integrate non-agricultural interests.

#### In search of innovations

Integration and participation became new demands of rural areas in NRW. An integrated land consolidation procedure has to combine different aims and tools of land development. Therefore it has to promote environmentally friendly agriculture, forestry and village development, including economic, environmental and social aspects.

The innovation is based on integration. Furthermore, the initiative supports flexibility because of its broad scope, having to deal with various demands of different regions. Although the integrated approach exists since 1976 in the Land Consolidation Act, the success of the Milchenbach project is still an inspiration for today's challenges.



## Results in the village

An important step for Milchenbach was to implement various village development measures. Road construction; the renewal of typical half-timbered houses; infrastructure development; and ecologic improvements were realised and promoted by public subsidies and consulted by the land consolidation authority. The village roads were also redesigned in a traditional but functional way. Now the public bus is able to pass through Milchenbach.

Trees were planted and green areas created on the roadside and in front of the houses. Some of the renewed buildings are used for tourism today (farm holidays, guesthouses, holiday flats) and provide an important (additional) income source for several villagers. About 500 fruit trees and hedges and shrubs were planted inside and around the village and the traditional dry stone walls were restored.

All these measures made Milchenbach definitely more attractive than before, both to locals and tourists.

The villagers and all local associations were intensively involved in the whole planning process. This co-operation for their village strengthened the social and cultural life. People not only took active part in recreation and hobbies, but also took responsibility (with support of land consolidation) for important services such as water supply.

## Relevant data

**Size:**  
946 ha.

**Type of Land:**  
Agriculture and forestry and the village of Milchenbach.

**Type of area:**  
Area with agriculture, environmental and touristic value.

**Innovation:**  
Integrated land consolidation including village renewal

**Objectives**  
Improvement of agricultural and forestry use, maintenance of enterprises, village development and rural development, diversification

**Costs**  
3,3 million €; 700.000 € from the participants and 2,6 million € from the Federal State of Germany, the State of NRW and the European Union

**Time schedule**  
1977 land consolidation decision  
1985 road and water, resources plan  
1986 valuation results  
1985-'95 building of roads and village development measures  
1986 provisional transfer of possession  
1987 publication of the land consolidation plan  
1998 implementation order  
1998-2002 updating of public records

**Contact**  
District Government Arnsberg  
- Unit 69  
(Rural Development, Land Consolidation)  
Seibertzstraße 1  
D-59821 Arnsberg  
0049-(0)2931-82-0  
[poststelle@bezreg-arnsberg.nrw.de](mailto:poststelle@bezreg-arnsberg.nrw.de)

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Integrated

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Environmental sensitive area

Metropolitan area

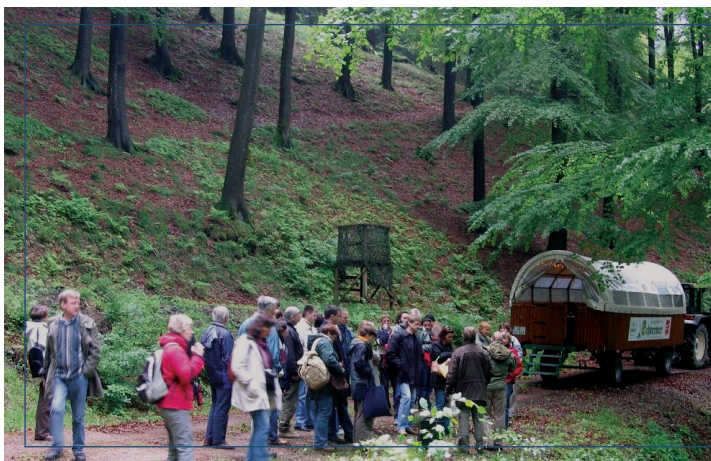
## Results outside the village

A new road network for agriculture and forestry was developed by the land consolidation procedure. Sixty kilometers of road was built or upgraded. Fragmented and uneconomically shaped agricultural and forestry real property was reallocated (consolidation ratio of average 7 to 1). The time spent for agricultural cultivation could be reduced by 80%, because machine usage for mowing and pressing for silage is now possible. Now the farmers can use their fields and forests in an economic and sustainable way.

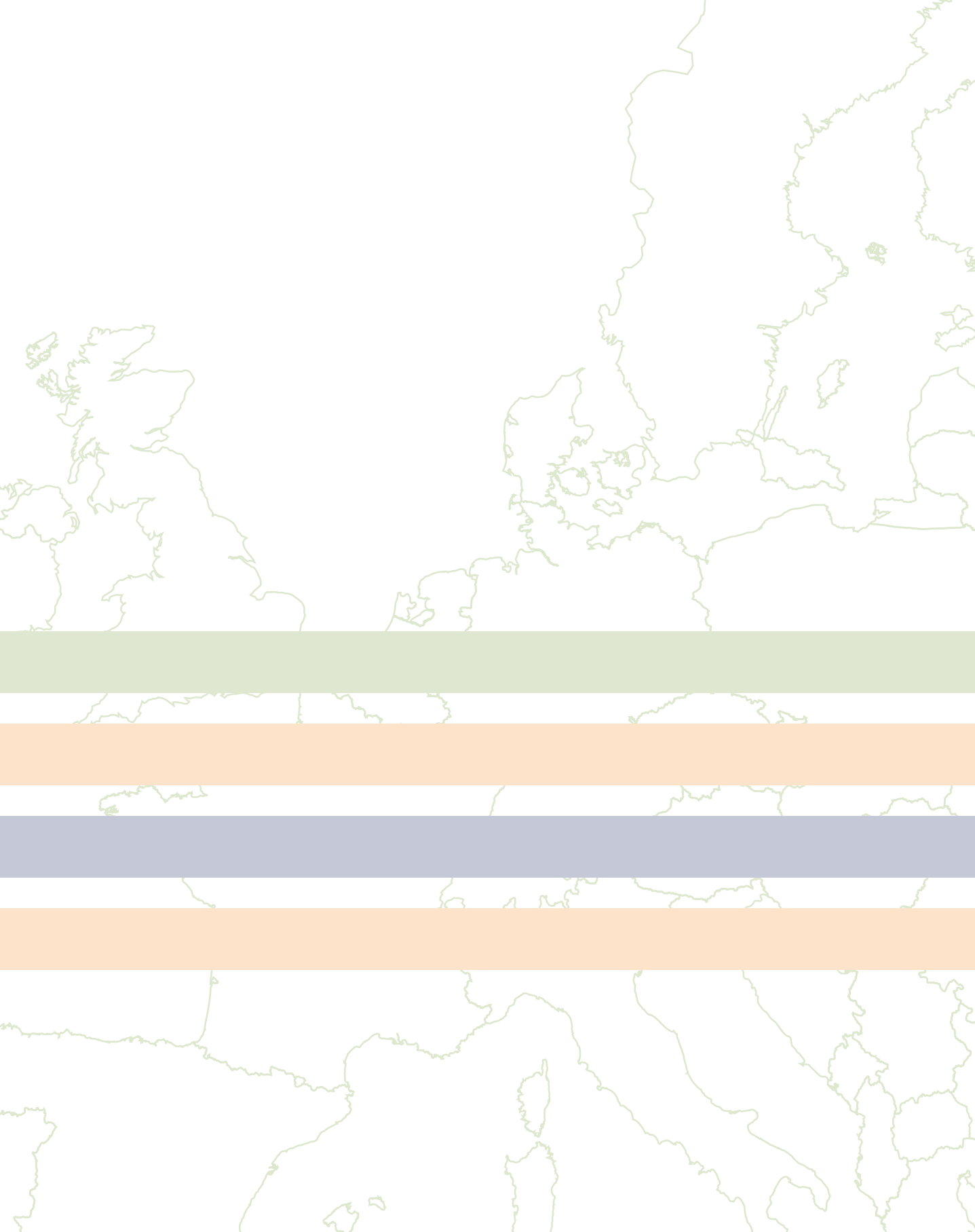
Milchenbach itself benefits from the new road network. The big lumber trucks can now drive around the village and do not have to use the narrow village roads as before.

Additionally, a number of ecological measures were realised. Creek valleys and water sources were developed, indigenous hedges and trees were planted and a biotope network implemented. In general, the quality of nature and landscape were improved. Tourists who use the newly constructed paths and roads for hiking can enjoy this beautiful scenery.

Land consolidation and village development contributed to the preservation of the appearance of Milchenbach, its identity, its quality of life and its economic development. Both instruments helped the village to adapt to present and future demands and to maintain it as an attractive place for its residents.







## 2.12 Port of Antwerp, Flanders (Belgium)

### “SPACE FOR INDUSTRY AND NATURE, SOLUTIONS FOR FARMERS”

#### Introduction

The need for port expansion near Antwerp posed challenges for nature, farmers and even a village. It entailed a vast land claim in an area with both large real property with high value and Natura 2000 designated area, and also threatened intensive agriculture on fertile polder soils. Also, the harbour development threatened the village's future existence.





## The problems

In 1998 the Flemish government decided on the expansion of the port of Antwerp (Antwerpen) on the left bank of the river Scheldt (Schelde). A tidal dock was to be built (the 'Deurganckdok'), enabling rapid access by container ships and having the largest tidal dock capacity in the world. After work started, a storm of legal claims by various interest groups brewed to dispute the legitimacy of the procedures that followed.

The Supreme Administrative Court withdrew the construction permit and stopped the work, resulting in a daily loss of approximately half a million Euros for stakeholders involved which included the Flemish government itself.

## In search of innovations

To solve the deadlock, the Flemish parliament passed the so called "emergency decree" on harbour expansion, by which normal planning legislation could be bypassed in this single instance.

This decision also had to accommodate the claims of various interest groups. It had to incorporate a sophisticated set of accompanying measures including mandatory environmental damage mitigation, since the expansion is located in special protected areas of Natura 2000 sites; and also a social assistance plan for inhabitants and farmers for the loss of valuable arable land.



The complexity of the challenges made it impossible to come up with a one-sided solution. There had to be a dialogue between the governmental bodies, other stakeholders and the local inhabitants to find appropriate solutions.

## Relevant data

### Project name

Port of Antwerp, expansion on the left bank of the river Scheldt

### Innovation

When port enlargement claims vast areas of arable land and nature, land development is put into action to create new nature and find solutions for farmers



### Location

Flanders, Belgium

### Land use/landscape

Fertile Polder areas in agricultural use, Natura 2000 to be compensated.

### History

1998: VLM's first involvement in the port expansions

2001: Emergency decree on port expansion, delineating role of VLM

2002: agreement between partners on detailed division of tasks

2002 and onward: land banking activities

2003 and onward: implementation of nature compensation measures

### Project size

Total project area: 521 ha

Managed by nature conservation organisation: 46 ha

Managed under farmer's contracts: 23 ha

Leased out on 1 year basis: 207 ha

Long-lease: 10 ha

### Costs

Land banking involved 20 million Euros, except for the 247 hectares of land acquired in the past. Financing by the Flemish government, responsible for the harbor's development.

### Status:

In execution

### Contact

Head of the VLM division of East Flanders:

[Roland.Vancauwenberghe@vlm.be](mailto:Roland.Vancauwenberghe@vlm.be)

Project Leader at FLA:

[Jan.Verboven@vlm.be](mailto:Jan.Verboven@vlm.be)

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Finally, the responsibilities of all stakeholders involved after the eventual recommencement of construction was delineated and described in an extensive “matrix of tasks”. Two tasks are assigned to the Flemish Land Agency (VLM) based on its extensive experience in land development and land consolidation practices.

First, a development plan was drafted which detailed the implementation of the mitigating measures to protect nature and to coordinate the construction work.

Next, based on agro-economical studies, a land banking project was set up to free land for environmental compensation and find solutions for the farmers affected by land loss due to these compensations.



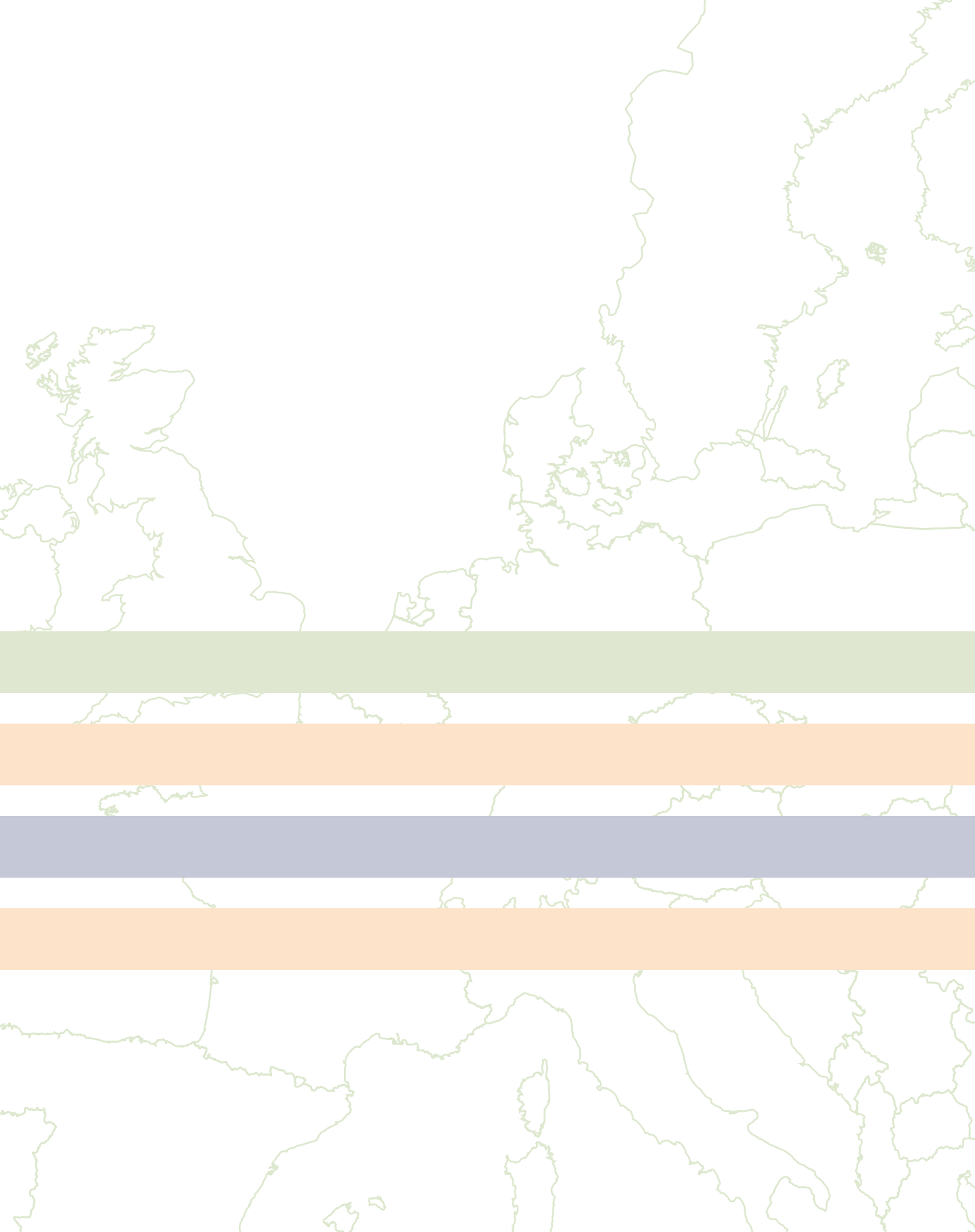
## Results

In September 2005, the first container ship unloaded its cargo in the new dock. Meanwhile, restoring green areas and compensating farmers by land banking is still continuing. The land bank succeeded to complete its goals to free more than 500 ha of farmland with only two cases of legally enforced expropriations.

The experience on the left bank of the river Scheldt has led to the awareness of the responsibility the government has in implementing accompanying measures when executing large infrastructure projects. For the harbour extension of Zeebrugge, a similar approach is being followed today.

For VLM, the involvement in the harbour project was one of the first strategic projects, after the demand of a problem owner. This is a deviation from the traditional approach for projects.

Nowadays, this demand-driven approach where the problem owners are in the centre of the process instead of the organisation holding the solutions, is becoming more prevalent. VLM puts each question on the agenda of the Minister who decides on the future process to follow. Hence, the initiation of new projects can be seen as an implementation of a flexible bottom-up approach.



## 2.13 Schetsschuit Ruiten Aa (The Netherlands)

### "MATCHING BY SKETCHING"



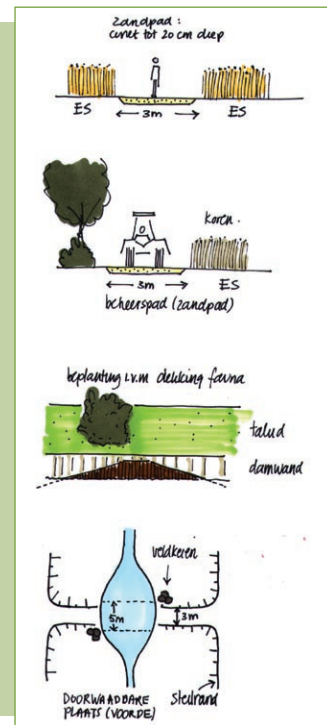
### Introduction

Designers within the land development agency in The Netherlands felt the urge to redefine their jobs. This led to a new instrument widely used that fits to the actual spatial issues and the need for an integrated instrument. The use of this tool called "the schetsschuit" (the sketch boat) will be illustrated in use at the reconstruction of the traditional river system Ruiten Aa.

### The problems

Within DLG the designers were all working on 'an island' in their own provinces, with their own way of doing project research. They felt that they needed to work together strengthen their role and visibility as designers in projects and to also strengthen their designs.

By combining their forces they also hoped to achieve national significance in green design by DLG. In a national DLG designers' workshop, a group of designers came up with the idea of organising workshops together with stakeholders, lead by designers, to visualise ideas and problems and to try to find solutions by sketching on the spot. The DLG North group came up with this idea and Wim Boetze, a designer from this group, invented the name 'Schetsschuit' for this tool. It fit perfectly with the instrument DLG was already using, the 'Dialogue'. With this instrument DLG was already solving problems between stakeholders in projects and 'Schetsschuit' added the strong component of visualisation to it.



## Innovation: integrated innovation at instrument level

Within five years the initial idea of a floating mobile team of experts, sailing into the project area to explore the various stakes and spatial needs became a widely used and well defined instrument.

Unfortunately, the instrument lost its floating character and took up a more informal appearance. Now a field visit is one of the elements of the programme. The tool evolved into a rapid interactive pressure session in which all the actors of the region have their say. The designers have a central role to facilitate the interaction by visualising and bridging the different perceptions.

The new Schetsschuit formula also includes financial specialists to complete the different spatial scenarios with feasibility studies. At the end, the solutions found are presented to the politicians concerned and other decision-makers, with the hope that they will approve the proposals. The result is the creation of momentum for a faster and more integrated project start-up.

## Results in the field

The realisation of the National ecological network by restoring the traditional system of groundwater flows and dynamics in the river Ruiten Aa was the aim in Westerwolde. The challenge of the project group was to integrate the sometimes conflicting stakes and spatial needs of nature, agriculture, recreation, cultural heritage, archaeology and water management.

At the start-up phase, a 'schetsschuit' session with all the acting bodies illustrated needs and requirements of the specific actors. The sketches served the commitment of the participating parties. The focus at an early stage on cooperation and teambuilding relieved the conflicting interests of the stakeholders and forced them to work on an integrated solution.



## Relevant data

### Project name:

Beekdal Ruiten Aa

<http://www.ellersinghuizerveld.nl>

(one of the nature areas that is completed already)

### Country:

The Netherlands, province of Groningen, Westerwolde, 2400 ha, nature development

### Innovation:

Instrument to bridge different stakeholder perceptions through visualisation

### Status of the project:

in process

### Type of area:

areas with environmental values

### Objective(s) of development:

to realize the ecological network by restoring the traditional system of ground water flows in combination with run off in the river system of the Ruiten Aa

### Implementation bodies:

DLG (Land Development Agency of The Netherlands) in cooperation with Province of Groningen, Area Committee of Westerwolde, Water Board Hunze and Aa's, State Forest Office, Natuurmonumenten, municipalities of Bellingwedde, Vlagtwedde and Stadskanaal

### Important other details:

DLG has the multiple role of acquiring needed lands, design and implementation, secretary of the area committee and process guidance.

Flexible

Decentralised

Integrated

Agricultural area

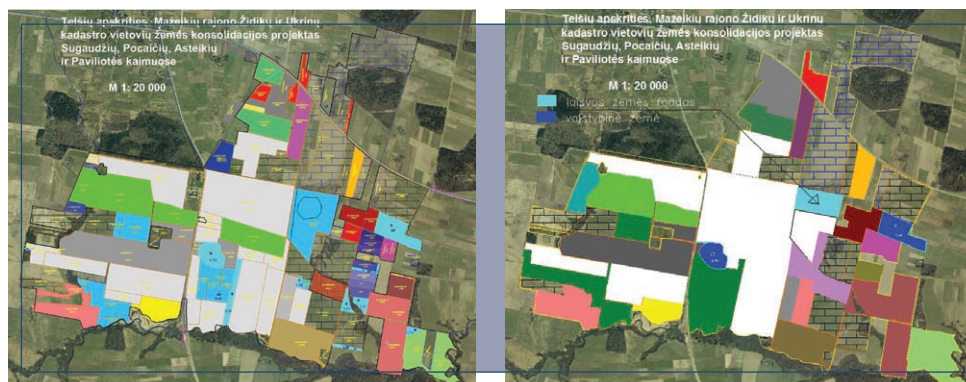
Environmental sensitive area

Metropolitan area



## 2.14 Land Consolidation Project in the Židikai and Ukrinai Cadastral Areas of Mažeikiai District, Telšiai County (Lithuania)

### “BOTTOM-UP, LEARNING BY DOING”



On the 20th of December 2005, the Governor of Telšiai County approved the boundaries of the land consolidation project on the territory of the Židikai and Ukrinai cadastral areas of Mažeikiai district in north-western Lithuania.

### Introduction

In Lithuania, the land ownership situation was very turbulent in the last century. During the independency period (1918-1940), a reform was passed to divide the land into individual farmsteads. In the Soviet period, the land was nationalised and no private ownership remained. When Lithuania regained its independence in 1990, the economic system shifted towards private ownership again and land reform was re-enacted, based on the restitution of land and the restoration of ownership rights. This process is nearly complete in Telšiai County.

However, where restitution has been completed, land fragmentation has become a widespread problem. Most farmers own very small land plots that are highly dispersed in the area of their farms. Many of the rural dwellers own only small household plots up to 2 – 3 ha. The need for land consolidation is becoming increasingly urgent due to the pressure to establish larger and more integrated farms that could develop into competitive agricultural holdings.



## Land consolidation: first steps

The main principles for land consolidation were developed and adopted in the "Law on Land" in 2004. This was established between 2000 and 2004 after the completion of several pilot land consolidation projects. In 2005 detailed rules on developing land consolidation projects were approved by a special government resolution.

The project is based on voluntary participation and a bottom-up approach. As the next step, County Governors submitted applications for EU support for 14 land consolidation projects. When EU support was granted, the County Governors organised a tender to select the planners. These 14 projects are the first to be carried out in accordance with the new legislation and the new EU support rules, in a "learning-by-doing" process. One of these land consolidation projects takes place in the Židikai and Ukrainai cadastral areas of the Mažeikiai district, Telšiai County, in north-western Lithuania.



## Local initiative and public support

The execution of the project has a bottom-up characteristic. Some farmers in the area wanted less fragmented land parcels and better access to their land. They took the lead and initiative, showing confidence in the development process. A few farmers did not want to participate as they wanted to wait and be certain about future developments. Their land was excluded from the project territory, although to a certain extent they will benefit from the project. Landowners identified a number of reasons for land consolidation:

- Enlargement of farm holdings;
- Improvement of farm structure;
- Establishment of compact land tenure of the farms;
- Improvement of the local road network;
- Reduction of distances between cultivated land parcels;
- Establishment of a territorial base for infrastructure improvement;
- Identification of the areas where land improvement is necessary (mainly drainage).

## Relevant data

### Project title:

Land Consolidation Project in the Židikai and Ukrainai Cadastral Areas of Mazeikiai district, Telšiai county

### Innovation:

Land consolidation

### Location:

North-western part of Lithuania

### Project area:

685 ha (with 21 ha of state owned land)

### Number of land parcels:

120 (biggest land parcel is ~39 ha, smallest – 0,11 ha).

Average area of land parcel - 6 ha

### Number of participants:

54 landowners and 1 trustee of the state owned land

Average productivity factor of agricultural soil - 41 points (highest – 58, lowest – 18 points)

Average price of agricultural land - 1187 EUR/ha

### Land use:

agricultural land

### Status of the project:

planning phase

### Main objectives:

- Improve agricultural and farm structures;
- Improve rural infrastructure;
- Identify areas for land improvement (mainly drainage).

### Contact:

Giedrius Pašakarnis, Land consolidation project manager:

[giedrius@konsolidacija.lt](mailto:giedrius@konsolidacija.lt)

Vilma Daugaliene, Head of Land Management Division, National Land Service under the Ministry of Agriculture:

[VilmaDau@zum.lt](mailto:VilmaDau@zum.lt)

Flexible

Decentralised

Integrated

Agricultural area

Environmental sensitive area

Metropolitan area

The strong support of the local and regional governments was decisive when choosing this project as one of the 14 EU-backed land consolidation projects. The strong support of the County Governor, Director of the County Land Management Department, and the residents proved to be also very important.

## Accomplished activities and expected results

The following important activities have been carried out so far: the surveying of agricultural land properties; the exploration of irrigation and drainage areas in need for reconstruction; the pinning down of road networks and stream boundaries; and the investigation of the wishes and needs of the farmers. The results and findings are the basis of the land consolidation plan.

The expected results are:

- At least 13 landowners will enlarge their farm holdings.
- One landowner owning 15 small land parcels will own three compact land parcels.
- One landowner owning five land parcels will own three compact land parcels.
- Six landowners each owning two land parcels will own one compact land parcel.
- Nine landowners will have better and faster access to their land parcels.
- Thirteen landowners are going to sell their parcels to other participants of the project.
- One state-owned land parcel will be transformed into a 0,50 ha gravel pit.
- 21 ha of state owned land will be concentrated in ~ 6 (half the number) land parcels.



## Learning-by-doing: a rewarding strategy

However, there are still some major issues that have to be resolved before the plans can be implemented. These are mainly related to the financial allocations for the full implementation of the land consolidation project.

According to the administrative rules for financing land consolidation projects, eligible expenditures for EU structural funds in the period of 2004-2006 can only be related to the preparatory and planning procedures, cadastral surveying, and legal registration.

The expenditures for the implementation of the plan (such as the construction of the road, maintenance of the drainage systems, etc.) were not included in the list of eligible expenditure. Therefore, when it became clear that there will be no special EU funding available for these costs, individual efforts were made for finding additional financial sources. Regional and local governments and landowners are aware of this financial gap and the fundraising is still continuing. There are several sources available, such as EU support under other project titles, municipality budget, and some private contributions. It is very important to demonstrate the final benefits of land consolidation.

The existing legislation is considered too strict and not flexible enough by the new participants of the land consolidation project. They can only join the process at a certain stage and this becomes a constraint not only for individual landowners, but also for the project as a whole.

Therefore, currently, certain possibilities to improve the future process of land consolidation for the period between 2007 and 2013 are being stipulated in the National Land Consolidation Strategy. When this strategy is approved, the changes in the legislation:

- Will enable land consolidation to become a more flexible tool, giving more benefits to the participants and the whole rural community;
- Will establish a clearer link between land consolidation as a tool for territorial planning with agricultural, rural and regional development;
- Will provide a link between existing different financial sources that could be used for the final implementation of land consolidation projects.

Therefore, there will be a visible improvement in the quality of life in rural areas as a direct result of the plan.

## 2.15 Vilaverde Project, Galicia (Spain)

### “COMMUNAL FARMING FOR THREATENED VILLAGES”

#### Introduction

In many Galician rural areas, land is fragmented and abandoned and young people are leaving the villages for the cities. Local agricultural practices are very traditional and not correctly adapted to current market conditions.

The residents of Vilaverde, one of these villages, felt an urgent need to change this situation and started a project with new agricultural practices, using the strong traditional social structure of the village. This project envisions common farming using both private and common land. It is supported by a government program that finances singular projects.



#### The problems

Life in the village of Vilaverde, in the province of Lugo seemed to end. Many families had barely any income from agricultural activities. The fragmentation of land was so high that agricultural investors were not attracted.

In Vilaverde, and actually in all of Galicia, there was no tradition to rent or let the land, while traditional farming based on the existing farm structure had no future. Rural population was growing old because young people were leaving the villages due to lack of employment. This situation was quite new and so there was no tradition to handle this problem. New and yet untested solutions were necessary.

#### In search of innovation

One of the inhabitants of Vilaverde, Antonio, worked as a driver at a milk factory outside the village. There he picked up new ideas among which were the common use of land. While speaking with a municipality employee, he got the idea of using the common property of the village in a common way. Antonio discussed this with a technician who worked in this area and knew about a similar initiative in Asturias, Spain. Antonio, the technician and one member from each family travelled to Asturias to learn more. They visited two villages where people used their own plots individually, but also shared one big common plot.

Two alternatives were considered for the Vilaverde situation. The first possibility was that the nine families involved in Vilaverde would create a new farm for common use. This was important because all nine would have the right to use the common land. The other option was that the six farming families would start a common farm using all the private land and renting the common land. However, all families wanted to join the common farm, even those that had no farming activities.

Antonio went to seek advice from the engineer who was responsible for the CAP's agro-environmental scheme in the province of Lugo. He knew him because the engineer, Eloi, had proposed measures to solve the Vilaverde problems ten years before. At that time, the village people were not willing to join common initiatives. This time, it was Eloi who did not believe in the new ideas, nevertheless decided to speak with the landowners. He wanted to find out the motivation behind the new ideas, checking whether they were economic or just emotional. When he found that there was an economic drive, he acknowledged the initiative as serious and agreed to help find subsidies and also to give advice and encouragement.

The first idea was to establish a large company with appropriate equipment. As for the cattle, all the cows would have stayed indoors throughout the year. Eloi thought that this idea was not making the system more efficient. In traditional farming practice, cows stay in the barn only for the night and during the three months of winter. He proposed to leave them outside all the time, a very unusual practice in the area. This would have the advantage of combining low investment with low labour cost and better work conditions, all essential for development.

## Results

Now there is only one farm and each family owns a share of it, not only the former farmers, but also people who were just landowners. The farm has almost 150 ha and four parcels comprise all the private parcels (hundreds) and the common lands. Although the new farm is much bigger than the former ones, with more than 150 heads of cattle, its management is much easier and can be done by only two people due to the free range system and the new facilities.

The first real profits were distributed among the families last year according to their share in the farm. Now people are thinking about how to develop new activities to increase profit, for example by selling meat directly to private people. As labour needs in the farm are lower now, the farmers are free to engage in other activities.

On the national political level there was a government program to invest in projects like Vilaverde, but it had not been used frequently. Using this program for the Vilaverde project implied a turning point.

Vilaverde has become an example for new projects in Galicia. A similar project is being developed near Santiago, involving more than 300 families.

Due to political changes in Galicia a new government was elected that believed in this type of projects. They set up a new 6 million Euro program called Singular Projects in order to invest in rural areas.

## Relevant data

**Project name:**  
"A Capilla" Agrarian Transformation Society.

**Location:**  
Galicia. Province: Lugo.

**Municipality:**  
"Navia de Suarna"

**Innovation:**  
common farming activities against land fragmentation

**Size project:**  
199 ha involved

**Land uses:**  
grasslands, scrubland and forest.

**Status of the project:**  
completed; finalized in 2001.

**Type of area:**  
Area with environmental values, Natura 2000 Network, most of them linked to traditional agrarian systems.

**Objective(s) of development:**  
To improve the productive structure as well as the efficiency of farming. To increase the size of the farms (mainly grasslands) and to overcome the hard working conditions of traditional farming.

**Total cost:**  
471.820 €. Contributions: Private 74,3%. Public 25,7%

**Planning:**  
Broad idea mainly by the community, guidelines from public services

**Execution:**  
public services, community and other private companies



Flexible
Decentralised
Integrated
Agricultural area
Environmental sensitive area
Metropolitan area

## 2.16 Baixo Vouga Lagunar (Portugal)

### “MAKE AGRICULTURE VIABLE, IN ORDER TO PRESERVE AND PROMOTE THE ENVIRONMENT”

#### Introduction

This project deals with the influences of the river Vouga and “Ria de Aveiro”, where fresh and saltwater meet at one of the environmentally unique places of Europe. Very long and narrow parcels with farming activities, open zones, varied with traditional rice fields characterise this area.



#### The problems

The goal is to find a balance between environmental conservation, flood management and farming activities.

In this area, the classical ways of keeping the water out were destroyed. The amount of water increased during the 60s. In the 1930s, the tide (salted water) amounted to about 60 million cubic meters and presently, it has increased to 100 – 120 million cubic meters. This phenomenon is due to the enlargement of the Aveiro port and to the strong winds. If the situation remains unchanged, the farmers will abandon the land, leading to the further degradation of the area.



## Innovation: more flexible and integrated innovation at instrument level

DGADR is planning an intervention to preserve the existing ecosystems through the preservation of environmental values and the maintenance of agricultural activity. For each zone and system (Special Protection Zone and ecosystems "bocage", "sapal", "caniçal", and "rice fields"), a different kind of land use and intervention was defined within the scope of a LC project:

- (1) mainly nature preservation;
- (2) both agriculture and nature preservation;
- (3) mainly agriculture.

In terms of environmental aspects, there are three different emerging landscape types: the bocage, the open space, and the wet zones. These three different landscape units are all linked by the drainage system, the ditches, and the roads. The complex, as a whole, represents a unique landscape in Europe. However, new aspects, such as eco-tourism, are not suitably developed. This offers new opportunities for the near future.

The farmers planted bushes and trees for wind and sun protection and as fences for the cattle. The parcels are very long and narrow. By maintaining these trees, the farmers can keep the ecosystem that covers 50% of the area of this project alive.

Zea maiz and Lolium spp., two plant species exist in this bocage area in a rotating system. Cows and horses grow up in these fields and they are healthier because they live in a natural environment. There are special horse breeds and the farmers have agreed to keep their pedigree. There are about 3,800 of these animals left and the young animals are raised in natural conditions.

The need for a new kind of intervention was followed by a complaint from the Spanish and Portuguese Environmental Associations that was presented to the European Commission. The accusation was that Portugal was infringing upon the EIE Directive and the Directive on the conservation of wild birds by building a major dike to protect farmland. The Environmental Commission from Brussels investigated the area in question and the claim was cancelled the next day.

Nature and Agriculture have the same interests here. After the dikes were built, the amount of saltwater decreased. In the transition area there are different species of plants and animals that have good living conditions. Saltwater can still penetrate the area by seepage.

## Relevant data

### Project name:

Projecto de Desenvolvimento Agrícola do Vouga - Baixo Vouga Lagunar.

### Innovation:

Flexible land consolidation in harmony with natural values

### Country:

Portugal, region of Beira Litoral, Project area is about 3.000 ha, types of land use are agricultural and nature preservation.

**Status of the project:**  
plan.

### Type of area:

agricultural and with environmental values.

This area has about 650,000 inhabitants. About 100 inhabitants per square kilometre. 10% are in agriculture, 55% secondary sector, 35% third sector.

### Objectives of development:

promote the development of agriculture; preserve the existing ecosystems through the preservation of environmental values and the maintenance of agricultural activity; making compatible both agriculture and nature preservation interests through land use planning.

### Costs:

Project is still in a planning stage

### Implementation bodies:

Direcção-Geral de Agricultura e Desenvolvimento Rural (DGADR)

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Integrated
Agricultural area
Environmental sensitive area
Metropolitan area

It was always the belief that the most important people there are the farmers, not the technicians. The farmers maintain the land while the role of the technicians is to help and advise the farmers.

This is one of the highest latitudes in Europe where rice can grow. Production of rice is about 1500 kilos per hectare (3 times less than in other areas). Rice is very important for social and cultural reasons and also to keep the humidity at the right level. The farmers who grow rice here used to receive a subsidy from the EC to give them a minimum income. Unfortunately, this subsidy was cancelled.



## Results

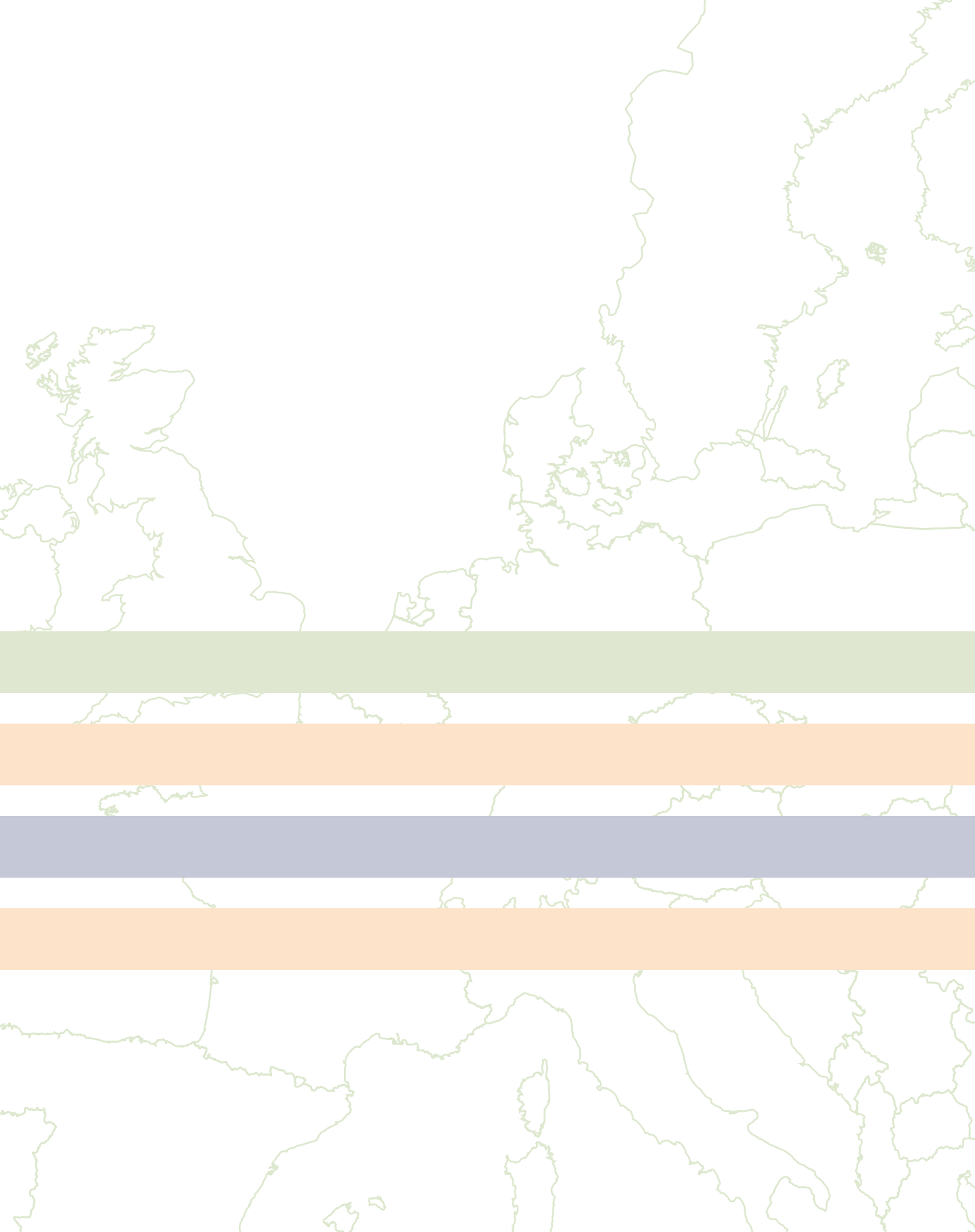
An environmental impact assessment was made as required by the law. The team responsible for this was very interested in the outcome. The main aspects that were analysed in the assessment were performed. Environmental impact on the following was studied:

- The structures to be built
- Work on the saltwater, on the tides, etc
- The land consolidation project.

A study was launched on the possibility of building a structure that would channel water, prevent floods, and lead the water near an industrial area, close to the city of Aveiro, and dilute the locally existing high concentration of heavy metals in the water. The idea was abandoned however, because of the impact on the environment.

How far one could go in cutting the trees and bushes of the bocage was also studied. The impact assessment presented proposals for models on how to manage the available resources. This assessment underlined that this kind of intervention is very important for social and cultural reasons. The farmers are active agents who maintain the area as it is. If you want to preserve the environment, you need farmers and if you need farmers, you have to help them. This idea is widely spread among the ranks of the different organisations.

The main slogan of the project team and the local farmers is "Make agriculture viable, in order to preserve and promote the environment".



## 2.17 Würselen-Euchen, North Rhine – Westphalia (Germany)

### “PUBLIC REQUEST ON LAND VS. CULTURAL LANDSCAPE – REACHING ECONOMIC WIN-WIN SITUATIONS FOR PUBLIC INFRASTRUCTURE MEASURES BY LAND CONSOLIDATION”

#### Introduction:

The public authority responsible for the road development and maintenance planned a new ring road for traffic reduction in the village “Würselen-Euchen”. The plan showed that the construction would have negative impacts on the agrarian structure and the cultural landscape. This land use conflict was solved by a special land consolidation procedure. Additionally, the economic value added by this procedure was researched by a comprehensive evaluation including a cost-benefit-analysis after project conclusion.



## The problems

Because of the increasing traffic passing through the village "Würselen-Euchen" located in the densely populated area between Cologne and Aachen, the public authority responsible for road construction and maintenance planned a ring road connecting to the highway. For road construction and additional nature compensation measures, the authority requested about 35 ha of partly high productive agricultural land and was allowed to take it by expropriation.

However, the impacts of these measures on the agrarian structure and the landscape would have been negative. For example, the stretch of the planned road affected a transaction of 45 agrarian parcels and the local agrarian road network. So the expropriation authority of the district government of Cologne requested for a special land consolidation procedure, the so called "Land Consolidation in Case of Compulsory Purchase".

The targets of the procedure were:

- land acquisition for the development of the road project without expropriation
- prevention or lowering of negative impact on the cultural landscape
- re-allocation of parcels and construction of a new road network for economic agriculture

## In search of innovations

Increasing pressure on agriculture by public infrastructure improvement was noted. The development of ring roads, motorways, railway tracks, etc. have a negative impact on agriculture and the landscape.

Land consolidation had been a tool for land management for consolidating and reshaping. In this case it was used to solve these land use conflicts by a special type of procedure called "Land Consolidation in Case of Compulsory Purchase" based on the regular German Land Consolidation Act.

This was done by balancing the public interest and private owners' (farmers) interests relating to property rights granted by the constitution. The land consolidation authority was able to take the requested land by expropriation and apportion the loss of land among a larger number of owners. The authorisation for expropriation was granted by a special law relating to road development. But it was not necessary to expropriate from the owners, because the LC authority was able to buy enough land in the surrounding area of the planned road by using a special financial fund ("revolving fund"). But the possibility for a compulsory purchase could support the solution of the land use conflict.

## Relevant data

**Size:**  
490 ha.

**Type of Land:**  
Agriculture and nature elements

**Status:**  
Completed.

**Type of area:**  
peri-urban area with agriculture near the incorporated village "Würselen-Euchen"

**Innovation:**  
land consolidation in case of compulsory purchase

**Objectives:**  
Prevention of the negative impacts of a ring road construction for the agrarian structure and the landscape; prevention of expropriation; allocating land for a ring road construction and necessary compensation measures

**Costs:**  
2.600.000 €; 1.250.000 € are paid by the road developer e.g. for new agrarian infrastructure (all figures without the cost for the targeted road construction)

**Location:**  
The incorporated village "Würselen-Euchen" is located in a densely populated area between the cities of Cologne and Aachen close to a slip road of the motorway A44

**Time schedule:**

1969	Definition of a new ring road line
1995	Preparation of the road construction plan
1997	Application for a land consolidation procedure by the expropriation authority
1999	Land consolidation decision
2001	Plan approval of the ring road plan
2002	Start of the road construction
2003	Finish of the road construction and transfer of possession
2006	Concluding statement of the land consolidation procedure

**Contact**  
District Government Köln - Unit 69 (Rural Development, Land Consolidation)  
Zeughausstr. 2-10  
50667 Köln  
Tel.: 0049-(0)221-147-0  
[poststelle@bezreg-koeln.nrw.de](mailto:poststelle@bezreg-koeln.nrw.de)

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Agricultural area
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Metropolitan area



Further, a comprehensive evaluation including a cost-benefit-analysis showed the economic value added by using a land consolidation procedure to support a public measure. The research included all costs of the public authorities relating to the LC procedure as well as all tangible and intangible benefits for all concerned parties (owners, developer of the ring road, other public authorities and the general public). A "consumer satisfaction" survey and interviews with agrarian experts collected opinions and expectations.

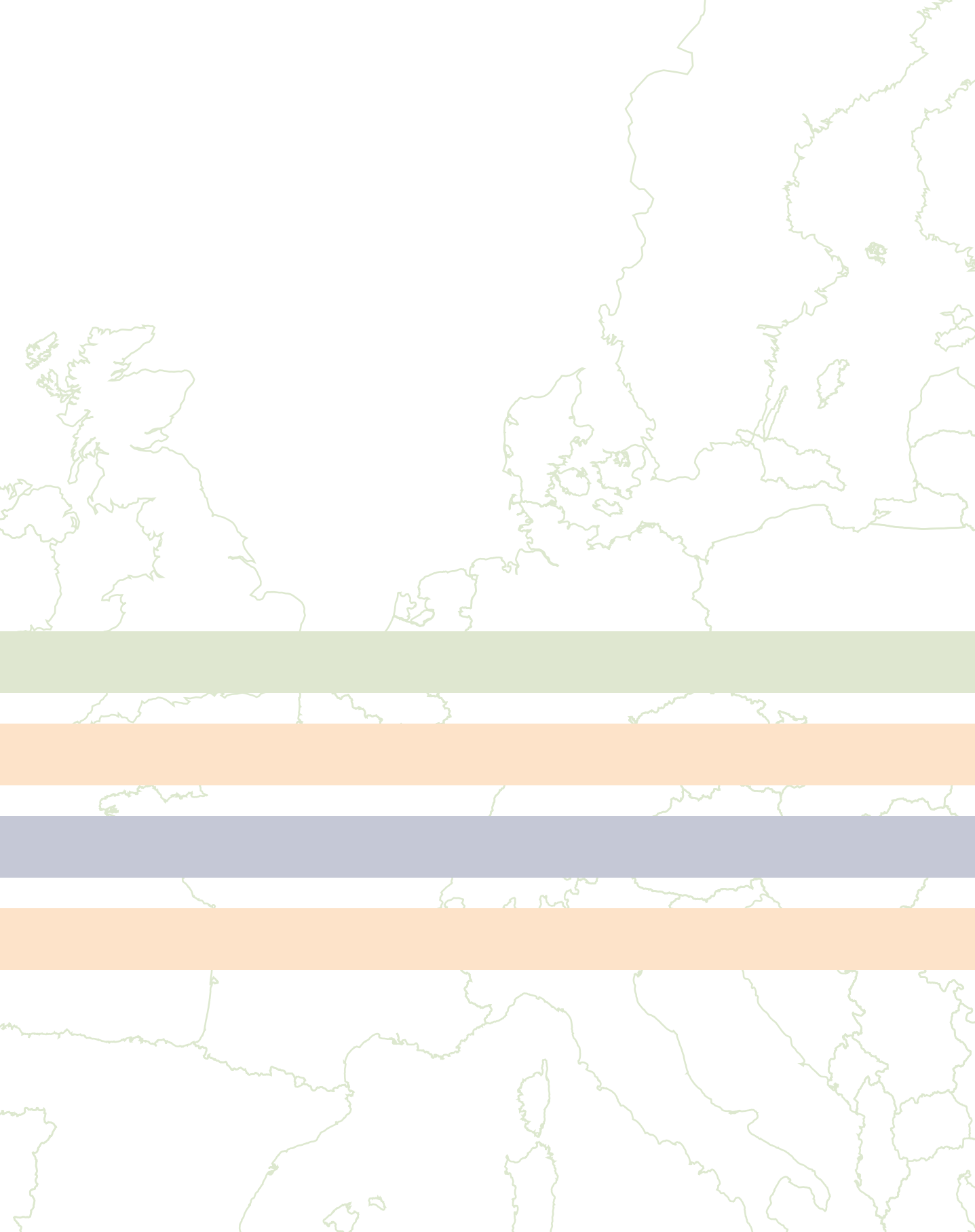
## Results

The land consolidation procedure offered the possibility for a win-win-situation for all participants. For example the benefits are:

- For the farmers:  
Disadvantages caused by the infrastructure project could be avoided and the parcel structure was consolidated (ratio: 1,8 :1).
- For the developer:  
The project could begin earlier, because the special type of land consolidation granted the requested land to the developer by an administrative act. Time-consuming trials did not slow down the process. Additionally, the calculated costs for the LC procedure for the developer were lower than the expected costs without land consolidation.
- For the general public:  
Disadvantages for the cultural landscape could be avoided. The result of the economic research revealed the positive value. The total costs were 2.604.976 Euro and the tangible benefit was 3.156.086 Euro. But the benefits were higher considering the intangible benefits such as landscape improvement, recreation and tourism and the preservation of local agriculture. Additionally, the "consumer survey" was also positive.







## 2.18 Žemaitija National Park (Lithuania)

### “ZONING PLAN IN LARGE NATURAL AREAS”

#### Original situation

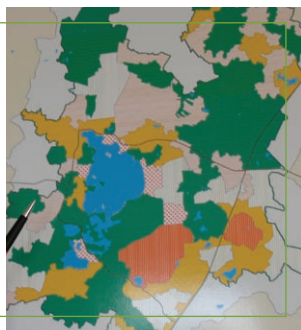
Žemaitija National Park (ŽNP) was established in 1991. Previously, in a small part of this territory there was a landscape reserve of purely state land. The borders of the present park have been defined by scientific studies, in an effort to incorporate nature protection as well as preservation of social and cultural heritage. The first stage of functional zoning in ŽNP was executed in 1992 – 1993 in order to preserve different parts of the protected areas from unsuitable land use.



The plans of the state parks and their boundaries distinguish the following functional priority zones: conservational (strict reserves and reserves), ecological protection, recreational and economical priority, and zones with other purposes. The functional zones are divided into smaller sub-zones to facilitate landscape management.

The first functional zoning plan, developed according to certain territorial planning rules, was approved by the Government in 1997. The director of ŽNP, Mr. Giedrius Norvaisas, was very much involved in the process. At that time this approach applied in large natural areas was very innovative in Lithuania. The zoning concept was implemented in a “learning by doing” way.

For the more detailed management of the territories, other types of territorial planning documents were needed such as special or detailed plans. In 2006, the management plan for the western part of Plateliai lake (an area of 273,23 ha) was developed.



#### Experiment with zoning

The life cycle of the functional zoning plan is supposed to be 10 years, so the plan was due for renewal. The new theme that justified a new plan was the integration of the cultural heritage.

The challenge was how to provide a sustainable economic perspective to the inhabitants (3000), combined with the development and management of a high value natural environment and landscape and adequate amenities for the increasing recreational activities.

The whole area has been mentioned on the national Natura 2000 list, as a first instrumental EU-oriented step. This could have been achieved

in the early 90s due to the fact that there was still a lot of state-owned land. Today it is far more difficult to satisfy the Natura 2000 policy, because of the implying land use restrictions.

## Obstacles

The zoning strategy appeared to be successful. Without it, it would have been much more difficult to achieve the same results because of the ratio of public and private land ownership, 30% versus 70%. Fifty percent of the forest and almost all farmland, for example, is privately owned. Success was achieved in a very short time, since 1991-the beginning of the land reform. The zoning strategy however requires constant follow-up by staff who have to keep an eye out on the activities in the zones.

A particular problem is the fact that the land restitution is not applicable (or only under strict conditions) within the park. This affects the support of inhabitants. Building activities are also strictly limited as only renewals are allowed. This may however offer economic continuity to the existing property owners.

A second new issue to the new zoning plan cycle is the planning of bicycle trails. An increasing number of recreational tourists use bicycles for moving through the park area.

## The Director: a personal challenge!

"It's creative to work on the park's future, especially since we can now see how it works in practice. What I like personally is the activity variety. I am like a manager now, but I haven't forgotten my background as a forester. I am proud to see the gradual development in some areas. I have a lot of ideas on how to make things better and how to manage and protect. I am interested in this practice and I like discussing



them with my colleagues in Lithuania and abroad, for example with foreign colleagues who are in administrations of the national parks of protected areas. They bring in good ideas."

## Perspectives

The new zoning plan is to be considered as a vision on the near term future, a guiding book for the measure to be taken by the local and regional administration, as well as the private institutions (nature protection organisations, land-owners and users).

The learning by doing approach appears to be fruitful. One lesson is that for the creation of the next zoning plan, a better link has to be found between the main global zoning plan and subsequent detailed plans for parts of the park.

## Relevant Data

**Innovation:**  
functional zoning plan

**Established:**  
1991

**Total area:**  
21.720 ha

**Woodlands:**  
9.683 ha (44,6%)

**Water:**  
1857 ha (8,5%)

**Wetlands:**  
963 ha (4,4%)

**Natural meadows and pastures:**  
1614 ha (7,4%)

**Farmlands:** 6794 ha (31,3%)

**Settlements:** 360 ha (1,7%)

**Other:** 449 ha (2,1%)

The territory of Žemaitija National Park is divided into the following functional zones:

- Conservation (10.460 ha, 48,1%)
- Protection (3.140 ha, 15%)
- Recreation (520 ha, 2%)
- Farming (7.600 ha, 35%)

**Total population:**

3500. There are 2 small towns and 53 villages

**Cooperation:**

Giedrius Norvaisas (Director of Žemaitija National Park)

[znp@zemaitijosnp.lt](mailto:znp@zemaitijosnp.lt)

Vilma Daugaliene (National Land Service under the Ministry of Agriculture)

[vilmadau@zum.lt](mailto:vilmadau@zum.lt)

**Information:**

Vilma Daugaliene, 2007: Legal framework of land management in Lithuania after 1990. Paper presented at UNECE WPLA workshop; May 2007, Munich, Germany.

Flexible

Decentralised

Integrated

Agricultural area

Environmental sensitive area

Metropolitan area

# ANNEX I

## Terminology within the FARLAND Project

The aim of the Terminology definition is to provide a coherent system of inter-related terms to facilitate unambiguous communication within the FARLAND project. Where possible, consistency with definitions with FIG and FAO was sought.

### History:

- At the meeting in Budapest in December 2005 a session was held to define the list of terms important to FARLAND.
- A draft terminology inventory was made by VLM.
- In May 2006 a special meeting was held in Kassel where definitions and the relationships between them were refined.

### LEVEL 1: STRATEGIC CONCEPTS

#### 1.1 Land development

Policy program <sup>3:1</sup> for adapting nature and location of land use and/or land ownership for the sake of public or private objectives.

Regional variation: In the United States, land development means constructing buildings on an undeveloped site

#### 1.2 Land consolidation

Instrument <sup>3:2</sup> primarily concerned with parcel reallocation <sup>2:1</sup>

Typically executed in a project-setting according to a procedure <sup>3:4</sup> that is defined by law

##### a. Traditional land consolidation

Addressing the problem of too many parcels per farm

##### b. Modern land consolidation

Addressing a broad range of objectives to promote the general use and development of land, typically in an integrated <sup>1:6</sup> way

Regional variation: In The Netherlands, land consolidation projects have to obey spatial planning <sup>1:5</sup>

### 1.3 Land banking

Instrument <sup>3:2</sup> primarily concerned with ownership exchange <sup>2:2</sup> executed in combination with a land consolidation **1.2** project where ownership rights are joined or exchanged with other owners to reap mutual benefits related to land use  
Regional variation: In Galicia land banking is also done by exchanging use rights instead of ownership

#### a. Traditional land banking

Addressing the problem of farms being too small in size

#### b. Modern land banking

Addressing a broad range of objectives to promote the general use and development of land

### 1.4 Rural development

Policy program <sup>3:4</sup> to reduce disparities between urban and rural areas by improving the rural situation

### 1.5 Spatial planning

#### a. [Scientific]

The search for and implementation of an optimal adaptation between geography and society

#### b. [Practice]

The formal framework regulating land use

Regional variation: In the UK, this would normally be called town and country planning

### 1.6 Integrated

Taking various types of land use into account simultaneously

Opposite: Sectoral

Synonym: Comprehensive, multifunctional

## LEVEL 2: IMPLEMENTATION CONCEPTS

### 2.1 Parcel reallocation

Reorganising the parcels <sup>3:5</sup> of a number of farmers into consolidated holdings by changing their number, location, shape and orientation with the objective of making the cultivation of land more efficient

### 2.2 Ownership exchange

Transfer of ownership-rights <sup>4:2</sup> from one natural or legal person to another if necessary using a land fund <sup>2:3</sup>

### 2.3 Land fund

Land reserve used for land banking <sup>1:3</sup> purposes held in temporary ownership and management by a land banking agency

## 2.4 Decentralisation<sup>1</sup>

Moving from the centre to the periphery. In governmental terms: shifting of decision-making and executive powers to lower tiers of government and particularly to lower government

## 2.5 Peri-urban<sup>1</sup>

Area on the periphery of the urban area of the town and its suburbs. Typically very dynamic and under pressure of transformation of greenfield sites into developed urban areas

# LEVEL 3: BASIC CONCEPTS

## 3.1 Program

Coherent set of policy objectives for a geographical or thematic unit of society within a predefined financial framework and time-planning with a strategic role, although some selection of instruments<sup>3,2</sup> may be proposed

## 3.2 Instrument

Set of activities, steps and decisions combined in a procedure<sup>3,4</sup> described by law or other rules

## 3.3 Measure

Any action directly resulting in a concrete change in physical or social reality

## 3.4 Procedure

Prescribed sequence of activities, steps, and decisions

## 3.5 Parcel

Smallest unit of land

### a. Agricultural parcel

Physical production unit visible in the landscape used for one type of agricultural production

### b. Cadastral parcel

Unit surveyed and described in the land registry according to its ownership and/or use



## LEVEL 4: CONCEPTS ON LAND TENURE

### 4.1 Land tenure<sup>1</sup>

The relationship, whether legally or customarily defined, among people with respect to land or associated natural resources

### 4.2 Land ownership

Right to occupy, use and alienate the land

Synonym: freehold

Regional variation: there is a great deal of variation between countries on the exact legal status of an owner

### 4.3 Land lease

Contractual agreement between a landlord and a tenant for the tenancy of land

Synonym: Tenancy

Regional variation: There is a great deal of variation between countries on the exact level of protection of tenants and regulation of tenancy prices

### 4.4 Common private land

Land owned by a group of people belonging to one community

### 4.5 Compulsory acquisition<sup>1</sup>

Procedure in which public needs for land or property rights in the pursuit of government policy are met, including compensation of the loss of the owner expropriated

Synonym: Expropriation

Regional variation: In the USA this would normally be called 'taking'

### 4.6 Pre-emption right<sup>1</sup>

Right of first refusal enjoyed by the holder of the right requires the vendor of the land to give the holder the first opportunity to buy on agreed terms

# ANNEX II

## Partners



### VLM – The Flemish Land Agency

The Flemish Land Agency is an agency of the Flemish government dealing with rural and peri-urban issues and rural development in Flanders, one of the regions of Belgium. Together with a number of partners, VLM makes sure that project areas are developed with respect towards local values and identity and the demands of society, using instruments like integrated land development, modern land consolidation, and land banking.

VLM provides support and expertise to the Flemish rural development policy and the European rural development programmes.

VLM helps realize the environmental objectives of the nitrate directive by actively encouraging farmers to opt for sustainable farming, agri-environmental agreements, and by supervising the correct compliance of the manure legislation.

Olga Jongeneelen

e-mail: [olga.jongeneelen@vlm.be](mailto:olga.jongeneelen@vlm.be)

telephone: + 32 2 543 6939

Jeroen Reyniers

e-mail: [Jeroen.reyniers@vlm.be](mailto:Jeroen.reyniers@vlm.be)

telephone: + 32 2 543 7619

Els Abts

e-mail: [els.abts@vlm.be](mailto:els.abts@vlm.be)

telephone: + 32 2 5436929

Flanders, Belgium



Ministério da  
Agricultura,  
do Desenvolvimento  
Rural e das Pescas

DGADR  
Direção-Geral  
de Agricultura e  
Desenvolvimento Rural

## DGADR

DGADR is an organisation within the central administration of the Ministry of Agriculture, Rural Development and Fisheries that has the mission to contribute to the execution of policies within the scope, among others, of agriculture, irrigation schemes and management of agricultural and hydraulic projects, protection of natural resources and territorial sustainable management, improvement and economical diversification of rural areas by proposing the measures and policy instruments, promoting their use and participating in their monitoring and evaluation. DGADR was formed on the 1st of March, 2007. Prior to that, IDRHa was the FARLAND partner as it was the organisation that had the related competencies.

Margarida Ambar

e-mail: [mambar@dgadr.min-agricultura.pt](mailto:mambar@dgadr.min-agricultura.pt)

telephone: + 351 21 844 2478

Margarida Pais

e-mail: [mpais@dgadr.min-agricultura.pt](mailto:mpais@dgadr.min-agricultura.pt)

telephone: + 351 218442473

Portugal



dienst landelijk gebied  
voor ontwikkeling en beheer

## GOVERNMENT SERVICE FOR LAND AND WATER MANAGEMENT (DLG) (LEAD PARTNER)

DLG is an agency of the Ministry of Agriculture, Nature and Food Quality (LNV). The service works for administrative constituents and also carries out legal tasks. The service is always looking for means for cooperation and solutions appropriate for the (administrative) wishes and the properties of the area. DLG also collects funding and offers insights in subsidy possibilities. The DLG assignments support several governments.

Frank van Holst

e-mail: [F.vHolst@minlnv.nl](mailto:F.vHolst@minlnv.nl)

telephone: + 31 70 33 71 219

Marijke Andela

e-mail: [m.a.andela@minlnv.nl](mailto:m.a.andela@minlnv.nl)

telephone: +31 70 33 71 344

The Netherlands



## ALTEERRA, WAGENINGEN UR

Alterra is the research institute for green living environment. It offers a combination of practical and scientific research in a multitude of disciplines related to the green world around us and the sustainable use of our living environment. Flora and fauna, soil, water, the environment, geo-information and remote sensing, landscape and spatial planning, man and society are just a few of the numerous aspects of our green environment that Alterra focuses on.

Wim Timmermans

e-mail: [wim.timmermans@wur.nl](mailto:wim.timmermans@wur.nl)

telephone: +31 317 478702

Terry van Dijk

e-mail: [terry.vandijk@wur.nl](mailto:terry.vandijk@wur.nl)

telephone: +31 317 486082

The Netherlands

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## U N I K A S S E L V E R S I T Ä T

## KASSEL UNIVERSITY, CHAIR FOR LANDSCAPE PLANNING (UNIK)

Kassel University has expertise in landscape planning and environmental management related to land development.

Prof. Dr. Diedrich Bruns

e-mail: [bruns@asl.uni-kassel.de](mailto:bruns@asl.uni-kassel.de)

telephone: +49 561 804 3559

Germany



## MINISTRY OF THE ENVIRONMENT AND CONSERVATION, AGRICULTURE AND CONSUMER PROTECTION (NORTH RHINE – WESTPHALIA)

"Integrated Rural Development" in NRW comprises the coordination, financing and implementation of regional activities (LEADER) and "Village renewal" as well as land management and land consolidation. The units II-6 and II-7 of the ministry are concerned with these tasks. Unit II-6 is responsible for all general issues concerning an "Integrated Rural Development" including village renewal. Unit II-7 is responsible for "Land Management" and "Land Consolidation". The activities of the units are focused on strategic and coordinating tasks.

The responsibility for the operational level, the implementation, and the execution of local measures is placed on five district governments (Arnsberg, Detmold, Düsseldorf, Köln and Münster) with local offices within the rural areas.

Margarete van der Beek-Optendrenk, (unit II-6)

e-mail: [margarete.van-der-beek@munlv.nrw.de](mailto:margarete.van-der-beek@munlv.nrw.de)

telephone: +49 (0) 211 45 66 233

Prof. Dr. Joachim Thomas, (unit II-7)

e-mail: [joachim.thomas@munlv.nrw.de](mailto:joachim.thomas@munlv.nrw.de)

telephone: +49 (0) 251 411 19 48

North Rhine – Westphalia, Germany



## RESEARCH INSTITUTE FOR SOIL SCIENCE AND AGRICULTURAL CHEMISTRY (MTA TAKI)

RISSAC is the scientific centre in Hungary for soil science, agrochemistry and soil biology. The Institute is primarily responsible for fundamental research in these fields with significant applied research, education, advisory and information activities, and extensive national and international cooperation. RISSAC is the coordination centre of numerous national and international programmes.

Zsuzsanna Flachner

e-mail: [flachner@rissac.hu](mailto:flachner@rissac.hu)

telephone: +36 1 356 46 82

Szabolcs Bíró

e-mail: [BiroSz@akii.hu](mailto:BiroSz@akii.hu)

telephone: +36 1 476 30 73

Hungary



## MINISTRY OF AGRICULTURE OF THE REPUBLIC OF LITHUANIA (ZUM)

The Ministry of Agriculture of the Republic of Lithuania is an institution of the executive power of the Republic of Lithuania. The Ministry carries out state governance functions in relation to the land, food, fisheries and rural development established in laws and other legal acts and implements the state policy in these areas.

Darius Liutikas  
e-mail: [DariusL@zum.lt](mailto:DariusL@zum.lt)  
telephone: + 370 5 2398 415

Lithuania

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## NATIONAL LAND SERVICE UNDER THE MINISTRY OF AGRICULTURE OF THE REPUBLIC OF LITHUANIA (NLS)

The National Land Service develops and pursues the state policy in the field of land management and administration, land reform, real property cadastre, accounting, geodesy, development of cartographic and geo-referential databases and information systems.

Vilma Daugaliene  
e-mail: [VilmaDau@zum.lt](mailto:VilmaDau@zum.lt)  
telephone: + 370 5 2391 305

Lithuania





## UNIVERSITY OF SANTIAGO DE COMPOSTELLA (USC)

The motto of the University of Santiago de Compostella is “education and knowledge at the service of society”. It is a singular institution due to its history, the impressive campus settings of Compostella and Lugo, its dynamism, and its commitment to modernisation. Founded in 1495 by Don Lope Gómez de Marzoa, this institution maintains one of the most important academic traditions in Europe, being always attentive to the growing demands of society and open to international collaboration.

Prof. Dr. Rafael Crecente

e-mail: [rcrecente@lugo.usc.es](mailto:rcrecente@lugo.usc.es)

telephone: + 34 982 252231/ ext. 23260

Francisco Onega Lopez

e-mail: [quicoxol@usc.es](mailto:quicoxol@usc.es)

telephone: + 34 982 252231/ ext. 23292

Galicia, Spain

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## MINISTRY OF RURAL AFFAIRS OF GALICIA

The Ministry of Rural Affairs of Galicia is responsible for the implementation of policies in rural areas related to agrarian structures and infrastructures, forests, agrofood production, agroforest research and training, and rural development issues.

The General Directorate of the Agrarian Structures and Infrastructures is responsible for land development issues and the Galician Rural Development Agency (AGADER) is responsible for rural development policies.

Subdirector of Agrarian Structures and Infrastructures

e-mail: [dxinfraestructuras.mrural@xunta.es](mailto:dxinfraestructuras.mrural@xunta.es)

telephone: +34 98 154 4763

Galician Rural Development Agency (AGADER)

Isaías Calvo de la Uz

e-mail: [isaias.calvo.delauz@xunta.es](mailto:isaias.calvo.delauz@xunta.es)

telephone: +34 98 154 7374

Galicia, Spain

# ANNEX III

## Working Groups

Three working groups were created within the FARLAND project for the 3 thematic fields: Review and exchange, Future Approaches and Promotion and Dissemination.

The working group Review and Exchange consisted of:

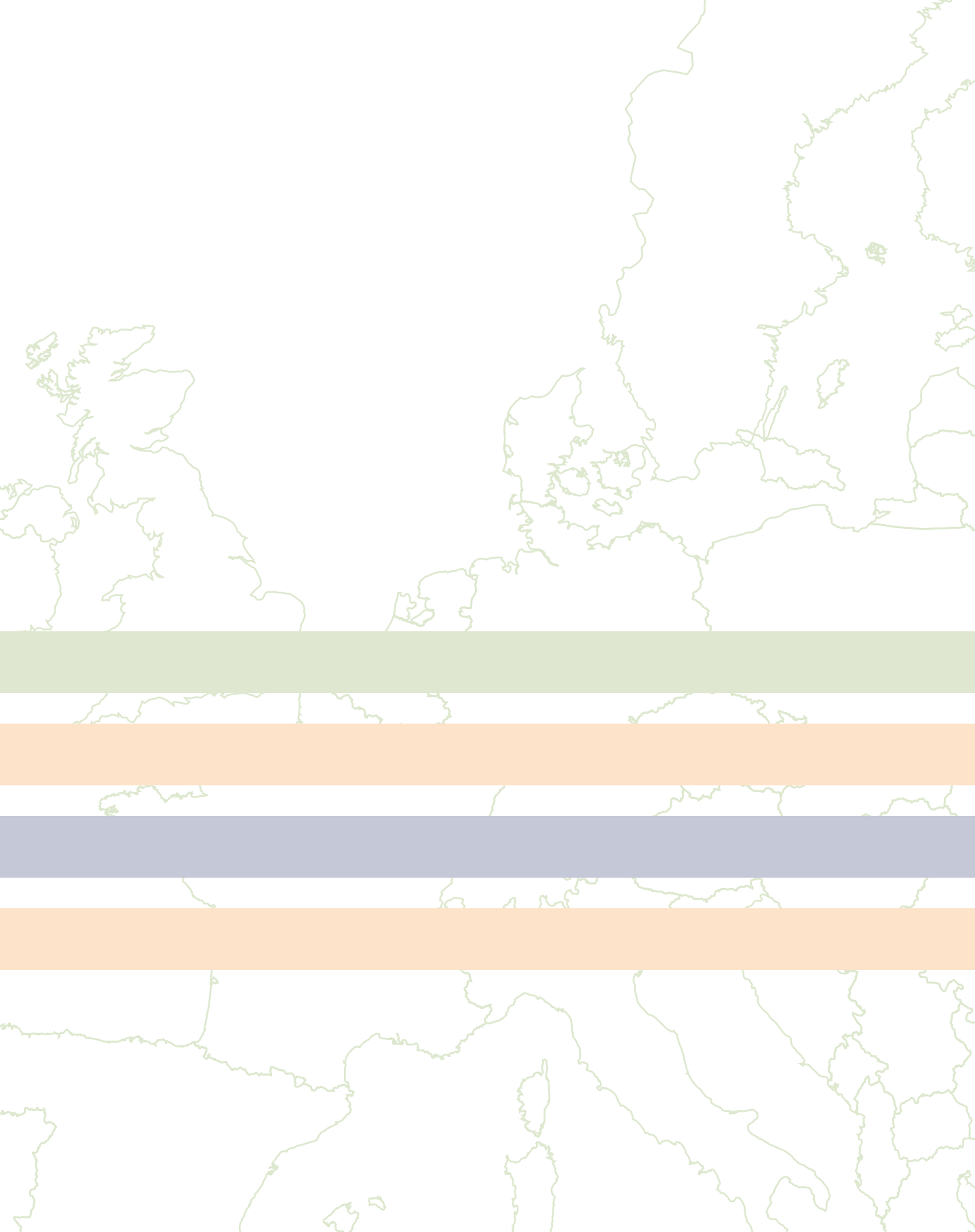
- W. Timmermans – Alterra (Chair)
- P. van der Jagt – Alterra
- A. Stiller – NRW
- H. Pflug – NRW
- D. Miranda – USC
- V. Daugaliene – NLS
- D. Liutikas – ZUM
- J. Reyniers – VLM
- B. Bos – DLG
- M. Pais – DGADR
- Sz. Bíró – TAKI
- C. Zolle Fernández – Ministry of Rural Affairs of Galicia
- D. Bruns – UniKassel

The working group Future Approaches consisted of:

- O. Jongeneelen – VLM (Chair)
- I. van Dienderen – VLM
- M. Lodts – VLM
- A. Wizesarsky – NRW
- H. Pflug – NRW
- R. Crecente – USC
- D. Bruns – UniKassel
- V. Daugaliene – NLS
- H. Moen – DLG
- M. Ambar – DGADR
- A. van den Brink – DLG
- Sz. Bíró – TAKI
- A. Vázquez – Ministry of Rural Affairs of Galicia

The working group Promotion and Dissemination consisted of:

- Zs. Flachner – TAKI (Chair)
- J. Niermann – NRW
- Q. Onega Lopez – USC
- E. Abts – VLM
- V. Daugalienė – NLS
- D. Liutikas – ZUM
- B. Gulickx – DLG
- T. van Dijk – Alterra
- F. Caetano – DGADR
- I. Calvo – Ministry of Rural Affairs of Galicia



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