

## **A Comparative Analysis of Senior Expert Experiences with Land Consolidation Projects and Programs in Europe**

**Walter T. DE VRIES, Germany, Rik WOUTERS, Netherlands and Kalle KONTTINEN, Finland**

**Key words:** land consolidation, fragmentation, European projects, narrative analysis

### **SUMMARY**

How land consolidation is executed in practice varies in history and differs from country to country. This article aims at describing these variations and analysing how and why these variations occur by seeking how experienced land consolidators have done this. This article provides an analysis of their experiences, captured through so-called narrative vignettes, i.e. short personal stories of experiences, opinions and perceptions. From the analysis we infer that land consolidation has adapted and reinvented itself over time, and experiences from different countries have brought more insights in the bottlenecks, limitations, opportunities and requirements for land consolidation. Despite regional differences in preferences, attitudes and opinions about whether land consolidation is an appropriate instrument, there seems to be some consensus that land consolidation projects should currently be highly pragmatically oriented, whereby one has to be very sensitive to the needs and characteristics of local contexts and stakes, and whereby one needs to be very clear on both short-term and long-term wins. From a methodological point of view we conclude that gathering experiences of senior officials through narrative vignettes is meaningful to get the better understanding of daily practices. Such experiences are highly relevant for practical work which does not only depend on how to regulate processes, but also on how to use the right instruments, regulations and human insights at which point in time and at which location.

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## **1. INTRODUCTION**

Land consolidation is a land management instrument whereby both the structure of the landscape and the shape of the parcels are transformed in order to achieve a better agricultural and ecological potential of the area. Land consolidation is usually complemented or guided by rural development goals. It involves a (systematic and comprehensive) change of land ownership and land use structures (usually in a larger area), and an economic and agricultural development through reducing strip farming, improving infrastructure, reducing absentee ownership, improving or introducing irrigation or drainage canals (rationalizing agriculture). Although in previous decades it was primarily led by agricultural goals, nowadays it is also used to achieve a more rational use of land, improve and/or protect ecological systems, and rationalise urban structures. Land consolidation instruments are additionally used to enable road and infrastructure developments, and mobilisation of land for larger spatial development projects.

More specifically, land consolidation is an instrument to reduce fragmentation of ownership and of land use. FAO (2003) refer to land consolidation as Land consolidation can assist farmers to amalgamate their fragmented parcels. For example, a farmer who owns one hectare divided into five parcels may benefit from a consolidation scheme which results in a single parcel. In many eastern European countries land consolidation programs tend to have primarily an economic production focus and/or a rural development focus (Bullard 2007). More recently land consolidation is associated specifically to a societal benefit or public value, such as food security (Bennett et al. 2015) or environmental protection (Louwsma et al., 2014). In this case, rather than relying on micro-economic agricultural production values social and societal values play a more crucial role. The optimal output of a land consolidation process then needs to be evaluated in terms of this societal benefit, rather than a pure economic benefit.

Although in some countries land consolidation has been an established and frequently practiced instrument, in other countries the instrument is rather new (Hartvigsen 2015) or not used at all. This is either due to recent regime and institutional changes (such as in the former Eastern European / socialist countries), or due to absent or inappropriate legislation concerning land consolidation or absence of political support. Moreover, land consolidation projects have not always been considered as successful, or have been debated at times (Sikor et al. 2009). Quite a lot of literature addresses land consolidation goals (Louwsma et al. 2017), tools for land consolidation (Demetriou 2013), measurement of land fragmentation (Janus et al. 2018), alternative forms of land consolidation (Bennett et al. 2015; Haldrup 2015).

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However, how land consolidation projects, goals and shared success factors have changed over time, and what sort of factors have influenced the perceptions about land consolidation among practitioners of land consolidation is still unknown. This insight is however relevant to understand the day-to-day practice of land consolidation, so that implementation guidelines can be derived for those who aim to start and/or re-define their land consolidation procedures and requirements for human resources. This article takes a closer look at these experiences.

The main purpose of the study is therefore:

1. To better understand the breadth and depth of the internal perspectives and experiences with land consolidation
2. To acquire senior level experiences, and learn from how experts dealt with difficulties and found solutions
3. To synthesize such experiences in order to provide recommendations for:
  - a. Future land consolidation projects
  - b. When, how and under which conditions to use land consolidation as a land management instrument

We first present a methodology to investigate such experiences and perceptions, followed by a set of initial results and a set of first observations. After this we introduce the theoretical and analytical framework to analyse the results and a first derivation of conclusions.

## **2. METHODOLOGY - USING NARRATED VIGNETTES**

To better understand the breadth and depth of the internal perspectives and experiences with land consolidation data are collection through narrated vignettes. The choice to rely on narrated vignettes is best to capture subjective experiences and views. Narrated vignettes are, simply put, stories generated from a range of personal sources and personal experiences (Wilks 2004). Vignette descriptions are an appropriate tool when compiling perceptions, experiences, beliefs and attitudes on a context or a phenomenon. We use the narrated vignettes to derive a synthesis of the discourse on land consolidation and the breadth of actions, beliefs, opinions and arguments in this discourse. The vignettes are not necessarily about the issue of land consolidation itself, but they describe the feelings and associations of practitioners once discussing land consolidation. Analysing the vignettes relies on a narrative synthesis using storytelling metaphors (Barone 1992; Czarniawska 2004; Greenhalgha et al. 2005). Narrated vignettes are personal stories told by experienced practitioners. These stories provide a subjective insight into ‘objective’ facts, changes, influences, drivers, endogenous, and exogenous factors. The stories are told and written down by people who have worked or have been working for a relatively long time in / for / with land consolidation projects (possibly for more than 20 or 25 years). They have ‘seen it all’, and their experiences - once documented through their own words in a short personal story, and once compared to other personal stories – can lead to a more fundamental insight in what influences, an what changes land consolidation projects and what makes one land consolidation project to a success (and also seen as a success story) and another land consolidation project not to a success (or even a failure, disaster, disputed program).

The guidelines for practitioners were:

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The personal stories should be ‘freely’ told. It should lead to a story of about 2-3 pages text. Suggested is however to address at least the following issues:

- I first started to work in / for / with land consolidation projects in .....(year / place / organisation)
- The land consolidation project with which I am most satisfied is the project called ..... in (place / location / year). I am most happy with this project because .....
- The issue which led to a lot of organisational and operational changes was ..... in ....(year). It changed not only ..... but also ..... For me personally this change implied that I had to .....
- I can still remember working with the farmers and other stakeholders in ..... (project name / location / year). What I still remember and what I have often talked about is the fact that ....., and the .....
- I have been back to the land consolidation project in ..... Now it looks like .... All the things that we helped to design are now .....
- I still remember when the politics decided to ....(in relation to land consolidation projects).
- In relation to our work in land consolidation I used to be proud of....
- Our work in land consolidation changed dramatically when .....
- The people with whom I used to work in the land consolidation projects are now working at / in .....
- Currently my work relates to .....
- What I always liked in land consolidation was.....
- What someone need to be able to do in land consolidation projects is .....
- The skills one needs to have to make land consolidation projects successful is ....

### 3. RESULTS

The request to write narrated vignettes were sent to senior staff members of 30 European countries. 21 responses were received. These included 18 narratives (Austria, Azerbaijan, Bavaria/Germany, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Lithuania, FYR Macedonia, Netherlands (2x), Norway, Romania, Slovakia, Slovenia, Spain, Sweden, Ukraine). Each of the narratives were scanned and categorized related to degree of experience and types of institutional frameworks. Some of the vignettes were very open and personal, whereas others were more related to formal rules and formal documentation of land consolidation in the respective countries. Examples of excerpts of the vignettes include:

- *It was during these years as a farmer I had a glimpse of what we refer to as “the classical village land consolidation”. The local land surveyor had initiated a land consolidation in our village. In those days, the Ministry of Agriculture had an annual budget for land consolidation.*
- *I was very young and I had just graduated university, I was working in a cadastral office in the south-western part of the country, (...) I was fascinated by the fact that so much land could be very well managed, and for sure its productivity could be as high*

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*as possible. The only regret of those who harvested the corn was that they did not own that land. I left that institution ...*

- *Personally the project makes me very proud, as there was a very successful end: despite massive changes of the agricultural structure and a many accompanying technical projects there were only 6 legal objections by the involved parties.*
- *As a senior officer I was leading several land consolidation and village renewal procedures (chair of the board). During that period I became also an expert for public planning processes with broad citizen participation (bottom-up) in rural development projects and Agenda 21 activities*

When comparing the main historical context in which the land consolidation was developed the received narrative vignettes of the respective countries can roughly be classified into the following five categories:

1. Active nationwide multipurpose LC procedure working and in action. No large issues with land ownership or land registration.  
Examples: Germany, Netherlands, Denmark, Austria, Slovenia
2. Active nationwide agricultural LC procedure working and in action. Other LC-goals are also possible. No large issues with land ownership or land registration.  
Examples: Spain, Finland
3. Nationwide LC procedure in difficulties or ceased. No large issues with land ownership or land registration.  
Examples: Sweden, Estonia
4. Nationwide LC procedure merging or in action. Large issues with land ownership or land registration.  
Examples: Macedonia, Azerbaijan, Ukraine, Lithuania
5. Nationwide LC procedure in difficulties or ceased. Large issues with land ownership or land registration.  
Examples: Romania, Czech Republic, Slovakia, Hungary

Furthermore, one can observe that Lithuania, Azerbaijan and Ukraine have large amount of state owned agricultural lands (and probably problems with that). Germany, Netherlands and Spain have moved LC responsibility from State to Regions. Austria, Germany, Netherlands, Slovakia and Denmark have moved from agricultural LC towards multipurpose LC. Smaller and/or voluntary projects have risen in to the limelight at least in Germany, Netherlands, Denmark and Finland. EU-funds are or have been used to implement LC at least in Germany, Spain, Netherlands, Macedonia and Slovakia. In some countries land owners don't contribute to project costs (certain Spain).

#### **4. ANALYSIS OF NARRATED VIGNETTES**

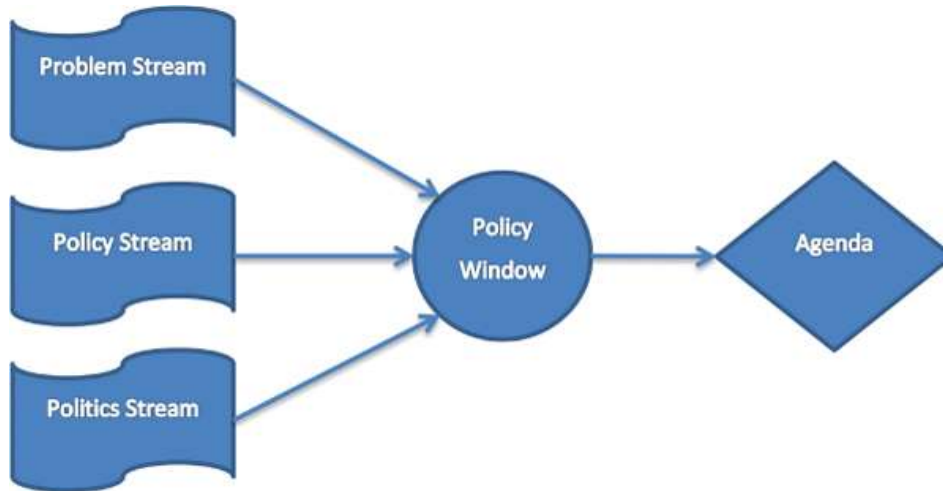
After the personal stories were collected we used Kingdon's the multiple streams framework to compare and interpret these (Kingdon 1995; Cairney and Jones 2016). This framework

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consist of three main streams: problem, policy and politics – demonstrated in Figure 1. Kingdon adapted this policymaking metaphor to argue that three separate ‘streams’ must come together at the same time - and they must do so during a brief ‘window of opportunity’ – for a policy to be implemented and accepted and / or for an existing policy to change significantly. Otherwise put, only if all streams reinforce each other there are windows of opportunity for change.



**Figure 1. Multiple streams model**

- Problem stream – attention lurches to a policy problem. What is considered a problem depends to a large extent on the framing of the problem and the knowledge dynamics related to a problem. The problem itself must be recognized as a problem. Problems are policy issues which are deemed to require attention. There are no objective indicators to determine which problems deserve attention, and perceptions of problems can change quickly. Problems get attention based on how they are ‘framed’ or defined by participants who compete for attention – using evidence to address uncertainty and persuasion to address ambiguity. In some cases, issues receive attention because of a crisis or change in the scale of the problem.
- Policy stream – a solution to the problem is available. While attention lurches quickly from issue to issue, viable solutions take time to develop. Kingdon describes policy solutions in a ‘policy primeval soup’, evolving as they are proposed by one actor then reconsidered and modified by others, and a process of ‘softening’, as some issues take time to become accepted within policy networks. To deal with the disconnect between lurching attention and slow policy development, actors known as ‘policy entrepreneurs’ develop solutions in anticipation of future problems, seeking the right time to exploit or encourage attention to their solution via a relevant problem (‘solutions chasing problems’).
- Politics stream – policymakers have the motive and opportunity to turn a solution into policy. Policymakers have to pay attention to the problem and be receptive to the proposed solution. They consider many factors, including their beliefs, the ‘national

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mood' and the feedback they receive from interest groups and political parties. In many cases, a change of government provides both motive and opportunity.

- Policy window – policy windows arise if all three streams converge. Policy windows are observable through the emergence of new opportunities, changes in fundamental values and fundamental discursive shifts

Based on these 4 elements each of the narrated vignettes were interpreted by five experts. The procedure of interpretation was as follows. Each of the experts selected sections out of the vignettes which marched one or more of the aspects of any of the policy streams and windows of opportunity. These sections were listed in an Excel sheet. For each section an additional column was added providing comments, thoughts and associations related to the sections, leading up to some sort of interpretation per section. After each of the experts had compiled a completed Excel sheet, the sheets with comments and interpretations were compared searching for similarities and differences.

## 5. ANALYSIS OF THE RESULTS

Based on the framework above and the comparison of completed Excel sheets we derived the following interpretations for each of the elements of the multiple streams model. Table 1 lists these findings:

Aspects of the multiple streams model	Problems associated with each of the aspects
Problems	<ul style="list-style-type: none"> <li>• Persistent fragmentation</li> <li>• (lack of) efficiency of current farming systems</li> <li>• Continuing subdivision as a result of continuing inheritance, even after land consolidation projects took place</li> <li>• Perceived increase of complexity due to ever emerging new rules and requirements to adopt or adapt to new procedures</li> <li>• Internal resistance within the land consolidation organisational system; especially in western Europe there has been more time to adapt and adopt as compared to eastern Europe. Not all organisations are willing to adopt new rules.</li> <li>• External resistance of citizens towards land consolidation. Citizens / farmers perceive it as unnecessary State-led interventions and/or refusing to accept new rules and conditions</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Degree of previous experience in executing with LC (LC managers need to gain experience in order to understand and handle sensitivities)</li> <li>• Number of years after or before conversion from socialists/communist systems to non-socialists land regimes (LC executed as technocratic process, thereby</li> </ul>

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	<p>neglecting the socio-human issues and sensitivities – this creates resistance or mistrust)</p> <ul style="list-style-type: none"> <li>• Degree of perceived complexity and associated adaption / adoption of new rules and execution forms (complexity perceived as LC was originally seen as technocratic, procedural process, and not as idiosyncratic projects each time)</li> <li>• Gradual change from improving quality of land survey data to a more general / overall quality of information</li> <li>• Degree of State interference</li> <li>• Option of voluntary land consolidation projects</li> <li>• Degree and possibility of participation</li> </ul>
Policy	<ul style="list-style-type: none"> <li>• Variation in degree of stakes of small and big farmers (smaller farmers thrive on fragmented parts; big farmers thrive with consolidating/merging plots)</li> <li>• Influence of external stakeholders</li> <li>• Necessity to have a good start with small pilots before rolling out full-fledged projects</li> <li>• Necessity to actively gain support and involvement of local stakeholders</li> <li>• Necessity to be acquainted with local sensitivities</li> <li>• Necessity to be acquainted with negative implications and connotations of use of certain words and symbols expressed during a policy development process. The term land consolidation has a negative connotation to top-down State-led driven processes in some countries. In these cases alternative terms may need to be used.</li> </ul>
Policy windows for successful projects arise when	<ul style="list-style-type: none"> <li>• Project area is not too big: 200 participants and 2000 ha or 500 parcels (Lithuania)</li> <li>• There are a (low) number of objections against the original re-allotment plan (Austria)</li> <li>• The land consolidation includes possibilities for Land banking and financial incentives</li> <li>• When the land consolidation is connected to multiple policy agendas (incl. rural development, spatial justice, integrated land and water management)</li> <li>• The LC project ‘ignites’ further economic development projects, e.g. new (integrated) rural development (DE), recreational areas in a municipality (AT)</li> <li>• When compulsory and/or State-led land consolidation is complemented with formalised possibilities for ‘voluntary’ (bottom-up) voluntary land consolidation and/or land swapping. In some countries this existed already for a long time (DE), in others this is only possible recently (e.g. NL)</li> </ul>

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**Table 1. Findings for each of the aspects of the multiple streams model**

It is clear that countries are in different stages of land consolidation adaptation, expressed amongst others by the length of historical developments and gradual revision in LC goals and practices. This also implies that ‘*Modernisation*’ of land consolidation occurred in some countries, which is usually expressed both in terms of technological innovations and as organisational reform. Many countries experienced major organisational changes, but not all countries had significant legal changes:

- *Juridical changes have been almost non-existent (FI)*
- *required amendments to the regulations of land acquisition , exchange and land consolidation have been drafted by now, and the draft act is currently in the legislative proceeding of the Parliament (ES)*

Lessons which can be drawn from the narratives are that land consolidation projects, goals, instruments and institutions tend to develop in different phases. Each phase is further explained. Figure 2 represents the entire cycle.

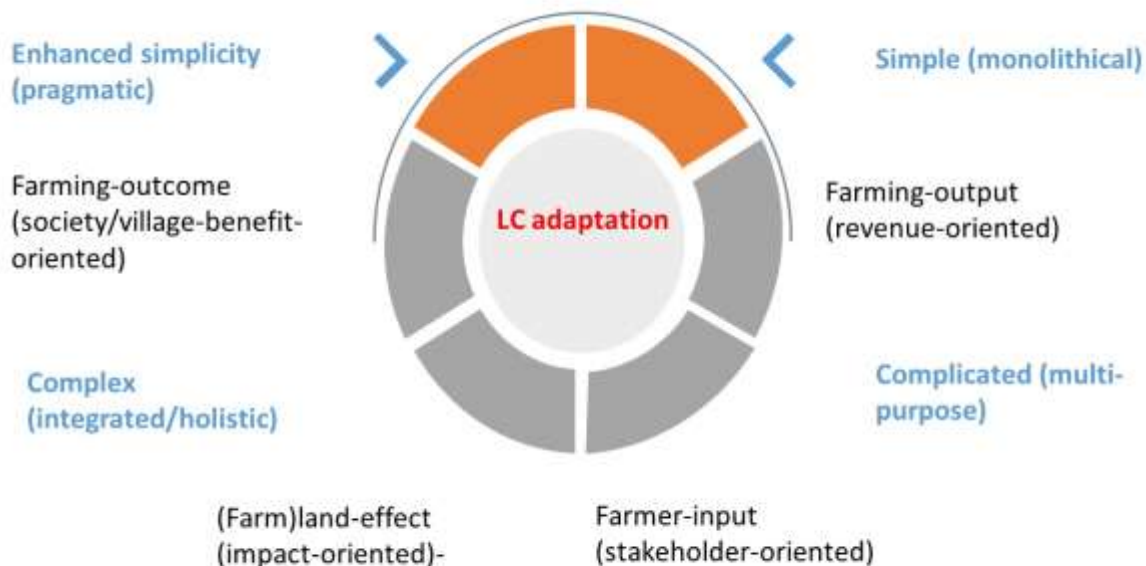
At first there is a specific ‘simple’ monolithic focus, which is the increase of farming output and the agricultural production efficiency. This is done by defragmentation, creating bigger agricultural plots and thus reshaping agricultural oriented ownership and land use structures. If these processes do no longer solve the specific needs and/or if these run into problems, than the land consolidation projects, goals, instruments and institutions tend to become more complicated. This means that one needs to address multiple goals simultaneously and apply multiple instruments in an integrative way. One can see this in the emerging combination of both agricultural and environmental goals. Hereby one needs to rely heavily on stakeholder needs and input expressed by stakeholders. Once these type of activities are no longer considered appropriate the next adaptive phase tends to be a more complex set of projects, goals, instruments and institutions. Hereby, one strive for more integrated problem framing and associated solutions. The solutions itself may not solve the fragmentation and ownership problem completely, as one has come to realise that land interventions have a very dynamic character. The problems change because of the intervention itself. This is visible in some countries where land consolidation is both the solution and the problem, such as in Macedonia. As a result of this complexity policy makers aim again for an enhanced form of simplicity in the preparation and execution of consolidation processes. Land consolidation is only considered effective and successful if it fulfils a very specific goal. One manner in which this is addressed by working with much smaller projects in size, number of stakeholders, and degree of complexity as well as shorter timeframes. In these cases solutions are assumed to be much more pragmatic and aiming for short term goals and wins. Although this is not true in all countries – e.g. Finland is still piloting these smaller projects – we can at least derive that perceptions about land consolidation as a whole have changed gradually.

In addition, some other external drivers generated policy windows for different kinds of land consolidation projects. These include both changes in the way professional surveyors operate , and changes which occurred in capacity development and formal education necessary for staff members working in land consolidation projects. The shift in professional focus in

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surveying is the shift from emphasizing quality of surveyed data to a focus on quality of geospatial information. This concerns a shift from monolithic technical processes to multi-functional processes aimed at overall quality of output and services. The shift in formal educational requirements refers to the need to include capacity building of social, entrepreneurial and communication skills. This would affect conventional curricula in geodesy and land surveying for example which focus entirely on conveying technical skills.



**Figure 2. Phases of land consolidation adaptation**

## 6. CONCLUSIONS

Responding to the main objective of this study we can conclude that:

1. The narrative vignettes have indeed provided a better understanding of the breadth and depth of the internal perspectives and experiences with land consolidation. Land consolidation has adapted and reinvented itself over time, and experiences from different countries have brought more insights in the bottlenecks, limitations, opportunities and requirements for land consolidation. The current idea is that land consolidation projects should be pragmatically oriented, aimed at short-term wins, and be very sensitive to the needs and characteristics of local contexts and stakes.
2. Gathering experiences of senior officials in a non-conventional way is meaningful to get the better understanding. It did not only derive new insights in daily practices, but also encouraged the practitioners to reflect critically upon their work and results. Such experiences are highly relevant for practical work which does not only depend on how to regulate processes, but also on how to use the right instruments, regulations and human insights at which point in time and at which location.
3. Future land consolidation projects can benefit from these insights. Certain policy windows were available in which all types of problems could be addressed with some

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degree of consensus on what the appropriate understanding of the problems and solutions were. Especially if land fragmentation is expressed and framed as a development problem, land consolidation may also be considered as a development solution / intervention. In addition, when the usage of technical procedures in land consolidation can be associated to technical innovations in geospatial information organisation and management, the potential organisational and civic resistance to land consolidation might be reduced. It is within such policy windows that land consolidation has a chance of getting accepted as an appropriate land management instrument. Reversely, as long as land consolidation is perceived as a top-down State-driven instrument, supporting the interests of financing the State only, resistance to land consolidation is going to prevail and the instrument remains unsuccessful. In addition, the narrated vignettes have shown that land consolidation is increasingly connected to multiple development, preservation and mitigation policies, including environmental protection, food security and climate change mitigation. With more flexible applications and execution of land consolidation regulations this is possible.

Overall, one can conclude that becoming a practical land consolidator requires a steep learning curve, whereby experience is crucial. This also implies that one cannot design any obvious course curriculum for land consolidators. Knowledge, skills and experience go hand-in-hand. Practical recommendations from this investigation include that land consolidation requires high ability to compromise, the art of communication by the responsible persons, a deep interest in all people living and working in the area, the need for a specific competence to deal with people (namely to be able to motivate and inspire them), the personality to never to be discouraged from setbacks and being open for new challenges and have a personal vision. A very specific observation is that ultimately expropriation, often needed during a land consolidation process, requires but also is in itself the highest level of good land governance.

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An Analysis of Long-Term Experiences with Land Consolidation Projects and Programs in Europe (9781)  
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