

Reorganisation of Land Holdings

Land Development Toolbox



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Foreword

The Free State of Saxony's rural area is a living, working, and recreational area for us humans. But it is also a rich habitat for flora and fauna. Our environment has evolved over many centuries into a cultural landscape representing the most important economic base for our country's agricultural and forestry enterprises.

Even after twenty years of German unity, ownership questions arising from the use of private property on land before the political change remain to be clarified. Actual land use and the legal protection of property rights often diverge markedly. That can lead to impediments in economic development and hamper the rural real estate market.

Rural plots of land are needed for the realization of a variety of significant projects such as the construction of roads and flood control systems. These have primarily one thing in common: they require large areas. These measures permanently remove the affected plots of land from their previous, mostly agricultural use. The landscape is also chopped up since projects with extensive area needs are often involved here. That has far-reaching consequences for both agricultural and forestry enterprises as well as for nature. This results in wide conflicts of interest demanding sensible, acceptable solutions for all involved. Land consolidation proceedings offer a variety of instruments for how such processes accompany and in particular can be implemented as land-reorganisation regulations. The steps necessary from the technical side as well as the desires of landowners and of agricultural and forestry enterprises are taken into consideration during the redesign of rural land ownership. No other land regulation instrument has access to such a comprehensive repertoire as reorganisation of land holdings. The ground on which we live is a limited commodity. This valuable resource must be protected and preserved for future generations.

The purpose of this brochure is to give an impression of how reorganisation of land holdings can accompany such processes and support community development in very different ways. Our thanks goes out to all of the district office employees who are wrestling with dedication and expertise in their daily work, focused, sometimes with persistence, on providing solutions to land-reorganisation problems in the communities, and who have laid the foundation for the creation of this brochure.

I wish you many new insights and suggestions.



A handwritten signature in black ink, appearing to read 'Norbert Eichkorn'.

Norbert Eichkorn
President of the State Office of Environment,
Agriculture and Geology

Introduction

Rural areas

Various images are associated with this term: untouched nature on meadows, fields, and in forests; contented cows and sheep on the pasture; and tractors, which but seldom disturb the village's idyllic calm. Others see agricultural operations, massive livestock breeding, biogas plants, gigantic wind turbines, or monocultures capable of high performance.

That Saxony's rural area is home to almost half of our population is undisputed. More than a million Saxons live in smaller towns and villages. Village structures are also present in the metropolitan areas around Dresden, Leipzig, and Chemnitz. Rural area encompasses more than 80 per cent of Saxony's land area. It has irreplaceable functions as living, working, and recreation space, and supplies vital food, raw materials, energy, and drinking water. It is a versatile and indispensable part of Saxon identity.

Reorganisation of land holdings in Saxony

Land reorganisation proceedings for re-regulation of the ownership-rights structure in rural areas are summarized under the term "reorganisation of land holdings" in Saxony. These have their legal basis in the Land Consolidation Act (FlurbG) or in section 8 of the Agricultural Adjustment Act (LwAnpG). Furthermore, land regulation can be conducted under the Building Code (BauGB). The goal is to develop capable, versatility structured agriculture and forestry, and to secure and improve rural areas as an attractive location for working, living, and recreation. Land management and land regulation serve "land development" and are thus in the area of tension of many different user interests.

Land development

The task and goal of land development is to create "living conditions of equal value". This is anchored in the basic law. Land development is influenced by long- and short-term developments at the community, regional, or global level such as demographic development in Saxony or the agricultural sector's dependency on European or global changes.

Rural areas are to be preserved as a working area for agriculture and forestry. Economic activity is to be encouraged, and regional and local development strengthened. The natural resources and cultural heritage are to be preserved and developed. These are



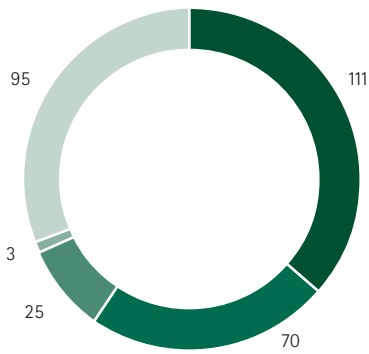
Removal of straw bales at Böhlitz

principles that the federal-state "Sustainable land development" working group has compiled in the "Guidelines for Land Development – Formulating the Future in Rural Areas" in the autumn of 2011. Keywords such as competitiveness, structural change; sustainability; diversification; customized and future-oriented infrastructure; citizen participation; internal development; tourism; flood, climate, nature, and environmental protection; biodiversity; eco-account; and material cycle exhibit the diversity of topics and the area of tension where the land development is involved.

Proceedings under the Land Consolidation Act

The superior land consolidation authorities have arranged 304 land consolidation proceedings since 1993. The 194,531 hectare area included in the proceedings corresponds to over ten percent of the land area. Land consolidation proceedings are officially directed proceedings that are conducted with landowners' close cooperation. Each proceeding's objective may be quite different. Land regulation is common to all of the proceeding. With its aid, property is rearranged so that use conflicts are eliminated, plans can be realized, and legal certainty is established on the property. How and in what time interval this can be achieved depends quite critically on the selection of the type of proceeding. The various types of proceeding that are possible under the Land Consolidation Act are introduced briefly below.

The standard or normal proceedings (Land Consolidation Act, secs. 1, 4, and 37) comprise the greatest portion both in number and in terms of their share of area. These proceedings' objectives are very comprehensive. The original goal of land consolidation is traditionally the improvement of general conditions for agriculture and forestry. However general rural development is supported above and beyond this. This can happen in different ways. The production of a functioning road and water network, the reduction of soil erosion by wind and water, water-management and flood-control measures, the establishment of biotopes and their networking, maintenance and development of valuable cultural landscapes, and village development projects are just a few areas whose actions may be supported by land reorganisation through property law and possibly even implemented technically. Extensive construction activities are often conducted within the standard proceedings.



■ sec. 1 ■ sec. 86 ■ sec. 87
 ■ sec. 91 ■ sec. 103 a ff.

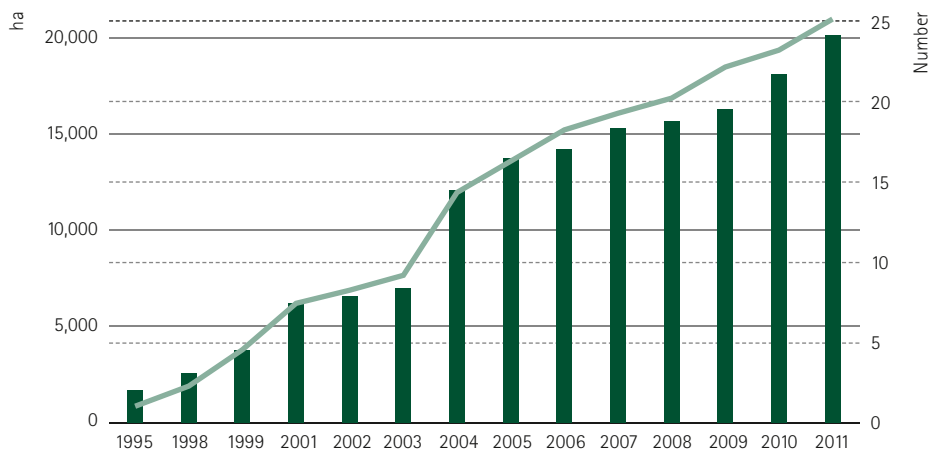
Number of proceedings ordered under FlurbG up to 31 Dec. 2011

A simplified proceeding (Land Consolidation Act, sec. 86) is the normal proceeding's "little brother". Conceivable areas of application are many, however the objectives are not as comprehensive as those in the normal proceeding, and so a few simplifications apply. Possible areas of application are land reorganisational implementation of nature- and environmental-protection measures or the elimination of drawbacks for general land improvement. For instance these can arise through the production, modification, or removal of infrastructure systems. In many cases other responsible bodies' activities are accompanied in the land reorganisational sense. Simplified proceedings are differentiated from special operations in that no expropriations are possible to implement the measures.

The use of so-called "enterprise land consolidations" or "special operations" (Land Consolidation Act, sec. 87) has increased in recent years (see diagram). This type of proceeding is selected in connection with space-intensive projects of public interest. These kinds of projects include motorways, railways, and flood control facilities. Large areas must be regularly provided for these. Parts of these impact owners so severely that the latter's economic livelihood is endangered. At the same time existing plot-of-land structures and road connections are often not taken into consideration. These conflicts can be minimized or entirely resolved with special operations. So far primarily road construction activities have made such proceedings necessary in Saxony. They can only be ordered under certain preconditions. Thus for instance expropriations must be permissible under the specific law.

Accelerated consolidation processes (Land Consolidation Act, sec. 91) are special, simplified land consolidation proceedings. Their purpose and scope are limited. Rural land ownership should to be economically consolidated, purposefully organized, or reorganized to rapidly improve production and working conditions in agriculture and forestry and to enable the necessary nature conservation or landscape management activities. They can be applied when the creation of a new lane network and more extensive water management measures are not required. The reclassification of land should, if possible, arise from the exchange of entire plots of land. Moreover this process assumes a special willingness to co-operate among the affected landowners. The valuations are undertaken in a simple way; settlements should be agreed upon among the participants to the extent possible. Exemplary application areas include the consolidation of (sporadic) fallow or virgin afforestation areas on suitable sites. This can prevent the negative consequences of a disorderly leaving of land fallow or afforestation and instead

■ Hectares (ha)
 — Number



Pending cases under FlurbG, sec. 87 as of 31 Dec. of the year indicated

achieve positive effects for nature conservation and the natural scenery. Mostly however, land reorganisation objectives in Saxony's rural regions are more extensive and cadastral conditions are unsuitable for the use of this instrument.

On the other hand the "small" process of voluntary land exchange (Land Consolidation Act, sec. 103a) is increasingly used, as the diagram makes clear. Usually these have a manageable proceeding size and a small number of participants. They are distinguished by the fact that the owners agree to the reorganisation of their property. The owners decide themselves about the value of their plots of land and any value compensation. Entire plots of land are exchanged where possible. Construction activities are usually not provided for. The participant's agreements are implemented with administrative direction. Voluntary land exchange resembles the accelerated consolidation process, but it's even more simplified due to its voluntary nature.

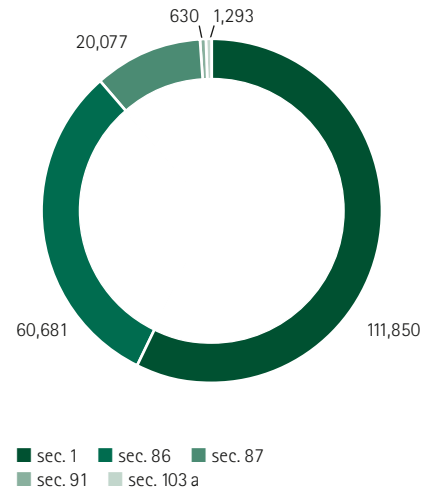
Land regulation and ownership guarantee

The determining element in every proceeding is land reorganisation during which the location, shape, and size of plots of land are changed and their (future) use appropriately formulated according purpose. Ownership is basically retained in this connection. Whoever the landowner is remains so. However land reorganisation can alter the object owned. An example: an owner possesses several small, non-contiguous pieces of farmland during a land consolidation proceeding. At the end of the proceeding he accepts a large plot of land corresponding to the value of his old parcels. He can then better cultivate or lease this more easily himself.

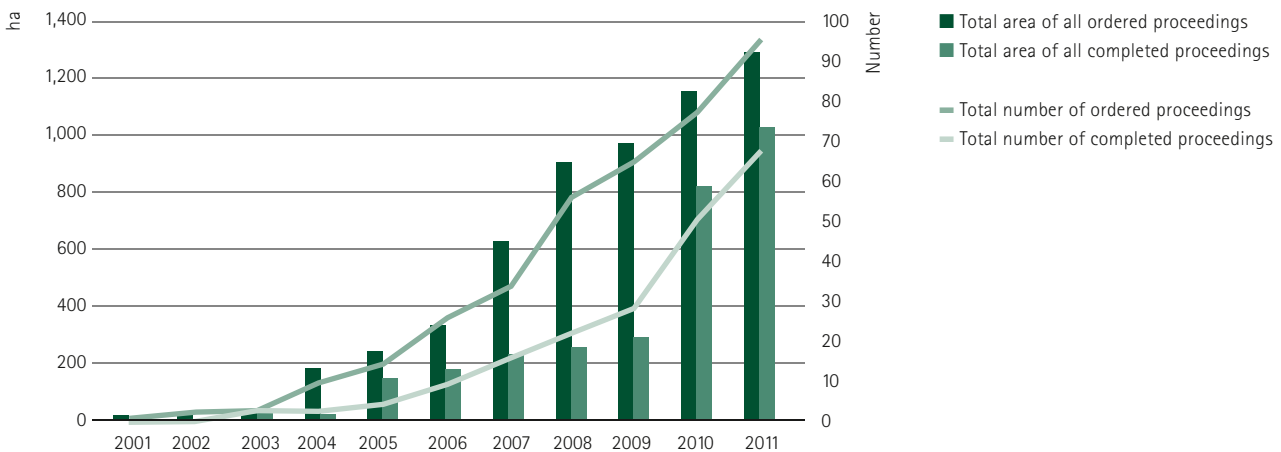
There is usually a comprehensive deed searches at the start of the proceeding since the land register does not always establish the current owner. This investigation proves difficult, for example due to lack estate settlements, missing entries for pipeline rights, and rights of way or erroneous cadastral documents. Concerning dimensions, the data of around 80,000 vested rights (land registries) are processed in Saxony's land consolidation proceedings.

Citizen participation in the land consolidation process – participants assume responsibility

Extensive preparations are needed before a land consolidation proceeding is officially begun (meaning is formally ordered). This is typically accomplished in working groups. In addition to the land consolidation authority, communes' representatives, resident



Proceeding area in hectares for proceedings ordered under the FlurbG up to 31 Dec. 2011



Total number of ordered and completed proceedings under FlurbG, sec. 103 a ff. up to 31 Dec. of the indicated year



Waldhuf structure around Königswalde



Schönbach volunteer fire brigade's younger generation

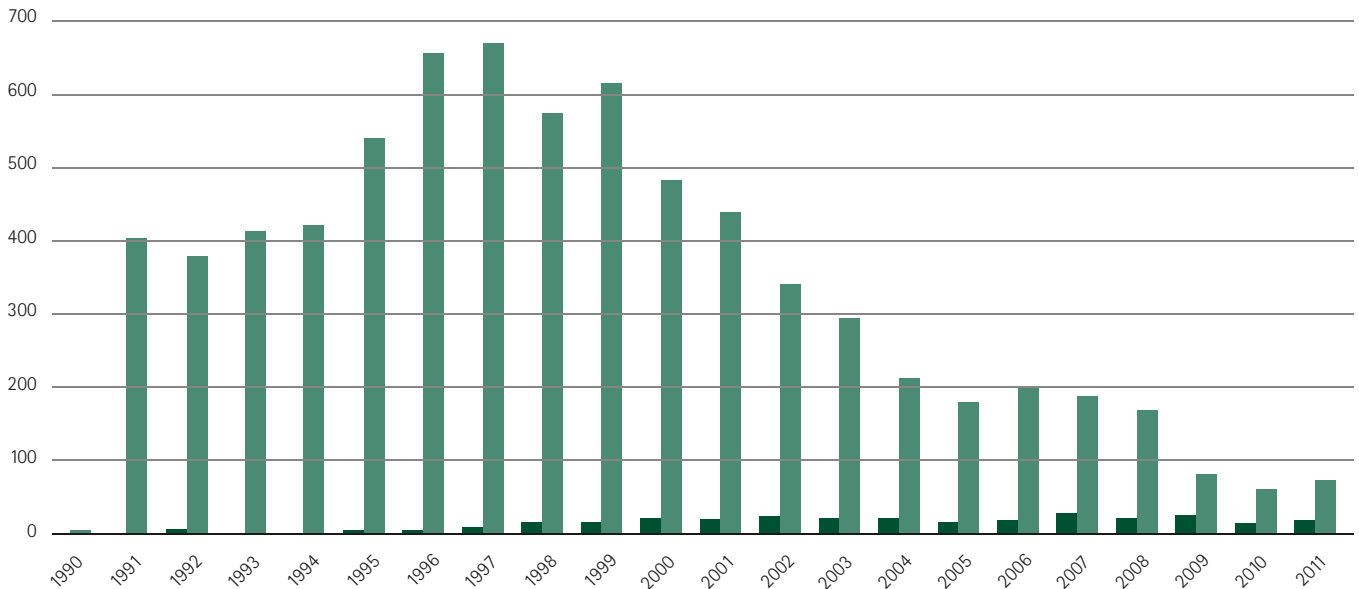
farmers, interested citizens, clubs, associations, other technical authorities and additional participants take part in it. The goals to be achieved by the proceeding are explored. This results in, for instance, the type of proceeding, the extent of the proceeding area, as well as the estimation of necessary measures and possible costs.

The owners who are likely to be affected by such a proceeding are informed about the proceeding, its objectives, and the expected cost at a public meeting (informational meeting under the Land Consolidation Act). A Community of Participants originates when the proceeding is ordered. It is the merger of all landowners and leaseholders within the proceeding's area. There are moreover additional (indirect) participants, for instance rights holders such as the tenants on agricultural areas.

Extensive powers, but also duties, are assigned by law to the Community of Participants' members (Land Consolidation Act and Implementation Law for the Land Consolidation Act in Saxony). It is the body responsible for the land consolidation proceeding and it decides on essential sub-steps. It is responsible for preparation of the road and water plan, valuation, financing the planned measures, their implementation, and the area's redesign. So in contrast to other proceedings, conducted for the most part purely bureaucratically, participants decide on the necessary measures themselves. A committee is needed for this – the Community of Participants' board. This is elected by the landowners and leaseholders. The board reports the proceeding's status at regular public meetings.

Road and water plan

The plan concerning community and public facilities (road and water plan) with landscape-care support plan forms the basis for the proceeding area's rearrangement. The preparation of this plan is one of the Community of Participants' primary tasks. The plan is coordinated with the bodies responsible for public affairs. The plan has a concentrating effect after its establishment by the superior land consolidation authority. That means no further approvals are generally needed if the plan has become final. The expansion of the planned activities can begin and usually extends over several years. This plan is the basis for cost determination and the application for financing funds.



Number of completed proceedings under section 8 of the Agricultural Adjustment Act

■ Land regulation proceedings
 ■ Voluntary exchanges

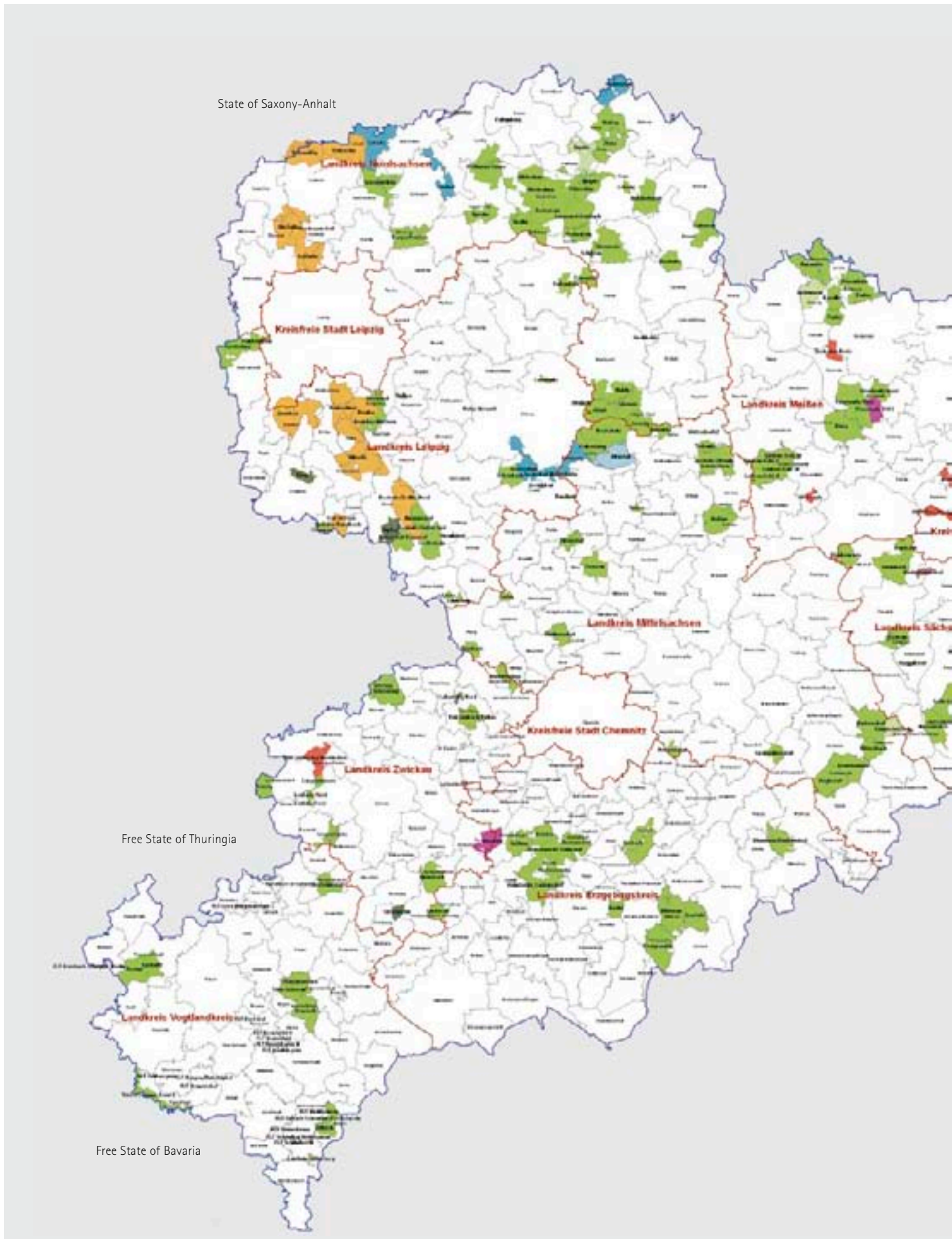
Since 1955, stakeholder communities have implemented many measures in the areas of traffic, town development, water management, nature and landscape conservation, as well as soil culture. In the process around 163 million Euros were invested (execution costs), of which around 132 million Euros were as subsidies. About 890 kilometres of rural roads were financed among other things. This corresponds to a distance from Berlin to Paris. In addition some 235 kilometres of linear and 100 hectares of areal plantings originated. Town development measures and the erection of flood control basins, dams, and dikes involve expenditures of about eight million Euros.

Financing

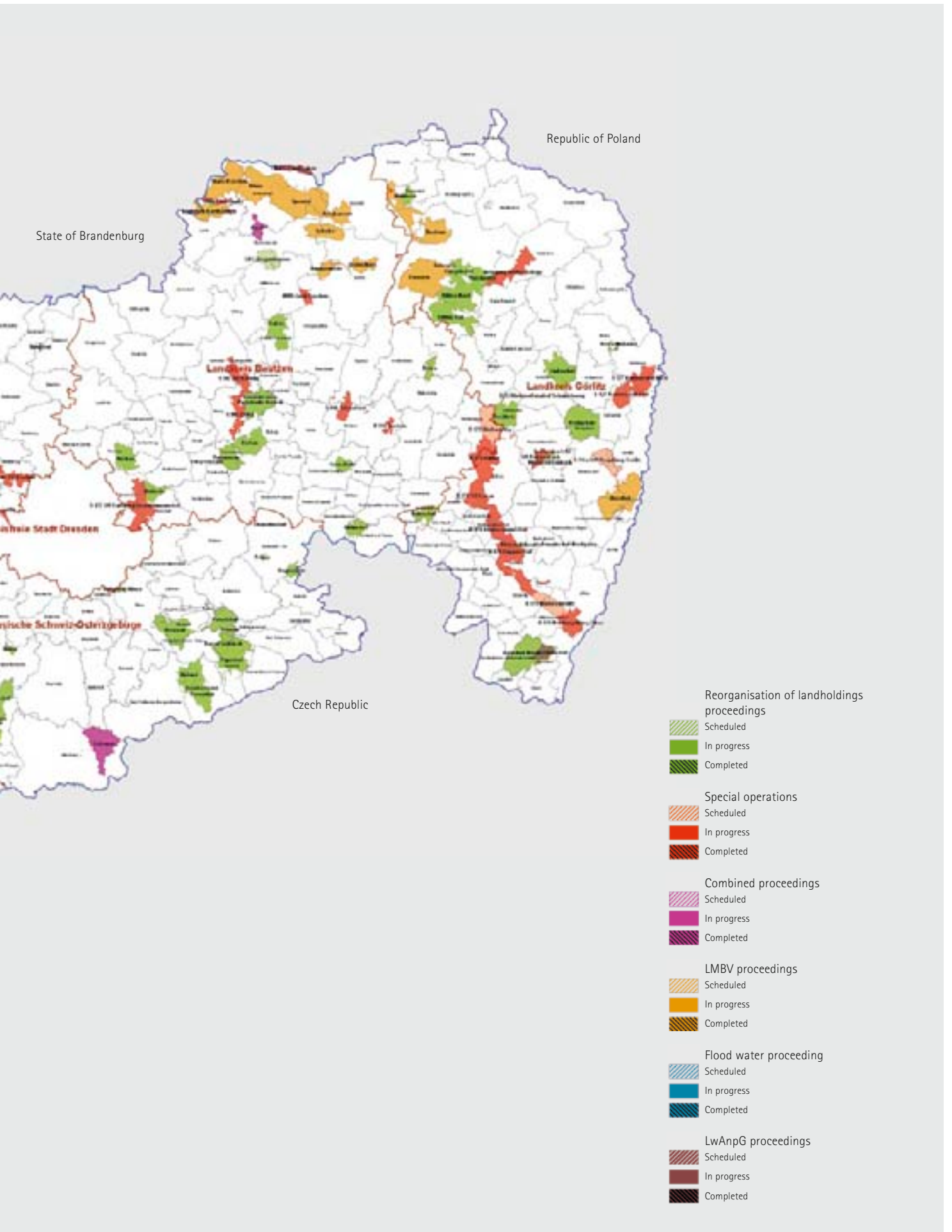
The Land Consolidation Act distinguishes between proceeding and execution costs when financing. The state bears the proceeding costs. Among these are all of the authorities' personnel and operating costs, thus also including the costs for experts during valuation, costs for surveying, and costs for the preparation and correction of the public books. Participants bear the execution costs. Among these costs are all expenditures specific to conducting the proceeding. Examples of this are the operating costs of surveying such as border stones, posts, and wages for surveyor's assistants. The largest portion of the execution costs typically take in the expenses of producing community facilities (farm roads for instance). Land consolidation pursues not just goals for private benefit, but indirectly also economic and social policy goals. That's why a significant part of the execution costs are taken over with earmarked grants from federal and state governments. The grant funding amount depends on the average agricultural comparative figure in the proceeding area.

Verband für Ländliche Neuordnung (Reorganisation of land holdings association)

The Saxon Verband für Ländliche Neuordnung (VLN) supports communities of participants in their work. This is a merger of communities of participants. It administers planning, construction supervision, and budgetary tasks for the communities of participants and is funded by a contribution from community-of-participant members. The association's Internet site (www.vlnsachsen.de) contains information about current proceedings such as the size and objective of the proceeding, important proceeding steps, and board contact persons.



Reorganisation of land holdings planning and status under the Land Consolidation Act (July 1, 2012); source: State Office of Environment, Agriculture and Geology, topographical basis, GeoSN



Proceedings under the Agricultural Adjustment Act

The Agricultural Adjustment Act serves to create a legally compliant, efficient, and competitive agricultural structure in the new federal states.

In the past, agricultural production co-operative (LPG) laws ensured agricultural production co-operatives an almost unlimited right of use. They overlaid existing law, private property, and in fact led to it being void. Independent ownership of buildings and other structures, which is dissociated from the ownership of the land, often emerged against this backdrop. The goal of the Agricultural Adjustment Act is to reinstate the unity land and facilities ownership as well as to build up an efficient, competitive agricultural structure in which all legal forms can act equally.

In contrast to Land Consolidation Act proceedings, proceedings under the Agricultural Adjustment Act can only be initiated upon application and not ex officio. Eligible applicants include for instance farms, retiring co-operative members, as well as land and building owners who are affected by separate building and facilities ownership. In practice, proceedings under the Agricultural Adjustment Act in Saxony tend to represent individual (rather extensive area) proceedings for combining land and facilities ownership.

Voluntary land exchange and land reorganisation proceedings are distinguished in proceedings under the Agricultural Adjustment Act. Both types of proceedings provide primarily legal certainty and are thus the basis for investment. But the aspect of legal peace within the municipalities and rural communities also has a high priority.

While over 1,000 applications per year were submitted in the early 90s, the number of applications received has declined steadily since. The number of new applications has fallen below fifty during the past five years. To date a total of over 10,000 applications have been submitted in Saxony.

Over 7,500 proceedings were completed in Saxony by Dec. 31, 2011 on the basis of these applications. The great majority of them were voluntary land exchanges. Some 400 proceedings are still in progress. A failed voluntary land exchange must be continued as a land reorganisation proceeding. It is becoming apparent here that the remaining proceedings often exhibit complex regulatory requirements.



Agriculture and forestry

The cultural landscape that surrounds us in rural areas emerged from centuries of work and action by farmers and foresters. It forms the foundation for our food production, provides space for recreation, shapes and ensures natural habitats, and provides wood for crafts and industry and raw materials for renewable energy production. Farmers and forest owners today still decisively dominate life and work in our villages and shape the regions in very many ways.

Technology has evolved rapidly in the last century. This also has a far-reaching influence on land management. Rural roads must bear heavy loads these days. So for example sugar beets or raw-wood machinery weighing up to 40 tons travels on the roads during transport. The fields and forests too are now processed with very powerful machines. Wider roads and stronger types of construction are required.

Agricultural and forestry areas are still withdrawn from agriculture to much too great an extent for many projects that also serve the public. Saxony's farmers don't fundamentally oppose the construction of roads, residential and commercial properties. However much greater emphasis than in the past should be placed on the revitalization of inner-city areas, the use of brownfield sites, and the preservation and expansion of existing roads.

Our needs as agricultural and forestry enterprises must be adequately met and meaningful solutions found. Land consolidation proceedings can help in many different ways here. They offer the opportunity to absolve various tasks and to create orderly ownership rights and well executed area sizes and structures in a single proceeding. Many benefits for agriculture and forestry can spring from it. Everyone who owns plots of land in a land consolidation area becomes a participant in this proceeding. Farmers and foresters are thus able to contribute and participate directly in the process. This applies on the one hand even before the procedure is ordered and, on the other hand, when the road and water plan is drawn up. Which measures at which places and in



Rural road near Schönberg

what manner they are to be expediently implemented is advised. Many discussions and the balancing of different interests are required to find the most favourable location and determine the optimal way to develop. Other measures such as protection against flooding or erosion mitigation can be planned and carried out depending on local circumstances. The soil can thus be protected from erosion.

Land regulation requirements are also very stringent in Saxony's forests. This is reflected in the fact that at least 91 per cent of private forest holdings are smaller than five hectares in Saxony. Fifty-five per cent of plots of land in Saxony's private forests exhibit a size of under one hectare where the plot of land's layout is usually unfavourable for cultivation.

Just after German reunification, it was important to resolve unclear ownership rights for our agricultural enterprises in Saxony. The system established during the GDR period, which separates land and building ownership, particularly limits the creditworthiness of companies. This frequently affected stables, silos, and workshops. These buildings and facilities were often erected on plots of land that were introduced by members of the farming operations. These kinds of ownership rights are in urgent need of regulation using the proceeding under the Agricultural Adjustment Act. Suitable exchange areas such as arable and grassland, even on spatially separate locations elsewhere, can be made available to the landowners as part of this proceeding. That offers great advantages. While it's true that landowners don't get their original land back, they receive arable or grassland of equal value elsewhere that they can farm or lease. Thus ownership remains intact. Important in the result is that each individual owner can freely access his plots of land. Land consolidation administration modernizes this process and conducts these proceedings. Above all, preconditions are created for participating agricultural enterprises enabling long-term investment in their businesses. That creates legal certainty.



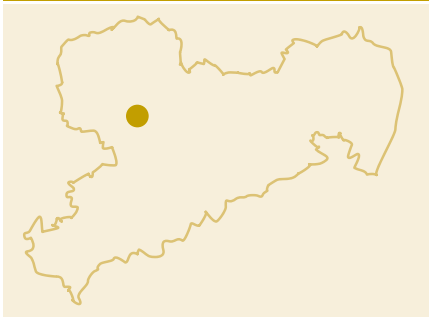
Back road in the Leipziger Auwald bird sanctuary; photo: LfULG Archive of Nature Conservation, Matthias Rentsch

Until now land areas involved in land consolidation proceedings have represented just a small fraction of all Saxon agricultural land. In addition, the duration of the proceedings is often very great in our view. Moreover we would like greater consideration of the economic requirements of agriculture, which has to exist in an increasingly global and more difficult market for agricultural products.

Gerhard Förster,
vice president of the Sächsischen Landesbauernverbandes e. V.

Land managers, landowners, residents in Schönbach/Zschetzsch – together to the goal

"Schönbach" land consolidation proceeding,
Leipzig County



The City of Colditz, located in Leipziger Land, includes among others the districts of Schönbach and Zschetzsch with a total of around 550 inhabitants. Substantial citizen commitment set a land consolidation proceeding in motion here in 1998, which positively influenced the two districts' development to a high degree. To date numerous measures have been implemented inside and outside the locale with the active help of the citizens. Additional projects are still in planning.

About the initial situation

In the districts of Schönbach and Zschetzsch, heavily influenced by agriculture (66 per cent arable land and 13 per cent grassland), the desire for town development in collaboration with community members was growing. The residents no longer accepted the minimal tourist appeal, advanced decay of the civic center, and poor condition of the historic hydraulic ram (ram-pressure water siphon). Unclear ownership rights structure and lack of roads for agricultural infrastructure were other points of criticism.

The establishment of a work group, "Sustainable town development", enabled the conduct of a future workshop. All of Schönbach's and Zschetzsch's clubs were represented in this working group so that everyone could put forward his desires and suggestions. So the main idea of town development was developed in collaboration with concerned citizens: "Committed life between nature, economy, and revitalized tradition."

The solution

In 1998, the former Wurzen State Office of Rural Development ordered a land consolidation proceeding on an area of 730 hectares. The proceeding's focus was particularly on the areas of community development and increasing tourist appeal. In addition, unclear ownership rights structures were eliminated, creating a convenient road and water network as a basis for efficient agriculture. It proved possible to increase the recreational value of the landscape and the ecological network by planting. A total of 16 road constructions, 3 water constructions, 6 plantings, and several town development measures were implemented.



View of Schönbach; photo: Dr. Gunter Möbius

In 1999 Schönbach/Zschetzsch was accepted into the Saxon town development program. More than 40 private renovation and repair measures to the existing building fabric were carried out could be supported with funding. A few measures are described in more detail below.

Renovation of the "Sächsische Krone"

Renovation of the former roadhouse was classified as the most important project. The "Sächsische Krone" building is being used as an assembly hall today. Renovation of the outer façade, the exterior with stream bed, the interior area on the ground floor, and the heating and sanitary facilities were tackled. The project was finally realized through the personal contributions of over 2,000 hours of work and in-kind and cash donations of over 15,000 Euros made by the residents.



"Sächsische Krone" town assembly hall;
photo: Dr. Gunter Möbius

Redesign of the town square

Land acquisition and voluntary exchange were needed to enable redesign of the adjacent town square. This is possible according to the land consolidation proceeding's general conditions. The erection of a modern, competitive skittle alley in the "Sächsische Krone" was subject to the condition that 16 parking spaces had to be created nearby. It was possible to do this on the newly designed town square. It now offers space for numerous events such as the Schönbach road race and the annual Christmas market.

Expansion of the fire equipment house

A further project was expansion of the fire equipment house. The community of participants provided the site through land settlement waiver and land exchange. The project was realized with the help of personal contributions made by the companions in amount of 1,600 hours. In addition, an old baking oven was built next to the equipment house with the financial support of the community of participants.



Trough in front of the hydraulic ram system; photo: Dr. Gunter Möbius

Restoration of the hydraulic ram system

The faithful restoration of a hydraulic ram system from 1904 was conducted in 2003 in Zschetzsch with the co-operation of the historical society. It now serves as the water supply for a newly created fire protection pond. It is thus one of only four functioning systems of this kind in Saxony.

Construction of the "Zeitzeugen" historical trail

The hydraulic ram system is part of the "Zeitzeugen" historical trail dedicated in 2007. Initiated by the Schönbach Historical Society e.V., it was built and financially supported by the community of participants in land consolidation. In the process, the existing road network was used taking into account the roads created by land consolidation. The historical trail is a circular route about eight kilometres long that was established both for hikers and bicyclists. At 13 stations the visitor can learn things worth knowing about old technology and local history as well as receive suggestions about observing the cultural landscape and vegetation. The Schönbach Historical Society e.V. manages and maintains the trails and information boards. Several more small projects to beautify the townscape were realized besides this.



Hydraulic ram system with info board; photo: Dr. Gunter Möbius

The newly-created multi-functional trails serve not only agriculture, but also improve the feasibility of the annual road race around Schönbach, which is a nationally known running event with up to 600 participants. It is suitable for the whole family

Numerous planting actions are conducted within the land consolidation proceeding. A total of six plantings were carried out with the involvement of school children and agricultural businesses as compensatory measures for areas sealed off during rural road construction.



Planting action on Bräuneck Weg as personal contribution; photo: Dr. Gunter Möbius



Bräuneck Weg after completion; photo: Dr. Gunter Möbius

The implementation of town development measures encouraged the town community to participate regularly in the Saxon town's competition beginning in 1998. After the 3rd place in 1998 and two second places in 2001 and 2004, 1st place was achieved in the 2007 district competition. It proved possible to occupy 2nd place at the district level in 2008 and Schönbach/Zschetzsch achieved 4th place in the 2009 state competition. Schönbach also scored in the town competition especially with its high civic involvement, which the then mayor of Großbothen characterized thus: "In Schönbach, more people come for community work assignment than they do elsewhere for holidays."

In future too, additional projects will be implemented in the context of the land consolidation proceeding in order to maintain and strengthen the local community. The value of previously implemented town development projects is secured at the same time. For example, continued renovation of the civic centre, redesign of the area around Schuster pond as a meeting area, and replacement of a mourning hall are planned. Tourism in Colditz's Mulde land should also be strengthened and expanded. For example further expansion of existing routes and improvement of tourist signs is provided for this.



Dr. Gunter Möbius,
Schönbach Historical Society e.V.:

"The active participation of our citizens in the workshops conducted and their keen interest in the further development of the district were the reasons a local development concept was created. The members of the working group put up over 500 hours.

The clear will of the still intact rural community to make something of the assembly hall was echoed by the competent authorities. Today we are proud that we have a renovated civic centre with a sense that young and old can unite under one roof."

Multifunctional road network secures agricultural areas in Peritz

"Peritz" land consolidation proceeding,
Meißen County



The town of Peritz is located in the commune of Wülknitz, in the northern part of Meißen County. Local politics and the commitment of the citizens have seen the land consolidation proceeding through especially positively. It's been possible to realize numerous measures in the locale throughout the years.

About the initial situation

The intensive agricultural use of farmland has led to significant changes in Peritz, as it has in many other regions of the GDR. The rural road network has been quickly adjusted to the conditions of large-area management. Existing roads were eliminated and new ones built. All that happened without taking into consideration borders of existing plot of land and the owners' interests. As a result many plots of land were no longer accessible by public roads. Many landmarks were removed during the time of the agricultural production co-operatives. As a result the locality's agricultural plots of land could found only with great difficult.



Town assembly hall in Peritz



Orthophoto of Peritz; source: Peritz Community of Participants



Partially reconverted rural lane with new accompanying plantings along the way



Town square in Peritz with fountain

Rietzschke creek in the locale was partially straightened in the past. The bridges had been in a poor state of repair. The town square was not suitable as a meeting place for the residents because an unused consumer outlet degraded the townscape.

The solution

A simplified land consolidation proceeding was conducted under Land Consolidation Act, sec. 86 on the entire area of about 580 hectares. The proceeding was particularly focused on improvement of the agricultural structure and on town development. The Peritz locale was able to receive its new shape mainly due to the excellent cooperation of the community of participants' board with the local government.

The Kamenz's Office of Reorganisation of Land Holdings at that time ordered the proceeding in 1996. Furthermore Peritz was also a programme village of the Free State of Saxony from 1997 to 2001. The citizens of Peritz participated actively in the process of planning the locality's future shape. Important structural improvement measures could be implemented right in the locale through the connection of reorganisation of land holdings under the Land Consolidation Act and town development with the appropriate financial and substantive funding. These include measures for waste water removal or road construction.

The former consumer outlet was torn down and the town square designed with a fountain. This space will be used by mobile shops as parking space for the mobile supply of meat and bakery products as well as fish. Older residents in particular take advantage of this offer. This square's design with a fountain and benches invites people to linger. This was a particular concern of the local working group and the community of participants' board. There is a village green in Peritz, which is rather unusual for this region, but numerous measures such as the reconstruction of three bridges enabled it to be retained. Peritz also has a small bakery store. A general practitioner from the neighbouring commune comes once a month to the clinic for the local population and uses the premises next to this bakery. The town assembly hall serves as a place of communication. A sports field and a skate park were created for the town's youth.



Redesigned T-junction of rural roads

The rural road network was expanded in the course of land consolidation process in order to ensure the accessibility of agricultural plots of land. In addition, two farm roads were dismantled. The freed up areas could be put to a new use. When choosing road reinforcement, the fact that the proceeding area is located in a flora-fauna-habitat area was taken into account. Thus many of these rural roads were constructed as paved tractor tracks.

This road network not only serves agriculture, but is also very well received by the local population. The roads are used as a foot and bicycle connection between individual adjacent locales. The multifunctionality of the road network prevents additional surface use and increases the traffic safety of both pedestrians and cyclists. It is worth mentioning that the local stakeholders have revived the names originally used with the signage on the lanes. The autonomy and local ties of the population is symbolized this. This is also reflected by the fact that the signs were installed by the participants in the proceeding on their own initiative.

In June of 2009 a town festival was held for the conclusion of the work to end the land consolidation proceeding. All of Peritz was present at the preparation and conduct of the festival.

The tornado in the summer of 2010 had left behind great damage to the rural roads in this proceeding area, and in particular to the plantings conducted as part of the proceeding. The place was still lucky because this tornado passed by just 200 metres from the town. The state of Saxony provided financial resources to restore the original condition. So the quick, unbureaucratic aid had already eliminated the significant deficiencies half a year later.

The land consolidation plan was finally announced in early 2011. In the locale of Frauhain bordering on the proceeding area, another proceeding under the Land Consolidation Act was ordered in 2011, and one was ordered in 2012 in the likewise bordering locale of Lichtensee.



Heinrich Wadewitz,
board member of the Peritz
Community of Participants

"The borders in the land parcels were no longer consistent with current use. Land regulation and surveying in the land parcels often make frequent generational change easier now. I consider improvement and expansion of the road network as well as the planting of trees and shrubs along the roads and ditches to be urgently necessary to upgrade the landscape again. Ultimately the larger, developed units resulting from consolidation of plots of land also enhance the market value of our parcels."

“Kirchberg–Seifersdorf” proceeding – property on the waste–water pond reregulated

“Kirchberg–Seifersdorf” land consolidation
proceeding, Erzgebirgskreis County



Kirchberg is a district in the commune of Erlbach–Kirchberg, which belongs to the Lugau administrative association. The nearby town of Seifersdorf belongs to the Jahnsdorf commune and is one of the oldest settlements in the region. It was presumably founded shortly after 1100. Both municipalities lie on the northern edge of the Ore Mountains. The hilly, undulating terrain offers attractive views for hikers. Both towns are located approximately halfway between Chemnitz and Zwickau.

Initial situation

The consequences of collective farming in the GDR continue to be felt today in rural areas. Unclear ownership rights and the separation of facility and land property still create barriers to investment in the economy, and not infrequently to strife in town communities. With the collectivization of agriculture, the GDR's agricultural economy was dominated by agricultural production co-operatives (LPGs). Here the land was not “expropriated”. Instead the agricultural production co-operatives received a comprehensive, royalty-free, permanent and legally vested right of use, which overlaid the private property. The agricultural production co-operatives could use the areas, cultivate, or distribute them as they saw fit. That was a de facto loss of private property. The unrestricted right to use eventually led to the separation of land use and land ownership and to the separation of facilities and land property during building development.

The majority of the agricultural land in the commune of Erlbach–Kirchberg is now managed by the agricultural co-operative “MAVEK” eG. “MAVEK” eG's premises are located on the border between the districts of Kirchberg and Seifersdorf. Besides livestock farming the enterprise grows grain and forage on about 2,500 hectares of inter-communal land. This operation is currently one of the largest employers in the commune. “MAVEK” eG emerged from the conversion and merger of several agricultural production co-operatives in the early the 1990s with the aim of bringing together animal and plant production. In consequence, today's agricultural co-operative “MAVEK” eG as legal successor is the owner of various facilities including a sewage treatment pond with inlet and outlet, a collecting basin, and a settling basin in the Kirchberg cadastral district, which was built in 1981 with the construction of the dairy



Settling pond – the "MAVEK" eG's facilities can be seen in the background

plant. The aforementioned facilities, including the roads that make the pond accessible, are located on several plots of land, which, however, do not belong to "MAVEK" eG's property. So far there has been no in rem guarantee in the land register. These facilities were originally used to separate and clean sediment from surface waste water and that of the stable facility's milk house. It proved possible meanwhile to reach the classification as storm water treatment plant due to the separation of precipitation and stable waters. Until now it was not possible for the agricultural co-operative to freely access the facilities and their access roads, because it did not also own the ground. In turn, because something was built on it, the owners could not use their property whether by the lane or the pond and they do not own the facility.



Stable facility on "MAVEK" eG's premises

But personal memories are bound up with the property too. Finally, there is the desire for justice, which the current owners are striving for. Should they now have to sell the ground, they would view it as a new compulsion after having already been de facto dispossessed once by the agricultural production co-operatives law without receiving adequate compensation. Due to this sensitive set of issues, which provides plenty of fodder for confrontation, it is often difficult for the participants to come to agreement under private law. As facilities owner, the enterprise filed an application to clarify ownership rights under the Agricultural Adjustment Act.

The solution

A land regulation proceeding under Agricultural Adjustment Act, sec. 8 was ordered. The goal of the proceeding is to guarantee the availability of all property and access to all of the plots of land.

Sächsische Landsiedlung GmbH (SLS) was placed in charge of the extensive technical tasks as administrative aid. That also includes administering proof of ownership. The entries in the land register are often outdated. Ownership changes have occurred, by succession for instance, without the land register having been updated. In the proceeding, involving approximately 49 hectares and directed by the authorities, it was possible to show the five participants possible solutions and the advantages and disadvantages were discussed with independent experts. In some cases, only this moderation makes arrival at mutually acceptable solutions possible.



The "MAVEK" eG agricultural co-operative's premises and the waste water pond in question from a bird's eye view with associated cadastral map section. The newly negotiated borders are in red; eliminated plot-of-land borders are crossed out; source: GeoSN, Erzgebirgskreis Rural District Office



Negotiation with participants, government officials, and a representative from Sächsische Landsiedlung GmbH

Participants were able to agree on various definitions during the course of the negotiations. Thus the settling pond received its own plot of land, which passes into the "MAVEK" eG's ownership. They also acquire the access road to the pond as a separate road plot of land. An easement for the waste-water line is established in the land register. A community of heirs was able to agree on sale of the land. The agricultural co-operative acquired this land with which it was able to increase its ownership share of the total operating area. Ownership leads to investment security and this ultimately ensures jobs.

The layout of a few plots of land was improved; commercial use is more attractive. Moreover it was possible to adjust district boundaries to local conditions. This was impractical within "MAVEK" eG's premises. Not least, the clarification of ownership questions clears the way for the restoration and strengthening of legal peace within the town community.

Left:
property structure before the land regulation proceeding;
source: Erzgebirgskreis Rural District Office

Right:
property structure after the land regulation proceeding;
source: Erzgebirgskreis Rural District Office





Protection of the sensitive spring water marsh near Pressel in the Düben Heath requires revitalization of the aquifer. This is made possible through a land exchange as part of a parcel consolidation proceeding; photo: Dr. Jan Stegner

Nature conservation and environmental protection

The basic tasks of nature conservation are wide-ranging. Biological diversity and the performance and functionality of the ecosystem must be ensured. The diversity, uniqueness, and beauty of nature and landscape must be preserved as well as maintained, developed, and restored in terms of their recreational value. All of these tasks arise from nature protection legislation.

The implementation of nature conservation measures is always bound to land parcels in the countryside. This causes broad overlap with the tasks of reorganisation of land holdings.

Land consolidation proceedings can and should accompany and support other responsible planning bodies with the former's instruments. Thus they contribute to the implementation of all plans, which aim at the lasting improvement of living conditions in rural areas. This includes maintenance and improvement of natural resources under the Federal Nature Conservation Act.

Requirements of nature conservation

As a societal obligation, nature conservation has various fields of activity. Among these are, for instance, site protection, species and habitat protection, habitat connectivity, landscape conservation, and protection of natural processes and natural scenery. Nature conservation's framework-setting requirements are formulated by law. When plans take the technical aspects of nature conservation into account, they contribute to the environmentally friendly moulding of land uses. From the technical nature-conservation viewpoint, particularly significant species and habitats can be preserved in protected



Example of morphodynamic processes on the Mulde: About 10 metres of land was lost left in the image as a result of the January flood in 2011. The gravel beach on the right in the image has widened. The tree lying in the river was still standing on the shore in 2010. These kinds of process are important for nature conservation and cost the availability of land; photo: Dr. Jan Stegner, March 2011

areas for instance with support and development plans or management plans and the implementation of suggested measures or state-subsidized support measures. Requests such as the following can be made mandatory for the protection of species and biotopes:

- The abstaining from or withdrawal of earlier changes to the landscape
- The continuation or resumption of certain use forms (often just in the form of care measures)
- The complete abstaining from certain uses or their restriction
- The new creation or reinstatement of biotopes and habitats
- The allowance of dynamic processes

In many cases nature conservation can only succeed over a broad area. It requires for instance the protection of marshes and the securing or improvement of groundwater catchment areas that are several times larger than the marshes themselves. The protection of watercourses may require measures throughout the water catchment area. It is just as impossible to maintain animal species needing large habitats on small areas. Many species and habitats can only be maintained when natural events are permitted that can have catastrophic impacts from the land use perspective. Examples are natural floods in river floodplains, which are a basic precondition for the continuance of certain species and biotopes. The survival of many species is only possible when undisturbed refuges and large-scale, linked systems exist for them. Connections that require a change to existing land use must often be created in the cultural landscape.

Conflict situations

A fundamental problem arises from the contradiction between nature conservation as a societal task and the justified use claims of landowners. This contradiction cannot always be resolved through agreements. Many complex nature conservation plans cannot be implemented without securing legal ownership rights to land parcels. Areas whose owners have other use interests are frequently needed for development measures. In other cases a considerable discrepancy between property and utility structure has arisen during the course of recent decades that can impede nature conservation.



By water logging agricultural land, the beaver (*Castor fiber albus*) leads to conflict. With freshly laid bait, the species is drawn into a conflict-free area of Düben Heath, which was created by land exchange in a land consolidation proceeding; photo: Dr. Jan Stegner

In some regions land was and is acquired for the benefit of nature conservation, but these are often a mosaic intermixed with the areas of other owners. This can block the implementation of nature conservation measures.

Solutions

Land consolidation proceedings, particularly simplified land consolidation proceedings under Land Consolidation Act, sec. 8, can be appropriate instruments for resolving land use conflicts. Such proceedings can be initiated to implement land development, nature and drainage protection, landscape management, and natural scenery design measures as well as to resolve land use conflicts, among other things. Such proceedings can

- bring the property structure into agreement with the current landscape structure (or use structure),
- resolve use conflicts between owners (for instance responsible body for nature conservation measures) and leaseholders (for instance agricultural operations),
- merge fragmented individual parcels for the implementation of nature conservation measures and thus primarily make parcels available for development measures,
- bring about use separations (nature conservation, land use), and
- resolve basic conflicts among various parties (nature conservation, landowners, and land users).

Public land areas are brought into the land consolidation proceeding to obtain sufficient leeway for development measures necessary for nature conservation. Both nature conservation and land users can also profit when nature conservation measures in connection with land consolidation proceedings are fed into the Saxon eco-account. Investors can thus be offered "turnkey" packages of compensatory and substitutional measures. At the same time the tailored implementation of nature conservation is made possible. The withdrawal of land and forestry areas can be better controlled and minimized. Several complex projects used for implementing the objectives of the biotope network, flora-fauna-habitat (FFH) management planning, and measures design under the Water Framework Directive are already stocked up in the Saxon eco-account.

Dr. Jan Stegner, free biologist,
Institute of Landscape Ecology and Vegetation Science (GbR)

Callenberg Nord II is a habitat for rare animals and plants

"Callenberg-Nord" land consolidation proceeding, Zwickau County



Beginning in 1978, work began to access a nickel ore deposit between the towns of Callenberg and Langenchursdorf. Thus the land used up until then for agriculture disappeared. Mining of the ore occurred in the strip mine and was discontinued again in 1989. During this period of just a few years, it proved possible to mine around 1.69 million tons of nickel ore in this area alone. However the intrusion irreparably destroyed the cultural landscape.

About the initial situation

The nickel ore mining occurred in the GDR without legal ownership regulation with the landowners. The areas previously used for agriculture were thus unceremoniously laid claim to and the owners de facto deprived of the land.

After ore mining ceased, interest conflicts between the private owners and nature conservation arose increasingly beginning in 1990. Waste was dumped illegally on the grounds. Over the years a pool that invited swimming formed in the depression left behind.

The existing landscape was in fact irretrievably destroyed; nonetheless a valuable nature conservation area emerged. The strip-mining activity left behind new structures such as rock walls as well as gravel and boulder areas. Undisturbed over the years, otherwise rarely occurring plants and animals were able to establish themselves. This newly emerged habitat was thus reported in 1994 as the "Callenberg Nord II" nature conservation area. However at the same time this resulted in the landowners' use of these areas as arable land being henceforth permanently withdrawn.



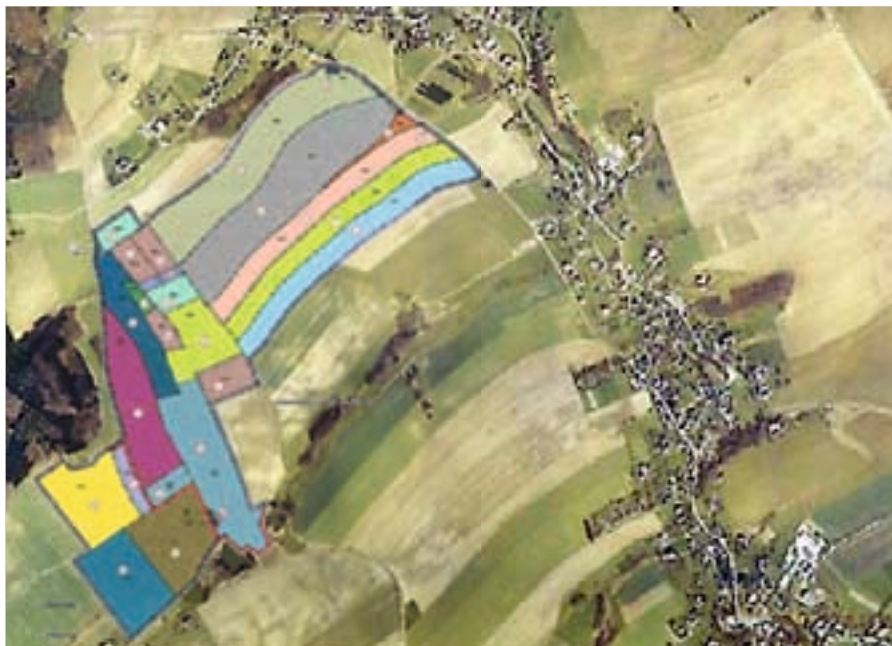
The former strip-mine area has become a refuge for rare plants and animals; photo: Callenberg-Nord Community of Participants

The areas occupied by the strip-mining areas limit the nature conservation area spatially. However, these are not identical with the actual property lines. Clarification of this legal relationship did not occur until the upgrade to a nature reserve. The ore mine's massive intrusion led to considerable transsection damage to adjacent agricultural areas, which led in consequence to uneconomically shaped residual areas. The parcels' accessibility was thereby rendered significantly more difficult.

The land use conflicts arising between nature conservation and agriculture could not be eliminated at first. The owner of the plot of land concerned, the municipal councils of the former communes of Chursbachtal and Callenberg, and former state bodies such as the Regional Council of Chemnitz as higher conservation authority, the State Environmental Agency, and Chemnitzer Land County favoured a land consolidation proceeding to solve the multiple problems. As a result, in December of 1995 the landowners suggested to the then responsible Oberlungwitz Office of Reorganisation of land holdings that a land consolidation proceeding be conducted.



Illegal trash dumping;
photo: Callenberg-Nord Community of Participants



Old condition of the proceeding area – The “Callenberg Nord II” nature preserve is marked in red.
photo: Callenberg-Nord Community of Participants



Penduline tit;
photo: Media database of the Saxon State Ministry for Environment and Agriculture

The solution

A simplified land consolidation proceeding under sec. 86 of the Land Consolidation Act was ordered in 1997 to resolve the various interest conflicts. The proceeding area encompassed an area of around 104 hectares. A total of 28 plots of land were located within the proceeding area.

It proved possible to develop good solutions quickly due to the openness of all parties, especially the landowners. The agricultural road network was redesigned and expanded corresponding to current use requirements. These roads passed into the ownership of each of the two communes. It was possible to reshape and allocate the remaining agricultural areas taking the desires of the participants into account. The execution costs totalled 208,000 DM. With a personal contribution share amounting to 14 per cent, the remainder was funded by the federal government and the Free State of Saxony from the joint “Improvement of Agricultural Structures and Coastal Protection” task.

A fundamental principle in the land consolidation proceeding is to bring about a settlement of the same value in land. However in specific cases the owners agree to a money settlement. It was thus possible to entirely acquire the areas worthy of nature conservation. A total of 27 hectares of nature conservation land was legally secured and passed into the county's ownership. This area was closed to unauthorized entry so that flora and fauna can develop undisturbed.



New state of the proceeding area; photo: Callenberg-Nord Community of Participants

The "Callenberg Nord II" nature preserve today

The area has developed splendidly. More and more plants and animals live in this protected space, which humans may not enter. In particular bird species such as the red-backed shrike, the penduline tit, and the Yellowhammer, which hardly find a habitat anywhere else, could be observed. Especially the body of water with its shore areas arising after termination of strip mining activity offers a habitat to various bird species, but also many other animals and plants. So there are different types of dragonflies, butterflies, and endangered lichens and mosses.



Spotted Orchid;
photo: Dirk Synatzschke, Sachsenforst State Enterprise, media database of the Saxon State Ministry for Environment and Agriculture

Presseler Heidewald- und Moor- gebiet is permanently safeguarded

"Wöllnauer Senke" land consolidation
proceeding, Nordsachsen County



The large "Presseler Heidewald- und Moorgebiet" nature conservation project lies in the Düben Heath nature park north-east of Eilenburg in the communes of Doberschütz, Laußig, Dreiheide, and Trossin. The area is located in the Elbe-Mulde lowlands nature area. The core area has a size of about 4,400 hectares. It is characterized primarily by large-scale formed marsh and forest-mire areas. These include the Zadlitzbruch and Wildenhain Bruch.

About the initial situation

The landscape is characterized by a large number of marshes, swamps, brooks, and wet meadows. However extensive measures, particularly the peat removal beginning in the 19th century as well as large-scale drainage of the marshes and meadows between the years 1970 and 1990, led to increasing soil desiccation. These measures severely impaired the peat field (peat depletion). These interventions resulted in a loss of up to 60 centimetres of land height. The soil's composition and functions changed profoundly. At the same time the variety of plant and animal species declined. The areas in the region's south west (Pressel/Wöllnau area, the so-called Wöllnau Senke) were more heavily used for farming as a result. The share amounts to about 1/10 of the large nature conservation project's area.

The large "Presseler Heidewald- und Moorgebiet" nature conservation project was funded by the German Federal Agency for Nature Conservation from 1995 to 2009. With this financial support, it was possible to implement high-priority measures that protect wetlands long-term. Furthermore marshlands, meandering streams, and forests were renatured. The area involved covers about 6,300 hectares, of which about 4,400 hectares are part of the nature conservation project's core area. Such large projects are characterized primarily by the fact that these natural spaces are of great significance at the state level as well as being nationally important and representative. The Presseler Heidewald- und Moorgebiet Administration Union is the body responsible for this large nature conservation project. Nordsachsen County and the Naturschutzbund



Grassland near Wildenhain Bruch in the land consolidation area water logged by marshland revitalization; photo: Dr. Jan Stegner

Deutschland (NABU) Landesverband Sachsen e. V. have jointly taken over sponsorship. The goals of the project are, among other things, preservation of the largely undeveloped, sparsely subdivided area, stabilization and improvement of the groundwater balance to preserve the wetlands, and accelerate conversion of monotonous forest areas into natural forests.

The maintenance and development plan provides that local conditions be created enabling future maintenance of existing peat and bog growth. However land use conflicts arise due to the implementation of these measures. Particularly for farm operations, the increasing water logging of land means a restriction in cultivation up to abandonment of the land's agricultural use. A working group comprising nature conservation and farming experts was formed due to the complex initial situation. This working group set itself the goal of implementing nature conservation project goals and, at the same time, of securing the existence of farming operations. The co-operation of all participants led ultimately to it being possible to reach agreement between the farming operations and the special purpose association for the delineation of usable farming land, and the areas for renaturation with subsequent succession and landscape maintenance. The acquisition of land in the area of the nature conservation project is therefore necessary for the long-term protection of these areas.



Ragged Robin (*Lychnis flos-cuculi*) – a typical variety in wet meadows; photo: Dr. Jan Stegner



Planned expansion of paved track ways in the proceeding area – comparable construction here in the commune of Langenweißbach



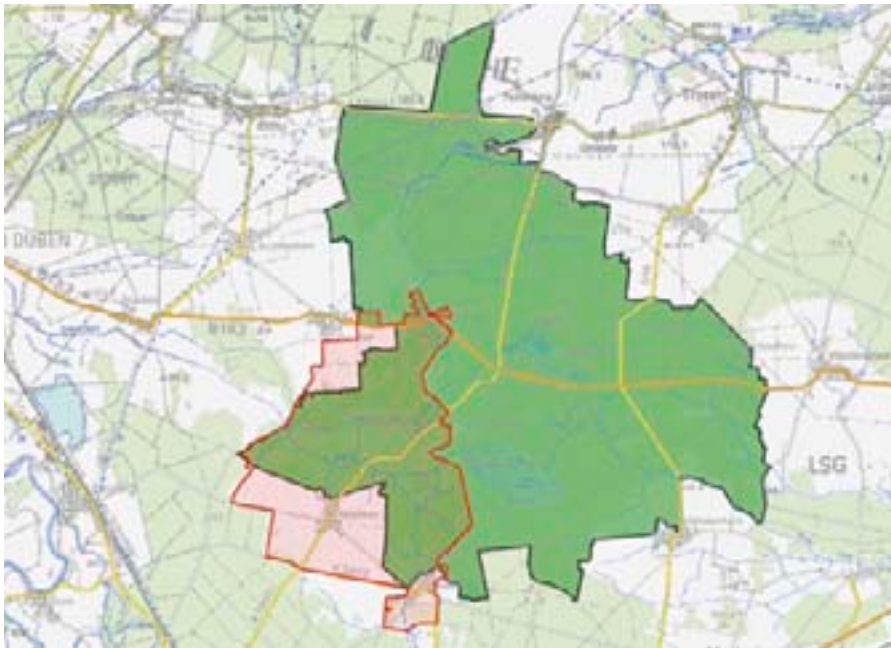
Proposed planting of a windbreak hedge – here similar planting in the commune of Erlau

The solution

The long-term securing of ownership rights to these areas is an important prerequisite for implementation of the measures provided by the large-scale nature conservation project. Other ways had to be found after the private legal options (usually the purchase of the necessary land) had been exhausted. In part, it was possible here to allocate restoration sites into the ownership of the special purpose association by the method of voluntary land exchange carried out under sec. 103 of the Land Consolidation Act. However a final settlement for a larger portion of the affected areas was not possible this way. The special purpose association therefore applied for a land consolidation proceeding in 2009 with the goal of reaching a legal property ruling. The Reorganisation of land holdings Office of the Nordsachsen Rural District Office thereupon initiated as simplified proceeding under sec. 8, paragraph 1 of the Land Consolidation Act.

The proceeding area has a size of about 1,800 hectares and covers mainly the southwest area of this large-scale nature conservation project. A total of 521 vested rights are affected; this corresponds to a least as many participants.

There are currently 13 farming operations engaged in agricultural activities in the proceeding area. These enterprises should receive more profitable area for cultivation during the course of the land consolidation proceeding. In return the long-term use of sites valuable for nature conservation should be secured. In addition it is provided that lease agreements favourable in the long term for use of the special purpose association's plots as well as those of the Free State of Saxony will be concluded with the farming operations.



Position of the land consolidation proceeding (red) and of the large nature conservation area (green);
source: Wöllnauer Senke Community of Participants

The existing agricultural road network should be expanded in addition to regulating ownership rights. Lane connections will be disrupted due to scheduled planning within the large-scale nature conservation project. New lane connections should be created within the land consolidation proceeding to nonetheless ensure accessibility of the agricultural areas. The rural road network is being redesigned to meet today's requirements. Among other things here, building methods are being used that seal the surface as little as possible. Among these are paved track ways, which have proven themselves in many ways in other land consolidation proceedings. In particular these roads meet stringent nature conservation requirements. They are used primarily in the cultivation of agricultural areas. Heavy agricultural equipment travels these roads resulting in severe stresses. Upkeep costs and of course the costs for expansion should be minimal however. But rural roads should also be sufficient to meet multifunctional requirements. That means they are also available for other users. Among these are hikers and bicyclists who want to relax in nature.

The cultivation of agricultural areas, particularly agricultural crop land, is influenced by wind erosion in the proceeding area. Copses, green road borders, and shore plantings on flowing waters should be created to reduce the removal of topsoil.

The plan is currently being worked out under sec. 41 of the Land Consolidation Act. Following this, the plan will be submitted for approval to the superior land consolidation authority. Implementation of the measures planned therein is foreseen beginning in 2013 and 2014. Valuation of the areas included in the proceeding is done in parallel with this. Thus the preconditions for the desired meetings under sec. 57 of Land Consolidation Act are created. Participants in this proceeding can express their desires for settlement at these meetings. The land consolidation plan is subsequently established. The goal is a proceeding term of ten to twelve years.



Transitional marshland in Zadlitzbruch;
photo: Dr. Jan Stegner

Molinia meadow in Dresden's Elbe Valley

"Birkwitzer Wiese" land consolidation proceeding, Sächsische Schweiz – Osterzgebirge County



The basin between Pirna and Meißen in which the city of Dresden lies is referred to as “Dresden Elbe Valley Hollow”. Geologically, it is bounded by the foothills of the Eastern Ore Mountains, the Lusatian granite slab, and Lommatzsch hill country. This area arose from the Elbe’s excavation activity, which dug into the glacial earth deposits with several meandering arms. Very early settlement of the area took place due to the fertile soil. It formed the foundation for the cultural-historical development and contemporary celebrity of the city. Dresden is not just culturally significant. The Elbe valley has also been able to largely preserve its natural riches.



Protection of the “Birkwitzer Wiese” by marking as a natural monument area and the fence;
photo: “Birkwitzer Wiese” Community of Participants

The initial situation

One of the rare molinia meadows can be found in the Dresden Elbe valley hollow. Such meadows are at home on damp earth and were traditionally mowed once every year. The cuttings have a low nutritional value so they were often used as litter in stalls. Therefore they are commonly referred to as "litter meadow". With the modernization of agriculture, these areas were often drained and converted into intensively used grassland or fields. Molinia meadows are very rare in Saxony. They are usually characterized by small areas and are floristically impoverished. The few remaining areas have, without exception, a high nature-conservation value. They belong to specially protected biotopes under sec. 26 of the Saxon Nature Conservation Act and are threatened with complete, nationwide destruction (red list biotope types). They provide habitat for many plant species and many endangered animal species, which are uncompetitive in intensively managed grassland. These meadows are typically rich in orchids and gentians and delight with their rich colours. Molinia meadows are very sensitive to changes in use (especially when mowing), fertilization, drainage, or abandonment.

The molinia meadow in the Dresden Elbe valley hollow is strictly protected as the "Birkwitzer Wiese" area natural monument, but it includes an area of only about 3,000 square metres. It is surrounded by drained, agricultural and forestry areas. This biotope should continue to be protected, preserved, and expanded to an area of 3.3 hectares.

The implementation

The project is to be implemented in co-operation between Sächsische Schweiz-Osterzgebirge County, the Landesverein Sächsischer Heimatschutz e.V., and Sächsische Landsiedlung GmbH (SLS).

The superior land consolidation authority based in the county supports the project through land reorganisation. It ordered the "Birkwitzer Wiese" simplified land consolidation proceeding for this in June of 2010. This encompasses an area of around 60 hectares. The use conflicts between the goals of nature conservation and surrounding agricultural cultivation are to be eliminated by reorganizing plots of land.

The conduct of building measures is not required due to the predominantly uniform cultivation by a leaseholder. Therefore a road and water plan does not to be established. The development of agricultural land is protected by land regulation within the proceeding.

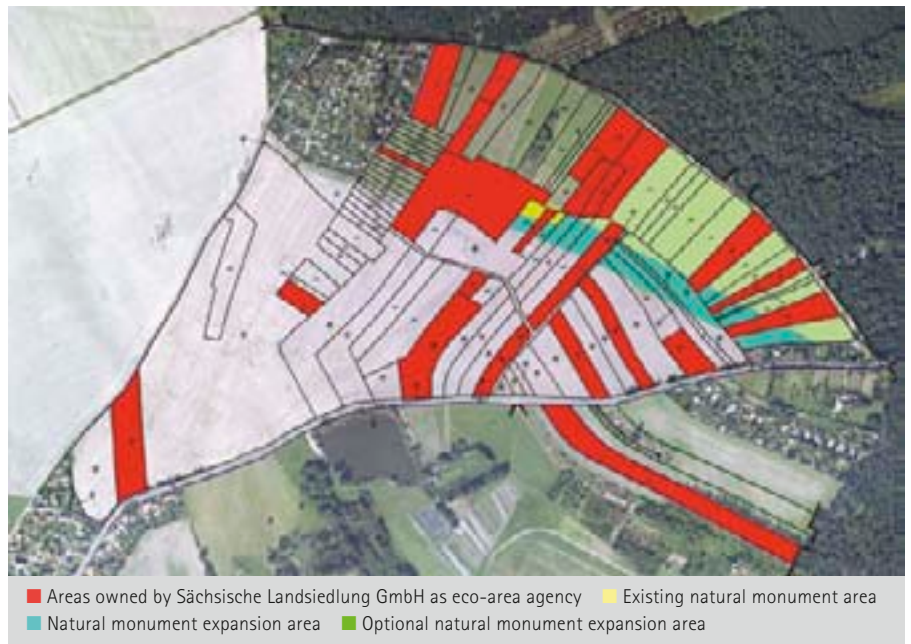
The affected landowners' acceptance is essential for the success of these kinds of projects. Land consolidation proceedings offer good preconditions for this. The landowners, who together form the community of participants, are the body responsible for the proceeding in Saxony. The Saxon Implementation Law to the Land Consolidation Act (AGFlurbG) entrusts them to carry out the proceeding's essential tasks. They shape the proceeding area themselves through their elected board.

Land regulation in the service of nature conservation

The "Birkwitzer Wiese" land natural monument is developed through the Saxon eco-account. That means that this measure, desirable in terms of professional nature conservation, will be given preferred implementation. The added professional nature conservation value can be subsequently expressed as eco-points and sold to investors. This approach immediately offers several advantages: Normally an investor must conduct suitable compensation and substitution measures himself for his intervention in nature and landscape. This is not always easy, not least because of the poor availability of suitable land. However, if third parties already have appropriately conducted measures "in stock", the investor can quickly and easily buy the required eco-points to fulfil his obligations. It also makes sense from the perspective of nature conservation if, for instance, the compensatory obligations of several investors can be pooled in particularly important, but usually more expensive projects.



View of the Pillnitz vineyards in Dresden's Elbe Valley



Project footprint and property of Sächsische Landsiedlung GmbH
 material: Sächsische Landsiedlung GmbH and "Birkwitzer Wiese" Community of Participants



Purple moor grass appears in its typical red-brown autumn colours;
 photo: Dr. Wolfgang Böhnert

Sächsische Landsiedlung GmbH has already been able to acquire various plots of land within the proceeding area in its capacity as eco-area agency. This was done partly through notarial purchase contract. Easier and less costly for the participants is acquisition via land waiver declarations under sec. 52 of the Land Consolidation Act. If a participant wishes to be compensated wholly or partly in money instead of land, he can explain this to the community of participants. The community of participants or the developer can acquire the land if this land waiver serves the implementation of the proceeding. Monetary compensation can be settled before the end of the proceeding. However the areas acquired by Sächsische Landsiedlung GmbH are scattered throughout the proceeding area.

The Sächsische Landsiedlung GmbH's areas are now merged during redesign of the proceeding area. This is done so that sensible extension of the existing biotope can occur from a nature conservation perspective. So property rights to the remains of the river valley depression are also legally secured. At the same time the former owners receive land of equal value outside of these sensitive, high-quality nature conservation areas.

Sächsische Landsiedlung GmbH can, so to speak, offer these measures "turnkey" in the Internet since its areas have been assigned by the land consolidation authority as part of the "temporary arrangement". This intermediate ruling already prepares the later, new condition. This helps to implement the intended measures in a timely manner and to facilitate conduct of the proceeding. Maintenance and development of the land areas under Sächsische Landsiedlung GmbH's envisaged measures concept is accompanied by the Landesverein Sächsischer Heimatschutz e.V.



Flooded farmland near Dresden

Flood protection

The significance of reorganisation of land holdings for flood protection may not be obvious at first glance. However anyone who has come across kilometre-long flood-protection dikes while strolling along the Elbe, Mulde, Neiße, or some other river will quickly realize that the erection of such facilities requires enormous areas. It is also clear that the contact and operation areas of dikes and dams, and of flood-water storage ponds are permanently withdrawn from other uses.

Less well known is that flood control often involves obligations to tolerate and restrictions on use. Thus for instance, reservoirs used for agricultural purposes in so-called green (dry) flood-water storage ponds and polders are typically burdened with flooding rights. If a reservoir inundation that damages or destroys the crop occurs during high water, the land manager must accept it.

The effectiveness of flood protection measures depends very much on their position relative to hazardous waters or to the hazard area. If the body responsible for the flood protection measure is not the owner of the required plots of land, it must acquire the land from third parties.

It is never a problem to design a land acquisition if the affected landowner is willing to sell on acceptable terms. If the responsible body owns or can obtain exchange land, and the landowner accepts the land exchange, nothing stands in the way of implementing the measure.



System of flood protection embankments above the locale of Podelwitz; photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants

Problematic land acquisition

But what about when the landowner wants neither to exchange nor sell, or when he has completely exaggerated price expectations? What about when he cannot sell because his livelihood, his farming or forestry operation, would be lost?

Albeit rather ugly, the body responsible for a flood-water protection measure can confront unwillingness to sell or exaggerated price expectations using expropriation. Heavy demands are rightly placed on the permissibility of expropriation. The expropriation must be possible under a sectoral law, according to which the action plan is established.

Saxon Water Law provides a basis for plan establishment and expropriation for flood protection systems. But should every little flood protection measure be authorized in a complex planning procedure for lack of land availability? What happens with the preventive flood protection measures that are intended to maintain or restore retention areas and for which no planning procedure are provided? Can these be implemented only if the responsible body owns or can acquire the areas?

Even if a plan establishment decision exists for a measure, may the affected party really be expropriated if he will thereby lose his livelihood, his farming or forestry operation? Also important is the question of how long an expropriation proceeding can be drawn out where the funding with which flood protection measures are financed is only available for a limited time. It is also always problematic when areas are required whose owner is unknown and cannot be determined despite extensive research.

Customized solutions through reorganisation of land holdings

Reorganisation of land holdings offers customized solutions for all of the problems addressed in connection with land acquisition for flood protection measures. More so, as the Dittersbach land consolidation proceeding subsequently shows by way of example, concepts can be developed and implemented as part of the proceeding that substantially defuse or completely eliminate specific local flood hazards.



Near-natural reshaping of the Ziegenbach ground; photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants

The simplified land consolidation proceeding under sec. 86 of the Land Consolidation Act is an ideal instrument for resolving land use conflicts and bringing about a balance of interests between landowners and project developers. Thus exchange land available in the proceeding area can be allocated to landowners who need to provide their land for flood protection measures.

Simplified land consolidation proceedings for land-reorganisational implementation support for flood protection measures (so-called flood proceeding) were ordered after the flood catastrophe of 2002 at the request of the Saxon State Reservoir Administration, for example in Nordsachsen and in the drainage basin of Freiberg Mulde. The simplified Zschadraß land consolidation proceeding subsequently presented in more detail is included among these.

With special operations, a specific procedure provided in secs. 87 to 90 of the Land Consolidation Act is available as a tool for land consolidation to provide at least five hectares of rural plots of land for large-scale flood protection measures. The proceeding assumes the permissibility of expropriation, but presents a less severe means in contrast to this. The meaning and the legal precondition of a special operation is to distribute the land loss of a few owners across a larger group of owners. However the proceeding is also admissible when disadvantages for general land improvement can be avoided or moderated.

An enterprise land consolidation can be ordered on application of the expropriation authority, as soon as the planning procedure for admission of the flood protection measure has been initiated. The advantages of the proceeding include the possibility of ownership control (dispossession of landowners and putting into possession of the authority responsible for businesses) that can be taken immediately after the declaration of enforceability or immediate enforcement of the plan establishment decision. It places the authority responsible for businesses in the position of being able to begin promptly with implementation of the project.

Wolfram Worm, surveying assessor,
chairman of several communities of participants in Görlitz County

Flood protection in Dittersbach

"Dittersbach" land consolidation proceeding,
Mittelsachsen County



The town of Dittersbach lies in a secondary valley of the Gimmlitz in the Eastern Ore Mountains. Dittersbach has been a district of the city of Frauenstein since community area reform of 1994. The surrounding areas are predominantly used by agriculture and forestry. Lichtenberg dam is located in the immediate vicinity. The place is of interest for tourism due to its altitude and its enchanting scenery.

About the initial situation

In the past there was repeated flooding on the south-eastern outskirts. This led to damaged buildings and agricultural roads.

The higher lying areas are used for agriculture. Brief, intense rain could cause strong outflows from the field location if plant cover, vegetation state, and water saturation of the soil were to interact unfavourably. Snow melt when the ground is frozen also represents a high risk of flooding that leads to inundation.

The solution

On behalf of the Dittersbach Community of Participants, a concept was developed, which assessed the local situation and presented concrete proposals to protect against floods. The goal was and is the protection of property and infrastructure in the flood zone. Nassau Road's elevated construction interrupts the terrain structure. Thus two water catchment areas result separated from each other by roads. Two separate flood protection measures were recommended in consequence. If necessary they should gather water accumulating from the area, reduce the flow force of the run-off, and slowly release the water again. The feedback between planners and local Community of Participants' board enabled an optimal choice of sites for measures and operating mode of constructions in accordance with the overall concept of the road and water plan. Both measures act in a small area and are intended to restrain precipitation in the respective catchment areas themselves. Positive impacts on the area-wide flood situation result from this. The community of participants implemented both projects during the course of a road construction measure.



Remains of the former machine hall; photo: Dittersbach Community of Participants

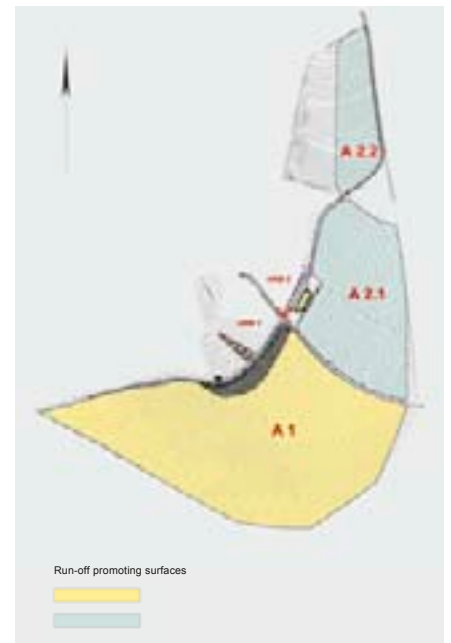
Advantages of the proceeding

A solution was brought about on the residents' initiative with the alternatives of the land consolidation process. This is citizen participation in the true sense. The necessary organizational and legal basis for planning, funding, and provision of the required land and the construction of flood protection works has been created by the community of participants in collaboration with the commune and the relevant authorities. The flood protection measure areas were made the property of the commune during the course of the proceeding. The commune has already taken over the maintenance obligation for the two structures during the proceeding.

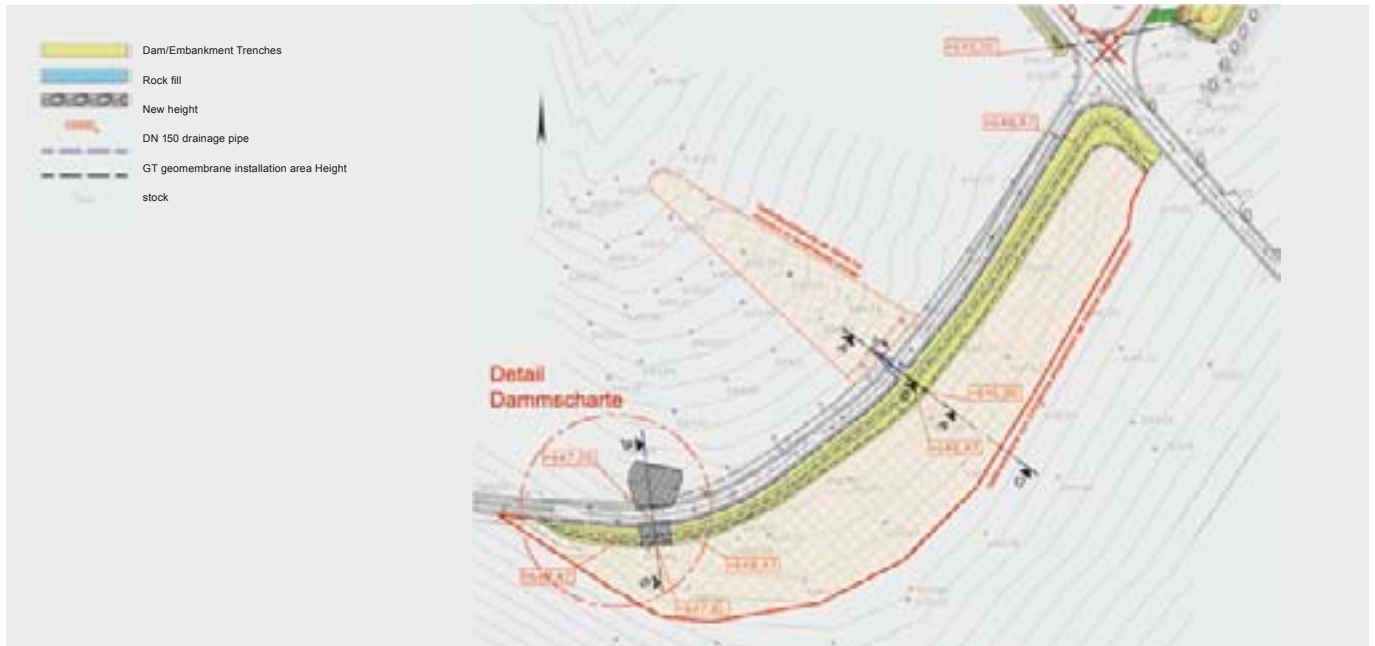
Flood control dam – catchment area A 1

Catchment area A 1 is flanked by Nassau Street and the way up to the market. The way up to the market runs crosswise to the slope. Above this farm road and parallel to it, a dam was built as a protective measure. It forms a basin with the existing terrain.

The dam initially retains the accumulating water. During regular operation, a culvert pipe at the basin's lowest point directs the accumulating water under the farm road. The water then flows in a profiled depression to an existing ditch. In the event of a flood, a so-called spillway comes into use as an overflow and relief structure for the dam. It consists of an overflow area and a connecting coarse wash, which is constructed using rock fill to avoid washouts and to reduce the water's flow force (energy conversion). The farm road is integrated into the spillway and is built to be floodable in this area.



Detail of the community of participants' planning documents concerning the situation of the catchment areas and the planned measures; source: Dittersbach Community of Participants, Eberlein Planning Office



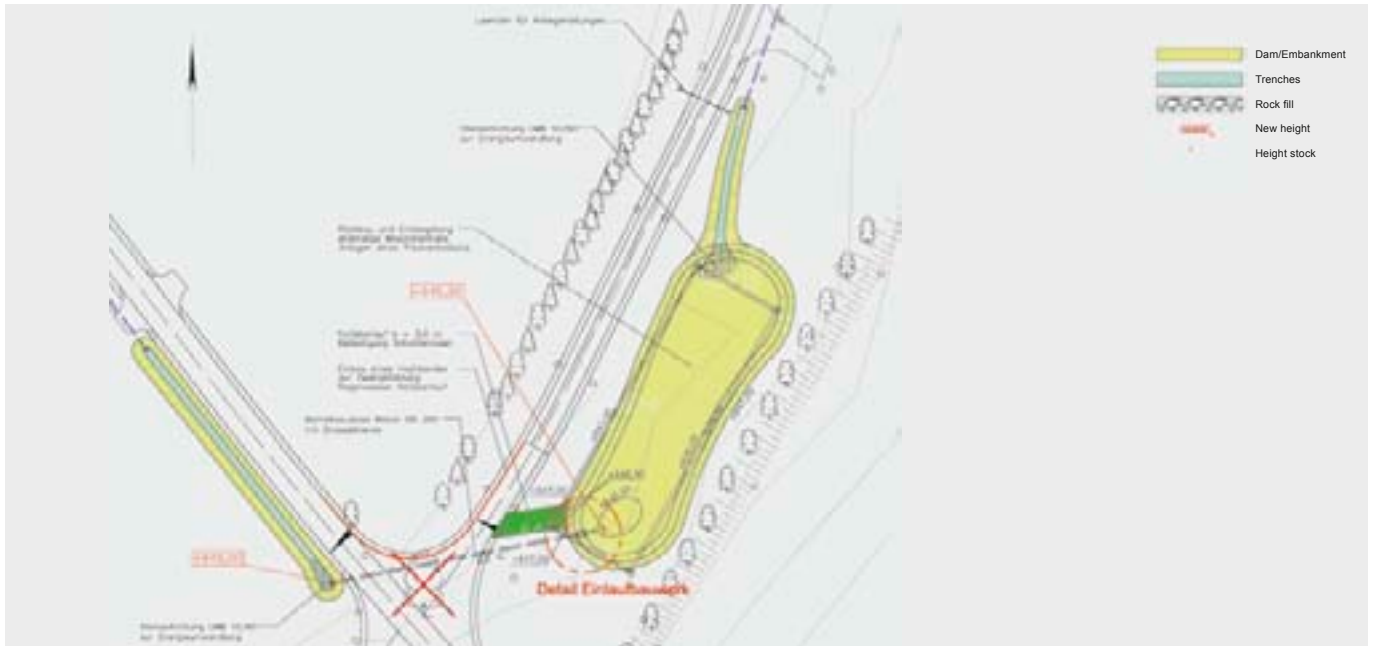
Planning documents for the flood control dam – catchment area A 1; source: Dittersbach Community of Participants, Eberlein Planning Office

Flood-water storage pond – catchment areas 1. and A2.2

A storage pond was designed as a protective measure for catchment area A 2. Accumulating precipitation water is collected in the basin as needed. The water is diverted under the intersection and into a ditch via an inlet pipe and connecting culvert pipe. In the event that the amount of precipitation exceeds the storage pond's capacity, there is an emergency spillway, which is secured by a gravel lawn. The foundation walls and foundations of a former machine hall were initially located at the proposed site. These were torn down, the ground unsealed, and the new dry basins profiled.



Completed flood control dam with spillway and farm road – catchment area A1. The locale to be protected is seen in the background.



Planning documents for the flood control dam – catchment area A 2; source: Dittersbach Community of Participants, Eberlein Planning Office

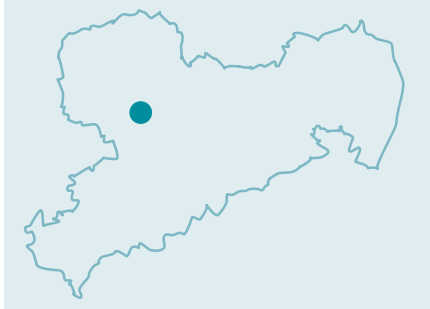
Today the dam and storage pond fit into the landscape and fulfil their function. Both areas are used as grassland and grazed. As a result a troublesome machine hall was removed, the area returned to agricultural use, and at the same time is making a significant contribution to flood protection for the locale.



Completed flood-water storage pond – catchment area A 2

The calming of Ziegengrund Brook in Podelwitz

"Zschadraß (Hochwasser-) Muldedörfer" land consolidation proceeding, Leipzig County



Water flowing wildly from the Ziegengrund repeatedly reached the locale of Podelwitz in commune of Colditz (now the city of Colditz) with significant consequences. This locality lies directly on the Freiberg Mulde, which merges with the Zwickau Mulde in Sermuth not far from there.

About the initial situation

In the 1970s the originally open, naturally winding bed of Ziegengrund Brook was piped to enable more intensive use the agricultural areas. At that time it was possible to execute such measures quickly without much effort. Nature conservation concerns or other interests were not, or insufficiently, taken into account during planning and implementation. The focus was only on the requirements that emerged from agricultural use of the land.



Devastation of the Podelwitz locale in August 2002;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants



Detail from the overview map of the landscape plan;
source: Zschadraß (Hochwasser-) Muldedörfer Community of Participants

Floods occurred ever more frequently since the mid 1990s. The brook caused immense damage on private plots of land and in the public domain especially around the water castle in Podelwitz. These areas were repeatedly flooded and buried under a thick layer of mud.

The Ziegengrund has a catchment area of around 137 hectares. The cohesive soil can absorb little or no water because of the pronounced ground slope. So the accumulating water flowed torrential on the surface and flooded the lower-lying residential areas. The surface of the slopes was thus worn away and eroded. The piped section of the Ziegengrund was unable to completely accept and harmlessly drain the arriving water during heavy rain in summer or even during light rain on frozen ground in winter.

The 2002, flood of the century had just left behind massive devastation in the Freiberg Mulde catchment area. In the wake of these events the "Zschadraß (Hochwasser-) Muldedörfer" simplified land consolidation proceeding was ordered at the request of the Saxon State Reservoir Administration. The primary goal of this proceeding under sec. 86 of the Land Consolidation Act is to implement measures to protect against flood water. The proceeding area encompasses an area of around 402 hectares. The Ziegengrund is located within this area.

The Saxon State Reservoir Administration plans and executes extensive construction measures for higher level flood protection. The land consolidation proceeding supports this project by implementing the land reorganisational measures necessary for producing regulated ownership rights for this.

The solution

In addition to the Saxon State Reservoir Administration's measures, the board of the community of participants is planning and implementing its own measures, which serve the participant's interests. Here these additional measures need not directly correspond to the Saxon State Reservoir Administration's scope of responsibility as initiator of the land consolidation proceeding. It is much more important that they serve the benefit of the participants and meet the objectives of the Land Consolidation Act. So the "Ziegengrund flood retention" project ultimately became part of this land consolidation proceeding.



Exposed area of the formerly piped brook in front of a dam;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participant



Construction of a fortified emergency overflow area for controlled drainage;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants



Exposure of piped sections of the brook;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants



Unspoiled pond with emergency overflow;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants

During the planning of this project, special attention was paid to ensuring that the water in the area where the flooding originates remains there as long as possible taking nature conservation interests into account. The run-off of large quantities of water accumulating from rain should be retained in the area of the Ziegengrund above the locale of Podelwitz in order then to be able to drain out slowly. The peak flows from the Ziegengrund into the Mulde will thereby be reduced.

Ziegengrund Brook, piped in places, was partially exposed. These trenches were created without bringing in concrete and with an irregular, meandering earth profile. In particular, value was placed on the brook's course fitting nearly naturally into the existing land structure. This brook subsequently flows into the Mulde near Freiberg. An existing dam on a small, already existing pond was heightened and stabilized. In addition three new earth dams, 28 to 84 metres long and 2.15 to 2.65 metres high were erected along the course of the brook. Thus it was possible to create a dammed volume of about 15,800 cubic metres in this area.

The ownership rights encountered could be ignored during the system's planning because the community of participants is structuring ownership de novo. Thus the necessary dams, trenches, and wetlands were not aligned with the available land, but built in the most appropriate places. This advantage was made possible only by the land consolidation proceeding.

The dam system here functions without using mechanically or electrically operated and control facilities. Using pipe restrictors in the dams, outflow is controlled automatically up to the maximum allowable run-off. The maximum allowable run-off itself results from the hydraulic performance capability of the pre-flood systems (trenches, canals).

The Ziegengrund also continues to be preserved as a meadow or pasture area. Already existing wet meadows were not touched. The road produced specifically for this construction measure was covered with topsoil and continues to be used as a greenway for management of the storage systems and adjacent areas. Numerous plants and animals are able to establish themselves in the re-exposed brook. That contributes to a significant enrichment of the variety of species in this area.



Initial performance test of a dam within the system;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants

Investments for this project amount to around 230,000 Euros. The Community of participants receives a 90 per cent sponsorship here. The commune of Zschadraß completely assumed the remaining portion. The city of Colditz obtains ownership of the areas in the Ziegengrund with the land consolidation plan. However it has been responsible for the care and maintenance of the functional capability of this trench system and dams since acceptance of construction work.

A hydrodynamic run-off simulation showed that such an integrated system can function in nature. The residents of Podelwitz confirm again and again how well it actually works. There have been no negative impacts due to torrential run-off from the Ziegengrund since July 2010. In addition, the recreational value of the landscape has been further enhanced by the redesigned Ziegengrund.

The specific construction cost of around 15 Euros per cubic metre of dammed volume shows that such systems are very economical to produce.

The ongoing costs to maintain the system are also low. Since the pipe restrictors in the dams are generally self cleaning, system care is limited to one or two inspections per year. Because the meadows are cared for naturally through meadow use, maintenance costs for them are completely eliminated. The community of participants has expanded another road in 2011 for maintenance and care of hydraulic structures, access to the public road network, and to open up the adjacent agricultural land.

If groundwater recharge becomes necessary due to climate changes, the system can be retrofitted for it with little effort. A possible increase in precipitation burden can also be met by increasing dam height at any time with little effort.



Restrictor run-off in the pre-flood trench;
photo: Zschadraß (Hochwasser-) Muldedörfer Community of Participants



Rural road along State Highway S 255 provides access to agricultural areas in the Thierfeld vicinity.

Infrastructure measures

Regions that wish to further develop themselves economically need a good traffic connection. In this connection the individual regions should be networked with one another and with the regional centres. The best line up of new roads is frequently associated with the use of agricultural land.

What does this mean for the affected areas and their owners?

Roads, streets, railways, or waterways are usually laid out linearly. The realization of these projects often leads to the carving up of landscape spaces. The spaces bordering the new roads are separated from one another and their accessibility is restricted. Mainly affected are businesses active in agricultural and forestry. The construction measures disrupt existing road connections. Cultivated areas are subsequently more poorly accessible or entirely inaccessible. In addition, unfavourably shaped or small residual areas emerge that can hardly be worked economically. Also, these projects often permanently alter the habitat of animals and plants.

Besides the areas for the actual building measures, additional areas are necessary for nature conservation mitigation and compensatory measures. Thus extensive areas are being permanently withdrawn from agriculture. In individual cases this may lead to endangering the existence of farms whose land areas are particularly affected by the measure.



Expanded paved road in the Reichenbach-Falken land consolidation proceeding; photo: Reichenbach-Falken Community of Participants

Remedy through special operations under sec. 87 of the Land Consolidation Act (FlurbG)

If expropriation of the affected land is possible under sectoral law for the proposed project, an enterprise land consolidation can be initiated at the request of the expropriation authority. The prerequisite is that the impending loss of land can be spread across a larger group of landowners or that through the proceeding, disadvantages for general land improvement (thus for instance fragmentations, unfavourable plot of land parcel shapes) are to be avoided. This proceeding offers the opportunity for landowners, farmers and foresters, the communes, nature conservation, and others to gather and agree among themselves on the best possible way. The various interests can be taken into consideration as early as the planning process. Later corrections have often been avoided during planning this way. Land losses associated with new construction impact not just individuals, but can be distributed over many owners. Through clever land management and the exchange of land areas in the proceeding area, land takings are often even completely avoided. The body responsible for the project assumes the majority of the proceeding's costs in contrast to other land consolidation proceedings.



Construction of a rural lane in the Langenhessen cadastral district; photo: Langenhessen Community of Participants



Asphalt-paved rural lane in the Erlau cadastral district

Rural lanes

The rural lane network is an important part of the road network. It generally involves open field and forest lanes. The primary function of these lanes is to provide access to agricultural and forestry areas. However today they also serve as hiking and bicycling paths or as connecting lanes between individual towns. This multifunctional use contributes significantly to the improvement of living conditions in the country.

In many land consolidation proceedings the community of participants replans rural lane network from the ground up. The lanes are expanded to meet today's demands. In this connection the large technology used by the operations imposes significant demands on route planning and design of the lane network. Various types of expansion are applied depending on the lanes' function. It is important here the not just the needs within the land consolidation proceeding are taken in to consideration, but also that optimum connections to the lanes occur extending beyond the proceeding area. The rural lanes are generally dedicated as public roads. An important precondition for proper and above all lasting maintenance is thereby created.

The land regulation need in is particularly great where the agricultural production cooperatives (LPG) in the GDR built or repaired rural lanes without attention to, and regulation of, existing ownership rights. Unclear ownership and use rights result from this. For affected owners this means that they still cannot fully use and access their plots of land even today. The reorganisation of land holdings proceeding uses land regulation to restore legally compliant conditions.



Construction of a rural on Schönberg farmland

Expansion of S 177 – Radeberg/Großberkmannsdorf local by-pass

"S 177 OU Radeberg/Großberkmannsdorf" land consolidation proceeding, Bautzen County



The major county town of Radeberg lies north east of Dresden on the south-western edge of Bautzen County. The first documented mention of Radeberg was in 1219. Franconian and Thuringian peasants populated the land around the Röder River and made it arable. Two hundred years later the market town was awarded a town charter. Today Radeberg is known far beyond the state borders of Saxony for its traditional specialities. Thus "Radeberger" is one of the oldest brands of beer in Germany brewed Pilsener style. "Heinrichsthaler" cheese claims to have been the first in Germany that could produce the French cheeses Camembert and Brie.

About the initial situation

The expansion of modern, efficient roadways often brings a great loss of previously undeveloped area with it. Among other things that leads to losses of income in the affected agricultural and forestry operations.



Overview map of S 177's location in the greater Dresden area;
source: GeoSN, edited: State Office of Environment, Agriculture and Geology

State Highway S 177 is an important major traffic route between the cities of Pirna and Radeberg. The route's expansion and new construction will increase its efficiency, traffic quality and safety. At the same time a north-east by-pass between federal highways A 4 and A 17 is being created. An efficient traffic network between mid-central Hoyerswerda, Kamenz, and Pirna, and upper-central Dresden, from which the regional economy is benefiting, is emerging in connection with S 95.

An approximately six kilometre long subsection of S 177 was designed and since expanded as a local by-pass for Radeberg and the district of Großberkmannsdorf. The new street including ancillary facilities and compensatory measures for nature conservation required about 64 hectares in this section alone. That corresponds to an area of around 80 soccer fields. It became clear in the planning procedure that not all of the necessary land could be acquired through private purchase so that some landowners were threatened with expropriation.



Water storage located in the construction;
photo: S 177 OU Radeberg/GroBerkmannsdorf Community of Participants

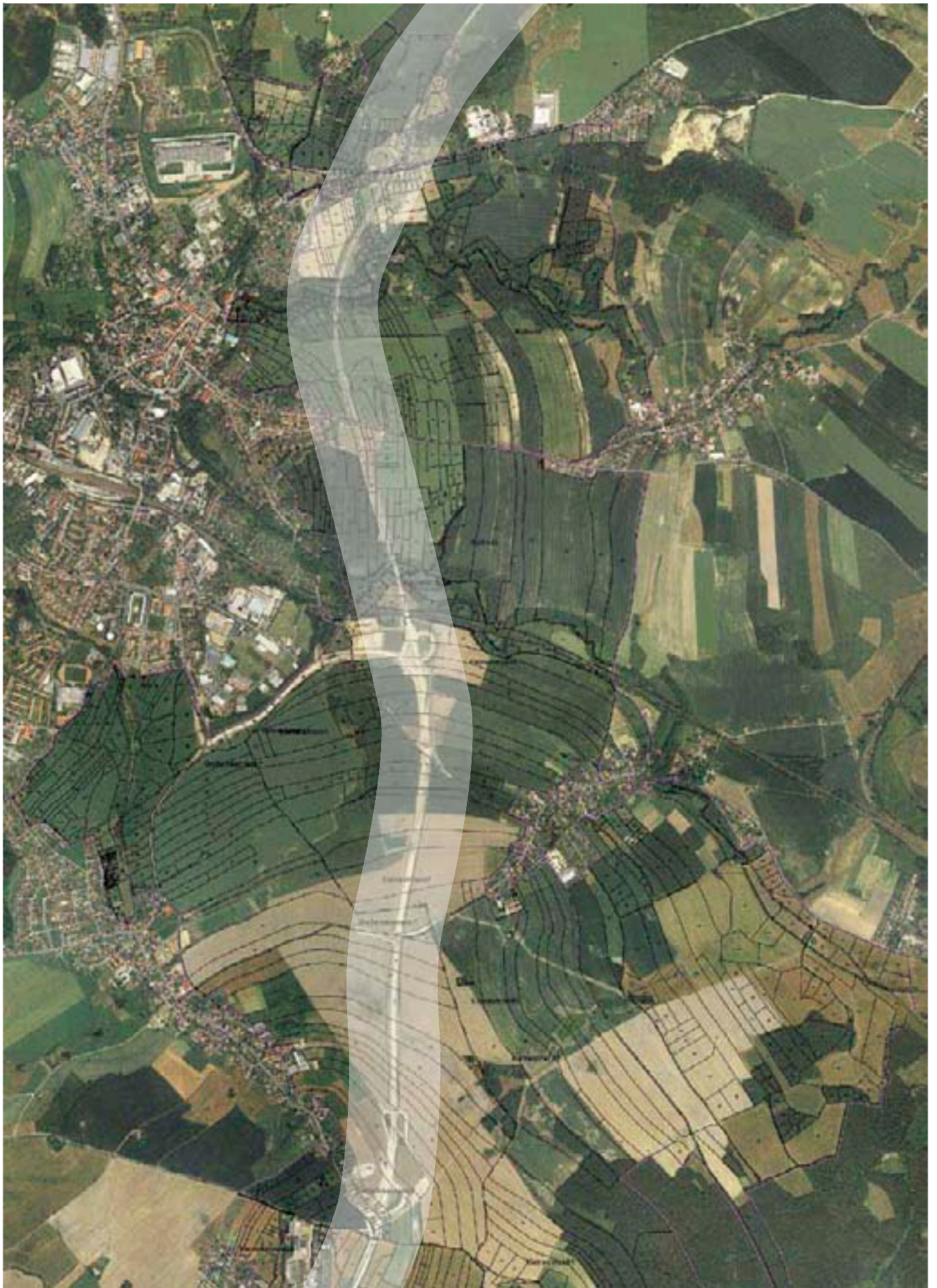
The solution

In comparison to expropriation, an enterprise land consolidation interferes less in private property. The goal of this proceeding is to distribute land loss over a larger group of owners. That means that no longer just the individual owners whose plots of land lie under the marked-out section or the ancillary facilities, but all participants in a correspondingly large proceeding area jointly provide the necessary area. In return they receive appropriate monetary compensation from the future owner of the facility. When the individual no longer has to give up much, but many have to give up a little area, threats to livelihood can be avoided.

The drawing of marked-out sections progresses independently of the current land structure. The planning of marked-out sections is oriented towards the terrain profile, the nature area, the necessary traffic related connections, the state of the subsoil, and many other aspects. The responsible road construction body would buy up either partial areas or entire plots of land in a private acquisition of the marked-off areas. However the acquired areas would not exactly correspond to the marked-out section and would thus deviate from the areas actually needed. Unfavourably shaped plots of land can arise for the owners. The development of the remaining space is no longer guaranteed in every case. The advantage of a land consolidation proceeding is, among other things, that owners willing to sell in the proceeding area can also be purchased outside of the marked-out section or the ancillary facilities. A land exchange takes place through the land regulation during which the body responsible for road building receives the marked-out sections including the ancillary facilities. Owners who do not want to sell can be compensated with areas in another location. Land loss for individuals can thus be held to a minimum.



Creating a new access road parallel to the local by-pass;
photo: S 177 OU Radeberg/GroBerkmannsdorf
Community of Participants



Detail from the land consolidation area with the local by-pass under construction and the land layout current at the moment;
source: S 177 OU Radeberg/Großberkmannsdorf Community of Participants



Landscape before the expansion of S 177;
photo: S 177 OU Radeberg/GroBerkmannsdorf Community of Participants



Landscape after the expansion of S 177



The "Way to Mittelmühle" was expanded on behalf of and at the expense of the community of participants. In return they were able to lay claim to subsidies;
 photo: S 177 OU Radeberg/Großberkmannsdorf Community of Participants



**Gudrun Schmidt,
 resident in Radeberg, Großberkmannsdorf district**

"The new S 177 is a huge relief for us residents in Großberkmannsdorf. Before, all commuter traffic from Pirna and the Oberland went past us through the place. Nothing could get across the road any more. The big milk lorries for the dairy plant in Leppersdorf came after 5 on Sunday afternoons. The stress from noise and exhaust was enormous. I lost quite a lot of land because of the new street too. But the local by-pass is a big benefit for us. I use S 177 myself."

Prior implementation

At the suggestion of the Meißen Road Construction Office as the body responsible for road construction, the Dresden Regional Council requested the initiation of an enterprise land consolidation in 2003 as the competent expropriation authority. In the current proceeding, no compulsory purchase is expected to occur, since according to current knowledge, all areas can be acquired privately in the generously demarcated proceeding area.

The new marked-out section cuts through numerous areas previously connected in their use. Uneconomical plots of land frequently emerge. The new street interrupts existing lanes or bodies of water, which disrupts drainage and improvement on the plots of land is rendered difficult. Land management is made difficult for the affected farmers and economic losses arise. As managers of the areas, they have to take longer detours into account for instance to even get to their fields. This transection damage will be avoided or at least mitigated by adjusting land boundaries to the new terrain and use structure, a new route concept, and by pooling plots of land. At the end of the process all the plots are measured and secure access is available.

Road and facilities construction can begin even during the very extensive and complicated land consolidation proceeding. Measures intended to promote nature conservation can also be sensibly implemented at other places in the proceeding area. So one of the piped trenches from "Walter's Teichen" was exposed and renatured up to the Schwarze Röder. This project served as a compensatory measure for the road construction. With restoration of the near-natural flowing water and the creation of a near-nature water storage area, flood protection for the Radeberg locale is also improved. A planting in the riparian area is being further enhanced.



The opening to traffic on the S 177 subsection, local by-pass Radeberg–Großberkmannsdorf in December 2008

Other measures not connected with the new road but in the interest and financing possibilities of the community of participants can also be conducted in special operations proceedings. This mainly concerns the expansion of existing roads beyond the marked-out section. They provide access to farming and forestry plots of land and are also used by the local population for recreational purposes. It was also possible to implement such measures in this proceeding.

The chairman of the Community of Participants is elected from their own ranks by the owners and leaseholders of the plots of land involved in the proceeding. This ensures that the participants are directly involved in the proceeding. Their local knowledge and spatial and social proximity to the other participants is used to design an optimal road and drainage network. That provides for acceptance in implementation of the adopted measures. Co-operation with the commune and other public bodies is also very important to optimally adjust various planned measures.

Of course no "new" area may be created during a special operations proceeding because land is a limited commodity. But the effects of a large building project such as the rerouting of state motorway S 177 are reduced for the participants by appropriate land regulation.



Steffen Gröber, managing director of the agricultural company "An der Dresdner Heide GmbH & Co. KG" and community of participants board member

"The loss of agricultural land is economically very stressful for us as an agricultural operation. This is because the new S 177 causes us not only loss of owned land, but also of leased land. But through land consolidation, the plots of land are adjusted to the new use and farm roads are better expanded. This brings advantages for field trips with our technology in terms of time and stress on the machines."

Crossen breaks new ground

"Crossen" land consolidation proceeding,
Mittelsachsen County



The commune of Erlau lies in the Erzgebirge foothills near the castle and the Kriebstein dam. 3,500 inhabitants live in the nine districts on an area of 3,800 hectares. Agricultural production characterizes the landscape and the commune's economic structure. The Waldhuf town of Crossen has been a district of the Erlau Commune since 1994.

About the initial situation

Roads existing in and around Crossen before land consolidation was ordered were partly in an inadequate structural condition, ran over private property, or provided only partial access to areas to be cultivated. In particular, plots of field land south of the locale and the plots of forest land were poorly accessible. Moreover connecting roads were lacking. Cultivation was done in large felling areas.

The solution

In co-operation with owners and residents of Crossen, an economically and ecologically sound road network should be established to ensure adequate land access and to permit optimal management.

The chairman of the community of participants elected by the landowners is tasked with planning and implementing this road network under the Land Consolidation Act. The road and water plan was developed in co-operation with the land consolidation administration, the communal administration, local businesses and citizens. In addition to the renovation of existing roads, rerouting was necessary to consolidate the existing road network. It was possible to begin realizing the planned measures even during the land consolidation proceeding.



View of Crossen

Selected measures

■ "Nördlicher Querweg"

This road was rerouted and expanded. It crosses existing roads running north out of the locale. The road network has been consolidated using this cross connection to give better access to the plots of field land. In addition, a shift of agricultural traffic from the locale into the field location is possible. Through the community of participants, this road was first established up to north-eastern tip of the proceeding area and provided with a turning area. The plots of land could thereby be opened up within the proceeding area. That was the declared goal of the community of participants.

In subsequent years, the commune from the locale of Schweikershain (outside the proceeding area) created a connection to the Nördlicher Querweg. Both projects were subsidized via the "Integrated Rural Development" Directive. Through co-operation between community of participants and commune, it was possible to combine both projects, which sensibly complement one another and yield an overall concept.

■ "Plattenweg" and "Südlicher Querweg"

Opening up the southern field land consisted almost exclusively of local connection ways that served general traffic. Existing roads and streets were absorbed into the new road concept as a backbone and the road network compacted. Such an already existing road was inadequately secured with concrete slabs. In consequence of this, this "flag-stone road" was continually extended and compacted in the side area. On the existing route it was ultimately thoroughly expanded and secured with asphalt to enable it to withstand the heavy loads. The expansion enabled the road width to be minimized.

The "Southern Diagonal Road" between the "flagstone road" and two additional local connection roads was rerouted and expanded. The locale and main traffic roads are relieved of agricultural traffic through this diagonal connection. Shorter travel distances and travel times are now possible.



"Plattenweg II" – section with asphalt surface



"Südlicher Querweg" – section with a paved surface of concrete blocks



Crossen road network with newly created roads; source: Crossen Community of Participants, LfULG



"Stichweg" after the expansion

■ "Stichweg"

The "Stichweg" also opens up the plots of land west of the railway line south of Crossen as well. It was expanded as a gravel road and runs on a historic road connection over the railway line from Mittweida to Waldheim.

Compensatory and substitution measures serve nature conservation and erosion protection.

Expansion and compaction of the road network represent interventions in the ecosystem. There is a legal obligation to refrain from interventions or, if that is not possible, to limit them to a minimum. The deficit thereby arising in the ecosystem must be compensated. Since the proceeding area is depicted as an area cleared of natural landscape, compensatory measure target the creation, restoration, and development of biotopes. This is intended to structure the landscape and link the habitats. Erosion protection was a significant aspect of planning. Two selected measures will be briefly introduced below.

■ Planting "Am Schusterberg"

Soil with especially sparse plant cover was repeatedly washed away during heavy rainfall on the north-western edge of the proceeding area. In the worst case, the torrentially flowing mass of mud and water threatened to impair the drainage system and adjacent residential development. A woodland planting was therefore laid out at the lower edge of the field. This stabilizes the slope, slows down rapidly flowing surface water, and stops washed-off soil. Meanwhile the planting has developed well, fulfilled its intended purpose, and provided habitat for small organisms.



"Stichweg" before the expansion;
photo: Crossen Community of Participants



Kindergarten outing on the "Nördlicher Querweg"
Crossen cadastral district



View toward the Erlau cadastral district



New planting layout on the "Rittergutsweg";
photo: Crossen Community of Participants

■ Planting "Rittergutsweg"

The existing access road to the former manor had become unnecessary due to demolition of the buildings. Wind and water influenced the surrounding farm land. In the process of land consolidation, the community of participants' board decided to make expendable road area available to the ecosystem. In the spring of 2004, the paved gravel roads were loosened and the material partly removed. On the old road route, a multi-row hedge with small, individual trees was laid out to a length of 400 metres. Since it had never been previously possible to cultivate the marked-out section either, the planting did not impair the agricultural economy. This hedge structured only the field land.

Experience from recent years has shown that the measure successfully protects against wind and water erosion. This strip of nature has meanwhile established itself as a refuge for many small animals and also offers larger animals protection in the field land.



Planting on the "Rittergutsweg"



Land regulation and land management

Land consolidation proceedings do a lot of good. Rural roads are built, flood protection measures implemented, trees planted, or bodies of water renatured. Everyone can immediately see the success. The actual service of land consolidation almost always remains invisible: land reorganisation. It includes the reorganisation of plots of land, the elimination of contradictions between the real estate cadastre and actual use, the re-measurement of all plot boundaries, and finally the legal documentation of ownership rights in the public books.

Why does Saxony need land regulation?

■ The historical land parcel structure in Saxony is varied.

The history of Saxon settlement has produced different land parcel structures. More or less strict legal limitations on divisibility since 1560 had the positive effect that comparatively quite large plots of land predominate in Saxony today. So there are closed estates in Waldhuf villages (e.g. in the Ore Mountains) with 30 hectares or more of contiguous area. The large "Presseler Heidewald- und Moorgebiet" nature conservation project lies in the Düben Heath nature park north-east of Eilenburg in the communes of Doberschütz, Laußig, Dreiheide, and Trossin.

Land reform in 1945 and 1946 had a drastic effect in Saxony. In particular, forest areas were then allocated in very fragmented manner. Today they are generally not accessible via roads and are marginally useful considered in themselves.

■ Ownership and actual use do not agree.

Use and ownership rights often conflict precisely in the country. This is mainly because of the legal situation and administrative practices in the GDR. The agricultural production cooperatives had an extensive use and layout rights to the land brought in by the members. Thus they could change the type of use and the road network, conduct land



Excavated sample ground as part of the valuation; photo: Zwickau Rural District Office

improvement, or construct new buildings. These changes were often not transferred to the land register, let alone regulated according to property rights. It was even common to remove existing, "distracting" boundary markers.

So today there are houses or roads on other people's plots of land, streams are rerouted, and the owners often no longer know the exact location of their land. Over 4,000 officially directed proceedings based on the Agricultural Adjustment Act adopted by the GDR parliament in 1990 were conducted to rule on these grievances in Saxony. Nonetheless a considerable need for land regulation still exists in all parts of Saxony. This always comes belatedly to light when areas are required for the implementation of projects or plots of land are no longer accessible due to lack of roads.

■ Current requirements often lead to competing use claims. Land is a limited commodity. It cannot therefore be ruled out that various users want or to need to have access to the same areas. Thus the interests of agriculture must be weighed against those of expert planning. Here solutions must be developed that guarantee an equitable balance of interests. Possibilities of reorganising the affected areas, the provision of substitute land, or the distribution of land loss on several shoulders must be included when finding the solution.

How can land regulation help?

■ Rural land ownership can be reorganized through land consolidation.

Here as needed:

- the shape of plots of land can be changed,
- plots of land can be combined,
- areas are provided for expert planning (such as nature conservation, road construction, and flood protection),
- areas are laid out corresponding to different intended uses, and
- already existing use relationships are regulated under ownership law.

Optimal results are achievable here only when participants (landowners, community, government agencies, associations, and companies) collaborative actively. The Land Consolidation Act allows leeway here.



Summary

Due to historical development and many current requirements, there is an, in part, acute need for comprehensive land regulation in Saxony. It is up to local actors to recognize this and to select an appropriate land regulation process together with the land consolidation authorities. The area to be reorganized must be delineated for that purpose to achieve the desired result quickly and effectively. It is not just a matter of keeping construction and planting projects in mind, but also drawing the positive effects of land regulation into the considerations. Thus it can make more sense to conduct small, quick proceedings without large construction measures when other private and public plans can be initiated or accelerated via early land regulation.

Jan Feige, senior surveying councillor and former chairman of several communities of participants

Ownership rights along the Schwarzer Schöps reorganized in Nieder Seifersdorf

"Nieder Seifersdorf 'Schmiedeweg'" land consolidation proceeding, Görlitz County



Nieder Seifersdorf is a district of the Waldhuf commune. The town lies directly on the A4 motorway in the eastern part of Oberlausitz. At the beginning of the 20th century the river bed of the Schwarzer Schöps, a tributary of the Spree, was moved within the locale of Nieder Seifersdorf. A ruling on property rights was not subsequently forthcoming. The plot of land, to which the cart path provided access, is now receiving a legally secured access road 100 years after the river straightening.

About the initial situation

Nieder Seifersdorf is a typical elongated Waldhuf town. The Schwarzer Schöps is a first-order body of water. It flows parallel to Dorfstraße and thus along the building development through the village. The bed of the originally, sharply meandering river was partially filled in after its relocation. These areas were in part immediately used for access ways to the plots of land. Agricultural farmyards, which were accessible via the cart way, laid to the south until the river was relocated and received their new accesses via the Schmiedeweg located to the North West.

The new course of the Schwarzer Schöps was not surveyed again with a few exceptions. That is why the current use was discontinued in the land and cadastral registers. Thus legal security of ownership is lacking for both the public and private owners of plots of land, which is the basis for the rights and obligations arising from ownership. This is especially true for the affected road and water plots.



Schwarzer Schöps in the Nieder Seifersdorf locale

Extensive need for clarification existed especially for the communal administration, because the Schwarzer Schöps flows through several places in the Waldhuf commune. Thus a similar initial situation exists in the Jänkendorf locale along the Schwarzer Schöps, which also needs comprehensive regulation.

A private legal ruling for these complex ownership structures was not an option. For one thing the surveying costs would have been enormous. For another the associated surveying and notary costs would have borne no reasonable relationship to the market value of some of the plots of land.

The solution

Already in the 1990s, the Waldhuf commune had been seeking a solution to clarifying the property and ownership rights for the Nieder Seifersdorf locale. However the Kamenz Office of Rural Land Regulation at the time did not see itself in a position to order another comprehensive land consolidation proceeding under secs. 1 and 37 of Land Consolidation Act for this commune. A land consolidation proceeding had already been conducted in the Jänkendorf locale at this time. In addition the planned proceeding area in Nieder Seifersdorf would have comprised an area of more than 1,600 hectares. However the commune's interest was, primarily to find a quick ruling on ownership rights in the locale. Precisely that would not have been possible with an extensive proceeding.



Originally planned proceeding area (red) and actual proceeding area (green); source: Nieder Seifersdorf "Schmiedeweg" Community of Participants



Surveying tasks



Detail of the proceeding area showing the ownership structure before (left) and after (right) land regulation;
 source: Nieder Seifersdorf "Schmiedeweg" Community of Participants, LfULG



Access road to the former river bed

Some ten years later the ownership rights still were not regulated, so the commune had another go at ordering a land consolidation proceeding. To be able to reach a timely solution for the commune and affected owners, a proceeding was ordered that restricted itself entirely to land regulation and completely dispensed with building measures.

The simplified "Nieder Seifersdorf Schmiedeweg" land consolidation proceeding under sec. 86 of the Land Consolidation Act was ordered on June 18, 2007. It encompasses an area of around five hectares. The objective in this proceeding consists exclusively of regulating legal property rights. Since construction measures were not necessary, it was possible to dispense with a road and water plan. As a further simplification, the all of the plots of land in the entire proceeding area were valued uniformly. This saved a lot of time, reduced effort, and allowed execution costs to be considerably reduced.

During the course of the simplified land consolidation proceeding, land parcels were allocated to the owners according to actual use. The allocation decisions of the Federal Office of Central Services and Unresolved Property Issues (BADV) were implemented.

Prior to the land regulation, actual local use disagreed with the contents of the real estate cadastre. For instance a different purpose had been applied to the former water plots by the adjacent property owners. The extensive need for rulings in this area becomes clear in the comparison of the actual use and border lines hitherto kept in the real estate cadastre.

The survey of the entire area, including demarcation of the boundary points was made in the years 2010 and 2011. Actual local use and the information in the real estate cadastre and land registers match after the final takeover.



Detail of the proceeding area before land regulation with the Schwarzer Schöps original course (left) and its current course (right);
source: Nieder Seifersdorf "Schmiedeweg" Community of Participants

The commune took over the community of participants' full share of personal contribution in the amount of eleven per cent of the cost of execution. Execution costs will lie around 3,000 Euros by the end of the proceeding.

The land consolidation plan was announced in 2012. The correction of public records and the final determination are expected to take place by 2013. Thus, the proceeding is completed within a relatively short processing time with the legal validity of the land consolidation plan.

Thus it was possible to establish functional boundaries in this area of Nieder Seifersdorf 100 years after the rerouting of the Schwarzer Schöps and to account for legally secure property in public and private sectors.

Horticultural farms get a new home – Thiendorf gardener settlement

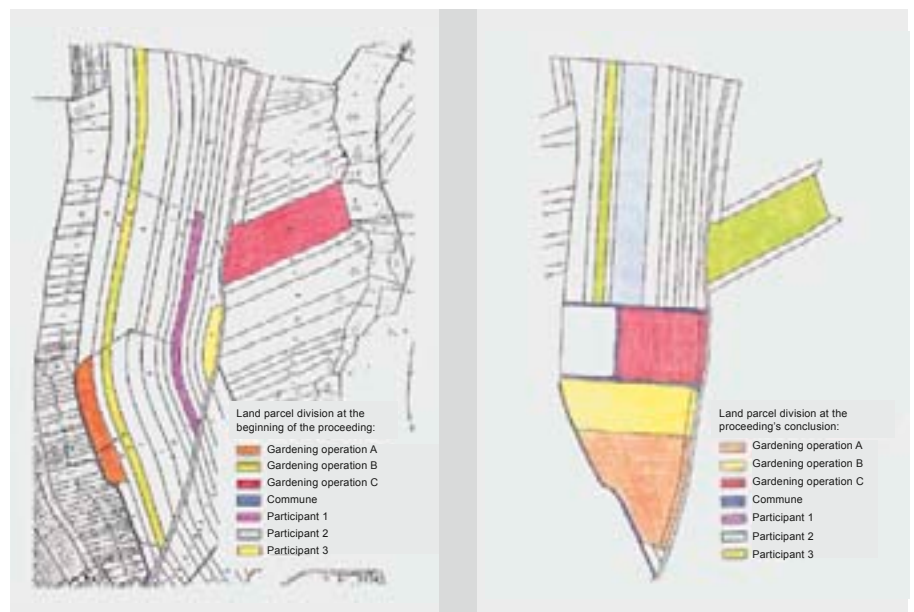
"Thiendorf" land consolidation proceeding,
Meißen County



Thiendorf is a locale in the commune of the same name. It is located in northern Meißen County. This area is nestled in the hilly landscape of Großenhain Pflege. The street village is characterized in particular by its direct location on motorway A 13 and federal road B 98.

About the initial situation

The possibilities for expanding production are limited for horticultural farms. The sites are often located directly in the locale. It is practically impossible to make additional areas available due to these location conditions. The resulting lack of development prospects associated with that threatens the existence of such operations. The Saxon State Ministry for Environment and Agriculture and the State Horticultural Association of Saxony e. V. were already looking for solutions at the beginning of the 1990s.



Map before (left) and after (right) of the reorganisation of land holdings proceeding;
photos: Thiendorf Community of Participants



View of the gardener settlement in Thiendorf; photo: Matthias Löwig

Especially in cities, the competition is great and the available land scarce. So it is important for horticultural farms to obtain suitable areas mainly in rural environs. However these areas in the outer region are often neither accessible nor are the plots of land shaped to meet the requirements.

In the example shown here, it was two horticultural farms settled respectively in the Thiendorf locale and the city of Dresden in spaces that were too small at the beginning of the proceeding. No space was available at the original location for urgently needed investments, including the additional production areas required for this.

The solution

In 1995, the Kamenz Office of Reorganisation of Land Holdings initiated a simplified land consolidation proceeding under sec. 86 of the Land Consolidation Act to provide these areas. On a formerly intensively farmed area of only 50 hectares, the prerequisites for settlement and resettlement of horticultural farms were created.

The location of the gardener settlement is optimal in particular due to the direct proximity to motorway connection A 13 as well as to federal road B 98, the very short distance to the city of Dresden, and optimal access to the already existing commercial area. The low prices of land and low development costs have facilitated the decision of these farms to resettle.

The legal ownership prerequisites were created for four potential horticultural farms on an area of 20 hectares. In the northern proceeding area, external access was created for the remaining 30 hectares as a reserved area for further horticultural farm settlements. Due to the small size of this targeted proceeding, a total of only 18 participants were members of the community of participants under the Land Consolidation Act.



View of the Thiendorf gardener settlement

The entire 50 hectares of the proceeding area were originally used intensively for agronomy as a felling area. For the new intended use therefore, a network of roads was to be planned for access to the horticultural farms. Four agricultural roads were expanded as a result. It was possible to create windbreaks to minimize the great danger of wind erosion. A well facility created by the community of participants serves to irrigate the areas used for horticulture. This facility passed into the ownership of the four horticultural farms at the end of the proceeding.

The Thiendorf land consolidation proceeding was completed in 2001 after just six years of preparation time as the first proceeding under the Land Consolidation Act in Saxony.

A glimpse into the future

The horticultural farms draw primarily upon flowering plants during the winter months. The energy required to produce the necessary heat, and the associated costs, are enormous. Previously mainly oils and animal fats served as fuels. A biogas plant should now remedy the situation. This facility was to be built on part of the site of operation A by the end of 2011 and was to provide the heat required for two of the three operations. Surrounding agricultural operations will deliver the required biomass.



Remediation ship on Haselbacher See; photo: LMBV

Mitigation of mining consequences

In the mid 19th century, lignite had already become one of the most important fuels as well as raw material for many branches of industry. Without these resources, especially in central Germany, rapid growth would not have been possible, particularly in the chemical industry. Former and active lignite coalfields in Saxony are located especially in the greater Leipzig area and in Lausitz. The raw material lignite was obtained in these regions' mining operation. Gigantic areas were claimed for digging. The necessary power plants and processing industry settled in the vicinity of these deposits. The great demand for lignite finally led to the disappearance of entire towns and countrysides to make way for the lignite. The natural scenery was radically changed in consequence.

What comes after the lignite?

The significance of lignite declined after 1990. After the reunification of Germany, most of the mining areas and processing plants were shut down. It became necessary to rehabilitate these areas in this connection. Meaningful follow-on uses had to be conceived and implemented. The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH (LMBV) was faced with a big task. Old, existing plants were generally dismantled and scrapped. Flooding concepts for newly developing lakes and reservoirs were worked out. The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH redesigned entire new landscapes. Huge lakes, new road networks, waterways, buildings, and other facilities emerged – but initially largely ignoring actual ownership rights. Integrating these new landscapes into the existing environment was a crucial task. In addition to vast expanses of water, the soils were processed in complex processes for agronomic (re) use. Other areas are being reforested or left to themselves so that diverse flora and fauna can develop. The vast lake landscapes are of interest for tourism.



Holzweißig land consolidation proceeding, Lake Paupitzsch; photo: LMBV

The measures exercise a not inconsiderable influence on the development of these regions. These processes still continue today in part. The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH thus implements renovation concepts over the decades in many former mines. This is a long road since many different interests are pitted against one another. The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH has the statutory mandate to fully utilize the areas on completion of the respective remedial measures.

Actual use and the real estate cadastre are in contradiction.

The profound changes led, among other things, to the fact that information in the real estate cadastre does not agree with current actual use. A considerable need for land regulation resulted from this, which the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH could not manage on its own. It therefore sought an appropriate partner in order to find economically viable solutions for these tasks. The land consolidation administrations ultimately offered aid and support.

The solution: land consolidation

Currently 23 land consolidation proceedings with a proceeding area of about 37,000 hectares are being conducted in Saxony alone. This corresponds to around 2,200 soccer fields. That means that a land consolidation proceeding encompasses an area of around 1,600 hectares on average.

These proceedings are effective and economical. Due to these massive changes, which are the consequence of decades of lignite mining, the property is hardly usable for the owners any more. Even the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, which possesses the better part of the areas, has considerable problems with this. Often only partial areas can be handled during sales or for leasing since the parcels' existing structure no longer suits the current situation. The new plots of land are therefore completely reshaped in the land consolidation proceeding based on the areas' actual use.



Haselbach land consolidation proceeding, aerial photograph of the Thuringian beach; photo: LMBV

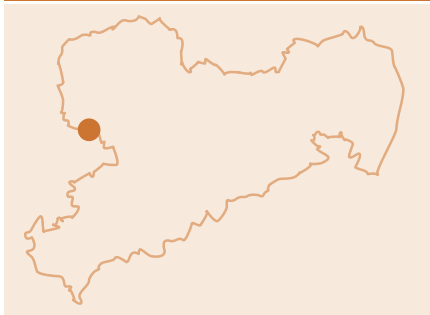
Land consolidation is used specifically in this proceeding. Here the focus is on reorganisation and securing ownership via land reorganisation. Close co-operation between the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH and the land consolidation authorities is indispensable here. The various interests of the old and new owners, farmers, communes, nature conservation, and other partners must be considered. One of the proceedings' great benefits proves to be that the new users can be very quickly be brought into possession of the new plots via a temporary livery of seisin.

Clear, and thus ensured, ownership rights are the fundamental precondition for a durable economic, social, and close-to-nature development of the former lignite mining areas.

Beate Jährling, Real Estate Administration,
Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, speaker

From lignite mine to recreational area “Haselbacher See”

“Speicher Haselbach” land consolidation proceeding, Leipzig County



The small Thuringian commune of Haselbach lies in the Altenburger Land on the Saxon state border. A strip mine situated in the immediate vicinity was named after it: “Haselbach III”. Beginning in 1957, it delivered raw lignite to the surrounding briquette factories for twenty years until the cessation of coal production in 1977. A majority of the open pit bottom was filled with spoils and the reclaimed areas were made arable once again. The abandoned open mine pit, flooded between 1993 and 1999, has become a popular recreational area.



Part of the land consolidation area cadastral map (old version) with an aerial photograph as background; source: GeoSN, LfULG



Haselbacher See, 2009; photo: LMBV

About the initial situation

In addition to renovation-related issues, ownership issues need to be addressed before the strip mine can become a recreational area. Following the political transformation, the Lausitzer und Mitteldeutsche Bergbauverwaltungsgesellschaft mbH became the owner of plots of land and facilities that had been used for over twenty years for the extraction, treatment, and reprocessing of lignite and has implemented renovation. The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH's task is to privatize its land holdings. However many plots of land are not marketable even after mine renovation since the current use does not agree with the existing cadastral register. Former roads were eliminated, open watercourses such as the Schnauder relocated, and boundary markers removed. The use of land for mining leads to pronounced contradictions between ownership and use rights. Their resolution using "traditional" surveying with private law agreement was eliminated, because the cost of surveying, notary, and land registry correction would have exceeded possible sale proceeds.

Into the mix came partly unclear ownership rights and difficult ownership determinations, which resulted from the history. Many small parcels have originated due to land reform. The personal relationship to property has meanwhile been lost due to the "collectivization of agriculture" and large-area management in the GDR. The original owners after land reform are often deceased. Heritage communities with up to 60 people, whose members are often unaware that they have become property owners, emerged in the region.

For the design of the abandoned open mine pit mining as a swimming lake with access roads, parking lots, beach areas, and so forth, compromises among the competing interests of the adjacent communes, agriculture and forestry, and the owners must be found.

The state border between Thuringia and Saxony runs through the middle of the former strip mine. Different regulatory responsibilities and procedural practices complicate a private law solution.



Spreader in the "Haselbach III" strip mine during the restoration work in 1995; photo: LMBV



Inviting view of Haselbacher See – the Ramsdorf locale is in the foreground; photo: LMBV



Ines Petschke,
City of Regis-Breitungen, Finance
Department/Real Estate

"The development of all newly created parcels is now legally protected. About 20 per cent of the owners of small parcels have waived a land settlement. Thus there existed sufficient scope for redistribution. The City of Regis-Breitungen took over citizens' co-payment necessary for a subsidy of the required road construction and compensatory measures."

The solution

For the reasons cited above, an officially led approach is needed that respects the interests of owners, resolves use conflicts, and brings about an adjustment of the pre-mining ownership structure to current use. That's why the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH applied for a simplified land consolidation proceeding under sec. 86 of the Land Consolidation Act and agrees to proportionately assume the accruing legal costs.

Since an interstate proceeding under the Land Consolidation Act is involved here, an agreement was concluded between Saxony and Thuringia in 2002 according to which the Thuringian areas are handled by Saxon land consolidation management.

The "Speicher Haselbach" Community of Participants is responsible for redesign of the land consolidation area. However the benefits of the proceeding can only be optimally exploited through close co-operation between the community of participants, the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, the City of Regis-Breitungen, the farmers, and other users.

It was possible to deal with the owners after extensive research to determine ownership and a continuation of the land registers. The desires of the owners regarding their settlement must also be recorded here. Land consolidation law refers to a land waiver when the owners do not want their own land back after land regulation, but would rather be compensated with money. The owners' land waiver declarations establish additional leeway in terms of re-parcelling the area. In particular agricultural operation can thus acquire additional agricultural areas in the proceeding.

The land parcels' boundaries are adjusted to current use. Thus a new boundary and land parcel layout emerges. A new road network plan has been designed and incorporated into the ownership structure. The owners receive land of the same value back, but partly in another location and with a better layout for cultivation.



Local recreation on Haselbacher See; photo: LMBV

The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH created the proceeding area's basic infrastructural development; the community of participants guarantees the necessary additional land access for the respective owners. The community of participants' chairman has also set up a road and water plan in which the roads' location and construction type are presented. This was approved in 2009 and is currently being implemented via construction measures.

Among other things a habitat network is being created between an existing strip of woods and a larger copse by establishing a meadow with scattered fruit trees for nature conservation. The resulting networking of the two wooded areas is intended to compensate for intervention into the ecosystem caused by the road construction measure. The areas needed for this will be raised from the land waivers and from the City of Regis-Breitigen's property.

The state boundary between Thuringia and Saxony crossing Haselbacher See will be initially retained. However parcels are formed in the course of the proceeding for the proposed straightening of highly structured state border so that an equal-area state border straightening can take place between the two states later.

After eight years of the proceeding, the parties have now been provisionally granted possession of the new land (provisional livery of seisin). The participants were informed of the new field division. Upon request the new land parcels were explained on the spot to new owners.

It will take some time until the final conclusion of the proceeding (closing statement). Already the provisions of the redevelopment master plan have been implemented relative to land reorganisation. Among other things, a semi-natural lake for the purpose of light tourism taking nature conservation into consideration has emerged.

Beate Jährling, Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH, Real Estate Administration

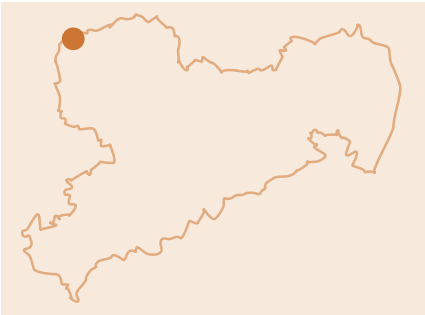
"The main advantage of the proceeding for us lies in the land regulation. The shapes of the plots of land can be adjusted to their actual use. I also highly value the support during the deed search. A representative can be appointed in the proceeding if it is not possible to discover an owner. That is very helpful so that the renovation can be continued. Certainly in the beginning we had other ideas about the time frame of such a proceeding. Since then experience has taught us that the multitude of questions required this period of eight years. Co-operation with the employees of the Office of Land Development in Wurzen turned out to be very constructive and trustful."

Barbara Straßburger, farmer

"In the beginning I participated in the proceeding as an agricultural land tenant without owning any land in the proceeding area. In the proceeding I was able to acquire plots of land within my means and thus augment my agricultural operation with arable land. These new properties now form a cohesive management unit along with the leased land."

New space for “wilderness” in the former lignite strip mine area around Holzweißig

“Holzweißig” land consolidation proceeding,
Nordsachsen County



Holzweißig – a district in the city of Bitterfeld-Wolfen – is located north of Leipzig in the area of Saxony-Anhalt. The lignite mining had already begun there in 1908 and was ultimately shut down in 1980. Closely associated with the lignite mining was the economic boom in the Bitterfeld area – especially with regard to the chemical industry. Today parts of this area belong to Sächsischen Seenland and to the Goitzsche landscape conservation area.



Overview map of the land consolidation area (red boundary) showing the state border (identified in blue); Lake Ludwig (top left), Lake Paupitzsch (top right), Lake Neuhaus (bottom); photo: LMBV



The guardians of Goitzsche; photo: LMBV

About the initial situation

Heavy demands were made on the areas used by the near-surface coal mine and they were radically changed. Entire towns disappeared. The soil was carried away to reach the valuable raw material – the lignite. It is a great challenge to develop such areas and make them usable again. The land parcel boundaries as well as the ownership rights have to be completely reorganized.

After reunification, the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH accepted the tasks of, among other things, rehabilitating and regulating ownership rights for this former lignite strip mine. As owner of the plots of land and facilities found there, the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH is obligated to privatize these areas. However the mining changed the entire area profoundly and permanently. The functions in the real estate cadastre no longer reflected the actual uses.

The Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH worked out a restoration plan for the entire former Holzweißig/Goitzsche/Rösa strip mining area.¹ The goal of the renovation consisted in making areas claimed by the mine usable once again. This also involves the establishment of public safety. To do this it was first necessary to completely reshape the surface of an entire strip of land and make it usable again. The soil was completely removed down to the deepest layers. The groundwater had been artificially lowered for operation of the strip mine. Water hoisting was discontinued after termination of mining activity and securing of the abandoned open pits. Thus began the natural flooding of the former strip mine in the proceeding area whereby today the lakes have formed after completion of the recovery process. Forests offering a new habitat to animals and plants grow around these lakes. Renovation of this area had begun even before the political transformation occurred. Mainly black pine stands were planted at that time. Reforestation, mostly as mixed forest, occurred after Germany's reunification.



Paupitzsch cross with boulder

¹ The different spelling of Goitzsche or Goitsche results from the fact that at the beginning of the 20th Century, the "z" had been dropped in the production of ordnance survey maps. So both names appear juxtaposed today.



View across Lake Neuhaus; photo: LMBV

The locality of Paupitzsch, with at that time about 600 residents, was resettled in 1975 for expansion of the strip mine. An iron cross and a boulder were set up on the site of the former town church in symbolic memory of the disappearance of the locality. Lake Paupitzsch and its environs have been able to develop into a natural refuge for many endangered plants and animals since termination of the lignite strip mine. This area will continue to remain as far as possible inaccessible to the public for the protection of nature. A total reservation emerged in sub-areas. This area is meanwhile a significant nature preserve under the Fauna-Flora-Habitat Directive (FFH) as well as a landscape and nature conservation area.

The entire proceeding area was used as a military training site between 1980 and 1990. After the political transformation, this area was severely reduced for military uses so that today only an area to the south and west of Lake Neuhaus serves this purpose. These areas are already under ownership of the Bundeswehr.

The artwork "Die Wächter der Goitzsche" was born west of Lake Paupitzsch. In connection with EXPO 2000, artist Anatol Herzfeld created a collection of ten iron figures grouped in a circle around a boulder. An additional circle with 70 smaller boulders complements this formation. The guardians watch over the further development of this post-mining landscape.

The solution

Due to the changes caused by the mining activity, it was necessary to adjust the ownership structures data entered in the land registers and the real estate cadastre to the new, actual situation.

Im September of 2002, the Wurzen Office of Reorganisation of Land Holdings then responsible ordered the "Holzweißig" simplified land consolidation proceeding under sec. 86 of the Land Consolidation Act in response to the Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH's application. It essentially encompasses the area of the former Holzweißig-West lignite strip mine thus stretching across the federal states of Saxony and Saxony-Anhalt. Of the total of about 1,600 hectares in pro-



Ceremonial handover of the Land Consolidation Memorial Stone (State Minister Frank Kupfer, Ulrich Fiedler, 1st Deputy Mayor of the Nordsachsen Rural District Office, and Dr. Mahmut Kuyumcu, CEO of LMBV – from right to left); source: SMUL

ceeding area, about 1,100 hectares is located in Saxony and the remaining approximately 500 hectares in the neighbouring state of Saxony-Anhalt. On the basis of an existing agreement between the states' two ministers, the Free State of Saxony is solely responsible for the conduct of this proceeding.

Land consolidation mainly supports the land-reorganisational regulation of ownership in this proceeding area. Lake Neuhaus, Lake Paupitzsch, and Lake Ludwig are located in the proceeding area. They comprise a total area of 350 hectares.

Lake Ludwig, Lake Paupitzsch, and the areas adjacent to them pass into the ownership of the BUNDstiftung. The Stiftung des Bundes für Umwelt und Naturschutz Deutschland e. V. (BUND) pursues in particular the goal of ensuring environmental protection and nature conservation. The transfer of ownership to these areas will thus ensure their long-term safeguarding as nature conservation spaces and as an area for the development of a "wilderness". In the Goitzsche landscape park bordering on the north east however, further development is targeted at national tourist recreational use.

After the valuation in 2004 and the desired schedule dates in 2006, a reorganisation draft was created a year later. Surveying and demarcation of new boundaries followed in 2008. The land consolidation plan was drawn up and approved in 2010. The property law issues are thus settled. Now the proceeding only needs to be formally concluded.

A memorial stone to land consolidation was unveiled in the presence of the Saxon state minister for environment and agriculture, Frank Kupfer, and the manager of the Lausitz and Central German Mining Administration Company mbH, Dr. Mahmut Kuyumcu, at the March 2011 handover ceremony of the execution order. All of the visitors who visit this region today to hike, bicycle, or to observe nature will be reminded that without land consolidation, the regulated use of the strip mine landscape would not have been possible.

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