



# Responsible Land Governance: Towards an Evidence Based Approach

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## **Options for Legislative and Institutional Reform of Land Consolidation in Serbia: Choosing the Right Approach and Building Regional Expert Networks**

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## **Abstract**

Agricultural land fragmentation constrains agricultural development in Southeast Serbia, where average land parcel sizes amount to 0.1 to 0.3 hectares, parcels are often left abandoned and are not accessible by roads or field tracks. Investments into land consolidation in Serbia can have high mid and long term returns, in particular as Serbia is on its way to become a competitive agricultural producer on the way to EU membership. Land consolidation programs contribute towards updated land cadasters, better infrastructure, better rural living and working environment, increased property market values resulting in increased investments, employment and increased direct and indirect tax revenues.

The Serbian Ministry of Agriculture and Environmental Protection (MAEP) in particular its Directorate for Agricultural Lands (DAL) is supported from 2013 to 2018 by the project “Strengthening Municipal Land Management”. The project was funded in its first phase from 2013 to 2015 by the European Union with 2.8 million EUR and 1 million EUR by the German Government and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). It modernized land consolidation procedures according to EU standards and principles of good governance. A key success factor of this project phase in transferring knowledge was the application of peer-to-peer learning approaches (see: Becker, M. et.al.(2015a), Becker, M. et.al. (2015b), Schönhuth, M.; Kievelitz, U. (1994)). The successor project phase “Land Management III” funded with 3 million EUR by the German Government now focuses on capacity development to increase capacities of land consolidation in Serbia on national and municipal level. It is expected, implementing land consolidation at a larger scale in SE-Serbia will be of a great benefit for the rural population, once the legislation and administrative structures are in place. Within land consolidation implementation, a learning mechanism needs to be established, to periodically review this complex process, its legislation, policy and find practical solutions for its institutional setup.

The majority of land consolidation pilot projects supported by the project have been reaching the status of approved re-allotment plans and land consolidation participants were vested into their new land parcels. In some municipalities, finalization of infrastructure works is still pending in order to complete the final phase for the land owners from old to new land ownership. Since the approval of made re-allotment plans, the vast majority of land owners is highly satisfied. Participation ensured transparency during all stages and allowed the land owners to participate in the design of plans and give objections which had to be verified and – if legally justified – also resulted in the amendment of plans. The reform process started by applying current Serbian land consolidation procedures and was complemented by gradually introducing novelties like EU standards for example an improved land valuation methodology, environmental impact



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assessments (EIA), establishing a plan of common and public facilities and landscape development plan, and introducing checks and balances. Within each stage of the land consolidation process, the community of land owners was gathered for a meeting in order to approve the step or plan within the planning process. Major stages were, for example: Development of a land consolidation program incl. the decision of the land consolidation area, identification of the factual situation (current land ownership), EIA & landscape plan, planning of new field track network, common and public facilities, drafting and finalization of re-allotment plans. Boards of Participants supervised the conduction of all land consolidation steps performed by the Land Consolidation Commission. Key findings of the project resulted in drafted bylaws and recommendations for amending the current law on agricultural land (see: MAWFM (2009)).

As a result of implementation of seven land consolidation projects supported by the project with a varying size of about 200-2500 hectares, average parcel sizes increased between 43% and 255%, due to the heterogeneous nature of land consolidation projects (e.g. size of land consolidation area, number of single parcel owners). Field road infrastructure and drainage channels were build, shrub covered areas – where permitted by the EIA – were cleared and selected cascaded areas were leveled. Participants received updated land titles free of charge. Upon elections in the first half of 2016, government structures and responsibilities changed and a new minister was assigned. The project continues to support MAEP in its land consolidation reform process. A new project phase (2016-2018) continues, funded with about 3 million EUR by the German Federal Ministry for Economic Cooperation (BMZ), implemented by GIZ.

While most neighboring countries in the region of Southeastern Europe are currently modernizing their framework and practices for implementation of land consolidation projects, networks of land consolidation practitioners need to be established and strengthened, which support joint learning within this complex reform process. In addition, Serbia is now supported by the German funded Advisory Fund for Structural and Regulatory Policy Reform (FSRP), which will support this land consolidation reform process with an intensive exchange of expertise and knowledge from land consolidation policy makers and practitioners from several German Federal States. The aim is to improve knowledge of Serbian national experts on the reform approaches of modern land consolidation based on the German model, improving their ability to implement reforms. In the beginning of this reform process, decisions on key objectives of the reform process need to be taken, and a road map will be developed, how the Serbian government will transform the current legislation and administrative executing bodies into a modernized land consolidation legal and administrative framework. The process will be supported by moderated, solution-oriented discussions in Serbia with experts in the field of administration, community work, geodetic works, land valuation and environmental assessments from at least two German federal states.



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The cooperation will be complemented with partnerships with selected German institutions, with an internship of a Serbian expert within a German land consolidation authority, cooperation with the German Federal Working Group for Sustainable Land Development (German ARGE Landentwicklung) as well as universities with an emphasis on land management and sustainable agriculture. The process is planned to be moderated by a German political expert and trainer supporting the reform process dialogue using networks of experts in Germany applying various formats as dialogues, visits, short-term assignments, seminars, round tables, visits from practitioners of land consolidation in Germany and visits of policy makers, as well as study trips to Germany. A dialogue with international and in particular regional experts (e.g. FAO, LANDnet, other GIZ projects) will be further supported by the project.

At the end of the reform process, Serbia will be able to systematically conduct land consolidation based on a reformed legal framework according to its priorities, as outlined within its strategies and policies on land consolidation. A separate law and administrative body on land consolidation could be established or existing bodies assigned strengthening the clarity of assigned tasks. Subnational offices would quickly and cost-effectively respond to the beneficiaries' needs within ongoing land consolidation projects, perform awareness campaigns prior to implementation, manage wishes and complaints of the participants and harmonize land consolidation efforts with current local sector strategies and plans.

In the long term, land consolidation projects in Serbia should furthermore be embedded into a framework of land use planning (see: GIZ (2011)) and spatial planning and zoning. They should result in an updated cadaster, improve tax revenues, vitalize land sale and lease markets, combat abandonment of agricultural land and can be used as a tool for land acquisition for common and public purposes without expropriation, e.g. for flood prevention or road corridor development. Successful land consolidation projects conducted with high participation of organized communities are also an entry point to for starting initiatives of rural development, village renewal and local economic development.

This paper analyses the findings from piloting land consolidation within the past 4 years of pilot implementation in seven pilot municipalities in southeastern Serbia and discusses the advantages and limitations of different land consolidation approaches or models, their requirements and key principles. It further outlines options for practical legal and institutional reform for effective implementation of land consolidation projects in Serbia as well as the establishment and strengthening of regional land consolidation expert networks.

**Key Words:** Agriculture, Land Consolidation, Legal and Institutional Reform, Expert Networks, Municipal Land Management, Serbia.



## **1. Background**

### **1.1. Situation in Serbia**

In Serbia, agricultural land fragmentation as a result of by division of land parcels by inheritance, constrains agricultural development. In Southeastern Serbia, average land parcel sizes amount to 0.1 to 0.3 hectares. Because of this, land parcels are often not directly accessible by field roads and tracks, and are often left abandoned. Current experiences of piloting modernized land consolidation have shown, that investments of the Serbian government into land consolidation in Serbia can have high mid and long returns. Developing areas with viable land parcel sizes, effective infrastructure, environmentally sound and socially accepted re-allotment plans lead to a more efficient agricultural production, updated land cadaster as well triggering private sector investments in in the land market and subsequently into agricultural production. This is of particular importance, as Serbia is on its way to EU membership.

### **1.2. Vojvodina versus Southern Serbia**

Serbia's agricultural landscapes can be distinguished into two major types: highly productive soils in the lowlands of the Danube basin in the northern area (Vojvodina) and less productive areas in hilly to mountainous terrains in the south, which are also covered with larger forests. Serbia has carried out a number of land consolidation projects predominantly in the northern area in the socialist past. At the time, land consolidation was conducted with little participation of the local population, little transparency and low environmental awareness in order to maximize the agricultural production. As a result, most shrub and trees have been cleared, swamps have been drained, leading to imbalanced ecosystems and a loss of biodiversity. Until today, large areas remain cultivated under the use of large amounts of pesticides and fertilizers. Applying these practices to southern Serbia, which is still rich in biodiversity, would not only contradict to current EU policies and standards of establishing environmentally balanced ecological landscapes where agriculture is sustainably productive. Specialized, adapted and diversified farming practices are required to be developed or improved in South-eastern Serbia in line with sub-national development policies and strategies, improving particular development potentials of each area and thereby reshaping agricultural landscape in the mid- to long term.

## **2. About the project**

### **2.1. German-Serbian Cooperation 2013-2018**

The Directorate for Agricultural Lands (DAL) of the Serbian Ministry of Agriculture and Environmental Protection (MAEP is supported from 2013 to 2018 by the project "Strengthening Municipal Land Management" (see: Becker, M. (2016), Becker, M.; Knežević, Z. (2015), BMZ/GIZ (2015), BMZ/GIZ



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(2016), GIZ-SMLM/Thomas/Zivadinović (2016)). The project was funded in its first phase from 2013 to 2015 by the European Union with 2.8 million EUR and 1 million EUR by the German Government and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Within the project land consolidation procedures were modernized according to EU standards, the UN-FAO Voluntary Guidelines on the Governance of Tenure and principles of good governance. Knowledge was transferred successfully from Germany and other EU countries with the application of peer-to-peer learning approaches. The successor project phase “Land Management III” funded with 3 million EUR by the German Government now focuses on capacity development to improve the performance of bodies implementing land consolidation in Serbia on national and municipal level. Experiences in seven pilot municipalities have shown, the modernized land consolidation is a great benefit for the rural population.

## **2.2. Impact and Achievements**

Six out of seven land consolidation pilot projects supported by the project have been finalized, re-allotment plans were approved and land consolidation participants were vested into their new land parcels. In one municipality, unforeseen costs for infrastructure required additional budget, which could be only released – according to current government financing mechanisms – in April 2017. The vast majority of land owners is highly satisfied since final re-allotment plans were approved. A high level of participation ensured transparency during all stages and allowed the land owners to participate in the design of plans and give objections, which – when verified and legally justified – resulted in the amendment of re-allotment plans. With the support of the project funded by the German government, former land consolidation practices were gradually modernized during implementation of seven pilot land consolidation projects: introducing EU and good governance standards (e.g. participation, transparency and accountability, checks and balances), an improved land valuation methodology, environmental impact assessments (EIA) and establishing a plan of common / public facilities and landscape development plan. The community of land owners was gathered for a meeting in order to approve each stage of a plan within the planning process, for example:

- Development of a land consolidation program incl. the decision of the land consolidation area,
- Identification of the factual situation (current land ownership),
- Land valuation,
- Environmental impact assessment and landscape development plan,
- Planning of new field track network,
- Plan for common and public facilities,



- Drafting and finalization of re-allotment plans.

All land consolidation steps performed by the Land Consolidation Commission were now supervised by Boards of Participants. Key findings of the project resulted in drafted bylaws and recommendations for amending the current law on agricultural land.

Seven land consolidation projects supported by the project with a varying size of about 200-2500 hectares, where average parcel sizes increased between 43% and 255%. A reason for this is the heterogeneous nature of land consolidation projects depending for example on the size of land consolidation area, the number of single parcel owners or subsistence farmers. Field road infrastructure and drainage channels were build, shrub covered areas were cleared and selected cascading areas were leveled in compliance with the environmental impact assessment. At the end of the process, land owners received updated land titles of their new land plot free of charge.

Parliamentary elections led to new government structures and a new minister in 2016. Supported with about 3 Million EUR funds of the German Federal Ministry for Economic Cooperation (BMZ), implemented by GIZ, the project has continued its support to both urban and rural land management in a new project phase from 2016-2018. In beginning of 2017, a reform process has been started with support of the project, improving the legal and administrative framework on land consolidation.

### **2.3. Next steps**

While most neighboring countries in the region of Southeastern Europe are currently modernizing their framework and practices for implementation of land consolidation projects, networks of land consolidation practitioners need to be established and strengthened, which support joint learning within this complex modernization process. In addition, Serbia is now supported by the German funded Advisory Fund for Structural and Regulatory Policy Reform (FSRP), which will support a legal and administrative land consolidation reform process with an intensive exchange of expertise and knowledge from land consolidation policy makers and practitioners from several German Federal States. The aim is to improve knowledge of Serbian national experts on the reform approaches of modern land consolidation based on the German model, improving their ability to implement reforms. In the beginning of this reform, decisions on key objectives of the reform process need to be taken, and a road map will be developed, how the Serbian government will transform the current legislation and administrative executing bodies into a modernized land consolidation legal and administrative framework. The process will be supported by moderated, solution-oriented roundtable discussions in Serbia with experts in the for instance in field of administration, community work, geodetic works, land valuation and environmental



assessments from at least two German federal states. The cooperation will be complemented with partnerships with selected German institutions, offering various formats of exchanging expertise between Serbian and German experts from German federal land consolidation authorities, a cooperation with the German Federal Working Group for Sustainable Land Development (German ARGE Landentwicklung) as well as with universities putting an emphasis on land management and development as well as sustainable agriculture. A dialogue with international and in particular regional experts (e.g. FAO, LANDnet, other GIZ projects) will be further supported by the project.

At the end of the reform process, Serbia will be able to smoothly conduct land consolidation based and a reformed legal and administrative framework according to its priorities, as outlined within its strategies and policies on land consolidation. A separate law and administrative body on land consolidation will be established and a clear administrative structure developed. Subnational offices would complement a land consolidation body on national level and quickly and cost-effectively respond to the beneficiaries' needs within ongoing land consolidation projects, perform awareness campaigns prior to implementation (see: MAEP/GIZ (2014a), MAEP/GIZ (2014b), MAEP/GIZ (2014c), MAEP/GIZ (2015)), manage wishes and complaints of the participants and harmonize land consolidation efforts with current local sector strategies and plans.

In the long term, rural land consolidation projects in Serbia should furthermore be embedded into an integrated framework of land development (a term that is called in German "*Landentwicklung*"), comprising also land use planning and spatial planning and zoning. A land consolidation project could then be one instrument of a bottom-up integral municipal planning processes considering all aspects required to increase the rural livelihood by developing the strengths of an area (or cluster of municipalities) while gradually mitigating its deficits and weaknesses. Therefore, conducting land consolidation projects results in an updated cadaster, improves tax revenues, vitalizes land sale and lease markets, combats abandonment of agricultural land and can be used as a tool for land acquisition for common and public purposes without expropriation, e.g. for flood prevention or road corridor development. Successful land consolidation projects conducted with high participation of organized communities are also an entry point for starting initiatives of rural development, village renewal and local economic development, which would be of great benefit of the rural population in Southeast Serbia.



### **3. Models and Approaches in Land Consolidation: Fields of Application, Key Prerequisites and intended Impact**

#### **3.1. Key Prerequisites and Key Principles**

Land consolidation is a process where land parcels are exchanged for the same value and merged in order to create economically viable parcel sizes for efficient agricultural production. Depending on the type of land consolidation, land owners exchange their land parcels in a moderated process for a smaller number of larger land parcels of the same value, regarding their agricultural productivity. A previously defined land consolidation area will be rearranged the field road network developed and upgraded, and common and public areas developed according to the needs of all land owners, involved stakeholders and the municipality. This planning process might address not only agriculture, but consider also other relevant sectors, which are dependent on land within the planning process, such as forestry, road infrastructure, irrigation, flood mitigation, environmental protection, village renewal, mining, or tourism. In Germany, land consolidation has become an instrument of prospective planning, as it helps the municipality to acquire land without speculative losses, and is conducted within larger time frames as an integral planning instrument. Some municipalities start buying land for accumulating a future land consolidation mass (for exchange with other parcels) about 10 years ahead of a planned land consolidation projects. This helps the municipality to acquire land without expropriation, avoiding to create a dissatisfied population in the long term, as land prices tend to gradually increase over time. Furthermore, long-term prospective land consolidation saves state budget as impacts of private land speculators can be minimized.

#### **3.2. Models and approaches of Land Consolidation: Benefits and challenges**

In contrary to EU member states, Serbia has adopted a **commission model** of implementing land consolidation. This means land consolidation commissions are nominated at the beginning of each land consolidation process. Most of the members of a land consolidation commission do not have experience in conducting land consolidation projects. Because of this, a large amount of resources is required to train this group to empower them to perform their tasks in such a complex process. A wide range of skills is required for that: Understanding of the legal framework on land consolidation and related topics, managing of budget and contracting and monitoring of service providers, managing the planning process technically as well as being in close dialogue with the land owners. In EU member states, land consolidation using the commissioning model has been replaced by a more professionalized **authority model**, defining a permanent body or authority (or parts thereof) exclusively dedicated to land consolidation.



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Furthermore, land consolidation can be conducted in a **voluntary or compulsory approach**. Both approaches reorganize land parcels and use without expropriation. **Voluntary land consolidation** approaches require the consent of the entire municipality to decide upon a re-allotment plan, which can speed up the process if there is a common understanding and joint decision of all participants. In a voluntary approach, participants have the right to keep their existing land parcels, which also might fragment the given land consolidation area and might result in that the municipality has no chance to acquire a particular piece of land. Because of this, the flexibility in planning and the economic gains of voluntary land consolidation are limited.

**Compulsory land consolidation** is based on rearranging land parcels with no right for the land owner to keep the land in a particular location. However, rule of law and complaint mechanisms are established in order to come to the most acceptable result for each land owner. This allows the municipality to acquire particular areas of land for development (from which also participants benefit in most cases), e.g. for road construction or flood mitigation. All relevant sector plans have to be considered in this land consolidation process.

Various **compulsory and voluntary models of land consolidation** are applied in Germany. They are laid down in the legal framework and offer a flexibility in terms of geographic extent of the area consolidated as well as the complexity of sectors and planning steps involved in the process. The simple and ordinary land consolidation type is a so-called “*Regelflurbereinigung*” (standard land consolidation) which aims reducing the agricultural land fragmentation by creating a smaller number of larger parcels, often accompanied by improvement of agricultural infrastructure. In Germany, these projects are often jointly conducted with measures for village upgrading (“*Dorferneuerung*”), that continue to improve the rural livelihood.

When the state or municipality needs to acquire particular areas of land, a so-called **land consolidation for large-scale projects of public interest** (“*Unternehmensflurbereinigung*”) is conducted as a compulsory approach in order to rearrange land use of the remaining agricultural land to its economic, social and environmental requirements. For this purpose, the municipality often buys land parcels prior to the start of a land consolidation project in order to have sufficient land mass to exchange for the desired area in need. Most common fields of application are for example national road or highway construction or flood mitigation measures. Participants have the right to get land of the same value in return, and participate in the process of making re-allotment and other plans. Also the right to complaint is safeguarded to all participants through all instances. Participants have no right to insist on keeping the



parcel they handed in prior to the land consolidation, therefore speculative gains for private land owners within the process are minimized, therefore a minimum of state budget is required. Depending on the magnitude of a given land consolidation project and the number of additional sectors involved in the planning process (e.g. irrigation, infrastructure, tourism), this form of a compulsory land consolidation process requires sufficient time to be conducted.

While above stated systematic land consolidation processes require reasonable time for implementation, **voluntary swapping and grouping of land parcels** is an alternative model to reduce land fragmentation within a smaller process. In most EU countries, this model coexists with the model of systemic land consolidation. The advantage of such a process is, that fragmented agricultural land parcels swapped and grouped within a shorter time, based on a joint decision of all land owners involved. However, such a process requires moderation and mediation, and is only useful in case simple exchange of land parcels leads to the desired results. As a disadvantage, systematic improvement of the agricultural infrastructure is in most cases not possible, as only a number of fragmented land parcels are involved in the planning process, as not an entire area can be developed as a whole considering the development of common or public areas.

**Integrated voluntary land consolidation concepts** are also being applied or tested by various EU countries, at the time being with a limited success. The idea is to consolidate an entire area on a voluntary basis including a contribution of all participants for common and public areas. This approaches requires the consent of all participants to contribute part of their land to develop common and public areas, and an agreement on joint budgeting of developing the infrastructure. Examples in Kosovo, Bosnia and Herzegovina or Serbia have shown, that reaching a full consent of all participants of land consolidation projects is difficult, those complex and controversially discussed projects can be quickly be hindered by people using their veto with a political interest.

Above stated models show, that for the case of modernizing the legal and administrative framework of land consolidation in Serbia, a **combination of a compulsory land consolidation approach and a voluntary swapping and grouping of land parcels** can be used to serve both needs of land consolidation projects required: a voluntary approach to come to rather quick results, where no land consolidation project is planned for and a systematic compulsory approach, with particular focus on improving the agricultural efficiency in a sustainable way, while providing options for other sectors to be integrated into the land consolidation and planning process. A high demand for future land consolidation project can be observed in regard to flood mitigation measures, village renewal and improvement of rural living standards,



improving agricultural infrastructure as for diversification, regionalization and efficient marketing of agricultural products including improvement of value chains.

### **3.3. History of land consolidation in Serbia**

There is no **ideal model of land consolidation** which can be applied as a blueprint in a country, this also applies to Serbia. For the development of agricultural cooperatives during socialist times, land owners were expropriated from most of their land. In addition, former land consolidation projects were conducted without participation in a top-down approach, often to the disadvantage to land owners (see: RGA (2004)). Because of this history, a large amount of the population of rural land owners has a limited trust in government services. For pilot land consolidation projects implemented from 2013-2016 by with support of the GIZ project, larger awareness campaigns were necessary to promote the modernized way of how land consolidation was conducted. At the end of piloting 7 land consolidation projects, the vast majority of participants was – and still is – highly satisfied with the results, their better economic situation through improved agricultural infrastructure.

A number of **key success factors of modernizing the land consolidation process** supported by the project contributed towards the process (see also: GIZ (2015a)).

Firstly, it was important to **comprehensively inform about the entire modernized land consolidation process** from a land owners perspective in order to improve the trust of land owner in the new land consolidation process. This was achieved by: improving the legal and institutional background; applying key principles of land consolidation; informing that land consolidation will not provide for expropriation of any kind; the jointly agreed point in time, when old land ownership will turn into new land ownership; participatory planning processes that require the local knowledge of all participants; the preparation of draft plans in consultation with the participants; mechanisms to hand in wishes and file complaints; conducting environmental assessments; informing on the extent and schedule of infrastructure and geodetic works.

Secondly, implementation was designed to follow **principles of good governance as well as EU regulations**. These comprise: clear roles and mandates (e.g. of the land consolidation commission, sub-commissions or board of participants); intensive participation of all land owners, land holders and other stakeholders involved; checks and balances (e.g. supervision of commissions or external service providers for road construction, clearing or geodetic works); transparency on the entire process and drafted plans; to be rather process than procedure oriented (with an open time frame) and to allow several iterations of reviewing plans, where legally acceptable complaints resulted in change of plans. In addition, EU



regulations such as environmental assessments or measures to protect water bodies were implemented. The transfer of practical knowledge and experiences from other EU member states using peer-to-peer learning approaches helped modernizing the Serbian model of land consolidation. As a result, 5 rule books have been drafted (see: GIZ-SMLM/MAEP (2016a): GIZ-SMLM/MAEP (2016b): GIZ-SMLM/MAEP/RGA (2016)), and a discussion process started within the Ministry of Agriculture, how the legal and administrative framework can be improved, in order to professionalize the institutional setup implementing land consolidation with a better cost efficiency in the future.

#### **4. Embedding Land Consolidation as an instrument into government structures**

##### **4.1. Key principles and values**

The need to reform Serbia's legal and administrative framework requires a view on the key principles required in addition, to ensure land consolidation is implemented successfully and with minimized conflict or resistance of participants involved. Some of the factors (clear roles and mandates, inclusiveness, participation, transparency and accountability, process oriented, mechanism to interact and complain, EU regulations) have been described in the previous chapter.

In the beginning, a clear goal needs to be defined, for which purpose land consolidation is used for, which land consolidation process/model is being applied, by which implementing body and to which geographical area. The time frame should be open as mechanisms of complaints might lead to changes of plans which can result in unforeseen delays of a land consolidation project. Budget should be allocated for the entire process with some contingencies to cover unforeseen costs. Relevant information on the process and intermediate results has to be thoroughly communicated during the entire process by the implementing bodies with land owners and the interested public. Participation and representation of all groups (e.g. minorities, elderly/youth, gender) should be encouraged and documented. Mechanisms for filing and handling complaints should ensure the maximum satisfaction of all participants, sharing the load of compromises between all. Local knowledge should be integrated into the planning process, in particular in the plan of common and public facilities, in which all interested people can participate. The future land use in a land consolidation area should be harmonized with existing spatial plans. Re-allotment plans should consider to be economically viable, socially fair, and last but not least environmentally sustainable. Effect of future land fragmentation should be reduced, where possible, e.g. by placing land parcels of relatives adjacent. At the end of a land consolidation process, additional investments should take place to increase the life quality of an area (e.g. village renewal), in order to create an atmosphere for private sector investments, reduce migration while generating income



opportunities in particular for younger generations. As a principle of countervailing influences, lessons learnt from implementing land consolidation on the local level should be reflected (e.g. within a regional network of experts or with bilateral partnerships with other countries), in order to provide feasible proposals for gradually improving the legal framework and administrative procedures, as well as national land consolidation policies and strategies.

#### **4.2. Options for the reform process in Serbia**

With the support of the German Government, Serbia has now initiated a process to modernize its legal and administrative framework in regard to land consolidation. From April 2017 onwards, a series of high level discussions complemented by roundtable expert discussions will develop a short and mid-term road map for this modernization process. Participants will develop concrete ideas, how to develop a new law on land consolidation, subsequent bylaws and regulations. Furthermore, they will elaborate, how to institutionally embed its tasks within the capacities of the Serbian government structures.

First talks have revealed, that the currently applied “Commissioning model” might be replaced with an “Authority model”, which will put future land consolidation implementation on higher professional level at a better cost-effectiveness. Making use of parts of the remaining state land (e.g. in a land banking model) can provide a cost effective option for municipalities to provide land for common and public facilities while saving state budget without selling and buying of land. By following this authority model, learning mechanisms can be established, which feed into reviewing national policies, strategies, and subsequently improve current laws, bylaws and the administrative structures and institutional capacities. Within its current phase from 2016-2018, the project “Strengthening Municipal Land Management” has committed to develop and increase capacities of government staff on national and subnational level to better perform land consolidation in the future. In addition, the German government further supports the development of regional and international partnerships will as an important role in the exchange of best practices within this reform process.

### **5. Mid and long term perspectives**

#### **5.1. Development of a Land Consolidation Policy and Strategy**

Land consolidation is an instrument to reduce land fragmentation. In the German context, **land consolidation** (“*Flurneuordnung/Flurbereinigung*”) is one instrument of land development (“*Landentwicklung*”) which is subordinated to **rural development** (“*Ländliche Entwicklung*”) embedded



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in the context of **federal state development** (“*Landesentwicklung*”, see Kummer / Frankenberger (Eds.) (2013)). In this regard, land consolidation is a measure in the development of land and land use aiming to increase the living and working conditions of rural areas with particular adjustments to the needs of the agricultural landscape (see: J. Thomas in DLKG (2016)). Therefore, it is also necessary for Serbia to discuss the objectives of the overarching instruments (land development, rural development, sub-national regional development) and the coherence of land consolidation measures in line with national and sub-national sector plans. This requires to develop or define political goals which land consolidation is aiming at, harmonization of sector plans in an integrated national and subnational integrated plans and zoning maps, and to develop a mid-term road map for the land consolidation reform process. When all relevant sector plans are considered and land owners are involved in a bottom-up planning process, **integral land consolidation** can be used as one instrument to redesign land use patterns of a rural area.

## 5.2. Implementing the Strategy:

For the case of Serbia, land consolidation is an instrument which can be used to reshape rural and agricultural landscapes with particular view on their unique advantages in agricultural production and other rural income opportunities, positioning itself for the EU market. This requires a clear land consolidation strategy for both northern and southern Serbia (or subunits thereof) with a clear aim to how agriculture will position itself for the next decades. It should set criteria for prioritizing land consolidation projects (e.g. in regard to cost/benefit ratio, number of beneficiaries, economic impact, etc.), in order to start land consolidation projects first, where they are most needed. In the process, and based on a reviewed legal and administrative framework, staff needs to be trained, budget needs to be allocated, public campaigns started, before land consolidation projects can be launched. Budget planning can be improved over time, when funds required are closely monitored during the process. In particular, costs should be monitored like for instance the average implementation costs per hectare, disaggregated by landscape type. Furthermore, detailed monitoring data is required to better plan future land consolidation projects, such as: costs for the government to manage land consolidation project; average costs for modern field roads and tracks to allow modern mechanized agricultural production using machines and tractors; costs for drainage, clearing of bush and shrub, leveling of cascades, geodetic works or environmental compensation areas. Further studies are required, to quantify the benefits of land consolidation projects.

A Serbian land consolidation strategy should also provide for being the starting point of additional development activities, such as village renewal, economic investments, development of value chains, diversification and regionalization of agricultural products, development of marketing infrastructure or



initiatives to improve the rural living conditions (e.g. LEADER). These increased income opportunities in rural Serbia also lead to reduced migration to cities and abroad.

### **5.3. From reactive to proactive and prospective planning: Informed decision making & risk assessments**

The floods in the town of Obrenovac in Serbia have shown, how important it is to become pro-active in the field of land use planning. Flood mitigation is an important topic for Serbia, where land consolidation can be a useful instrument. While land prices increase over time, expropriation is often perceived negatively by land owners that were expropriated. Because of this, in Germany, expropriation is widely avoided and the last measure of a municipality to act in common and public interest. Furthermore, this practice reduces the needs for state funded budget for compensation.

Putting land consolidation in the wider context of spatial planning, in the mid-term it is also necessary to improve the spatial data infrastructure and to collect and manage geospatial information. This also contributes towards better planning of land consolidation project budgets and spatial analysis for informed decision making. Therefore, in the mid-term, a spatial data infrastructure needs to be developed to exchange planning data between the sectors and generate timely validated datasets within each sector. This goes in hand with creating an awareness amongst politicians to make use of geo-information systems for decision making. The ownership of geographic data should be on the lowest level possible (e.g. municipalities) to make sure, it is up-to-date. Current technologies like web mapping or web feature services allow to exchange and merge standardized geo-data from various municipalities and sectors. With technical support of geo-information-systems specialists, integral land consolidation processes can be triggered by municipal bottom-up planning exercises.

### **5.4. Sustaining the effort: Expert networks and partnerships**

In order to maintain a continuous learning process within land consolidation, it is important to strengthen regional and international expert networks, and to create partnerships between the state institutions (like the Serbian Ministry of Agriculture and Environmental Protection, the Republic Geodetic Authority) and universities as well as institutes. Serbia, Kosovo, Bosnia & Herzegovina, Macedonia, Turkey and other Central and Eastern European countries have a high demand of exchanging their ideas on how to make best use of the instrument of land consolidation within their legal and administrative framework, and how to successfully implement the land consolidation process in practice.



Since there is a demand for peer-to-peer learning from best practices from many countries in central and eastern Europe, it is recommendable to create a network of expertise. This network should have a frequent exchange of experiences on land consolidation and its wider scope of application within the region, and occasionally exchange its experiences within other EU countries (ARGE Germany, LANDNET/FAO, EU Brussels) or international platforms (e.g. World Bank conference). This would speed up the process of improving the performance of land consolidation projects in the region and would help interested countries improving their legal and administrative framework according to the local situation and requirements (see also: FAO (2012)) .

## **6. Conclusions**

Piloting of land consolidation in seven pilot municipalities in South-East Serbia has shown, that land consolidation can be implemented successfully and to the satisfaction of the vast majority of participants, and that private sector investments are a result. Land consolidation is a powerful tool to not only increase agricultural productivity, but also to improve the living standard in rural areas. The case of Serbia has shown, investments of the state in land consolidation project comprising improved infrastructure are often followed by private sector investments at a much higher degree. The Ministry of Agriculture in Serbia has recognized its importance and started a process for reforming the legal and administrative structures on land consolidation with support from the German Government. Awareness campaigns creating a joint understanding of all participants on how this instrument of land consolidation is put into practice is of crucial importance, in order to prevent from controversial (and partly politically motivated) debates. Principles of good governance like transparency, accountability, participation, checks and balances have to be applied to a full extent to ensure the satisfaction of all land owners after the process. This requires a change within the mindsets of the responsible government staff, performing these tasks. Therefore, the German funded project “Strengthening municipal land management” implemented by GIZ continues its support not only in the legal and administrative reform of land consolidation, but also to increase the human capacities to empower them to smoothly perform the tasks required.

Within the reform process in Serbia, it is planned to adopt currently drafted bylaws to the existing law on agricultural land in the short term (in 2017), while a separate law on land consolidation will be elaborated in mid-term (about 2018). With a new law on land consolidation, the Serbian government considers to discontinue using land consolidation commissions for implementation, a system which has proven to be ineffective throughout the vast majority of EU member states. An authority or administrative unit will be defined to perform the tasks of land consolidation. Besides structures on national level, offices on sub-



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national level will be necessary for information events, handing in of wishes and filing complaints, and harmonizing land consolidation projects with existing sector plans. Serbia plans to gradually integrate other relevant sectors within the reform process (such as flood mitigation, road infrastructure). The success of the reform process can be measured by an improved cost/benefit ratio of land consolidation projects, a smooth implementation resulting in high level of satisfaction by all participants involved.

Furthermore, information campaigns will need to strengthen the understanding of the population of the necessity for improving the agricultural structure and landscapes in rural Serbia. Exchange of expertise with experts in Germany and other EU countries are planned to support the transfer of practical knowledge using peer-to-peer learning approaches. In the future, Serbia can become a showcase and a key player in Central and Eastern Europe moderating a regional expert network on land consolidation, once sufficient funding can be secured. Representatives from Kosovo, Bosnia/Herzegovina, Macedonia, Slovenia, Hungary, Romania, and Turkey have shown their interest to participate.



## 7. Annex:

### 7.1. Annex 1: Satellite image comparison Negotin municipality, cataster municipality Radujevac



#### **Before land consolidation (2014):**

2511 ha, 12537 Parcels,

0.19 ha avg. parcel size

Source: Google Earth



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## After land consolidation (2016):

2511 ha, 5041 land parcels,

0.80 ha avg. parcel size

LC coefficient: >4

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