

VAROVANJE PRAVIC NA NEPREMIČNINAH TER SMOTRNA RABA ZEMLJIŠČ OB NAVZKRIŽNIH ZASEBNIH IN JAVNIH INTERESIH – NEMŠKI PRISTOP

SAFEGUARDING REAL PROPERTY RIGHTS AND RATIONAL USE BY CONFLICTING PRIVATE AND PUBLIC INTERESTS – THE GERMAN APPROACH

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UDK: 332.624
Klasifikacija prispevka po COBISS.SI: 1.02
Prispelo: 18.5.2014
Sprejeto: 4.8.2014

DOI: 10.15292/geodetski-vestnik.2014.03.517-534
REVIEW ARTICLE
Received: 18.5.2014
Accepted: 4.8.2014

IZVLEČEK

V članku je predstavljen nemški pristop k varovanju pravic na nepremičninah ter zagotavljanju smotrne in racionalne rabe zemljišč ob navzkrižnih javnih in zasebnih interesih s komasacijami kmetijskih in stavbnih zemljišč. Pravna ocena o bistvu teh pomembnih instrumentov zemljiškega preurejanja kaže na številne možnosti oziroma prednosti ter tudi omejitve. Vsekakor lahko določevanje namenov in ciljev tega administrativnega ukrepa povzroči veliko nejevolje. Ne glede na to so se učinkovite zemljiške preureditve v pluralistični družbi in demokratični državi, kjer se pojavljajo navzkrižni interesi glede rabe zemljišč, izkazale kot pomemben sodoben pristop k varovanju temeljnih ustavnih pravic, ki se nanašajo na pravice do svobodnega in prostega dostopa do nepremičnin.

ABSTRACT

The article is aimed to describe the German approach to safeguarding real property rights and rational land use under conflicting private and public interests through implementation of urban land re-allotment or rural land consolidation. A legal assessment of the essence of these sovereign land re-arrangement instruments shows the possibilities and limitations. In any case, the legal determination of the purpose and goal of this administrative intervention is indispensable. Nevertheless, the sovereign land re-arrangement proves to be the contemporary approach to safeguarding the constitutional rights for freedom and free availability of real property in a pluralistic society and democratic state, under conflicting land use interests.

KLJUČNE BESEDE

menjava zemljišč, učinkovite preureditve zemljišč, komasacije stavbnih zemljišč, komasacije kmetijskih zemljišč, razlastitev, Nemčija

KEY WORDS

voluntary land exchange, sovereign land re-arrangement, urban land re-allotment, rural land consolidation, expropriation, Germany

1 INTRODUCTION

Throughout Europe land consolidation enjoys a long tradition (Figure 1). Over more than 100 years land consolidation was addressed to improve the agricultural production and to safeguard the food supply of the population. During the 1970s this sector-oriented approach changed to a broader approach to spatial development; as comprehensive land consolidation it migrated to an effective instrument of ‘integrated rural development’ (Thomas, 2005). The development does not seem to be finished: again and again new scope of works by realisation of land use plans, the methods of sovereign land re-arrangement are taken and modified. In Germany the creativity of technicians and planners is not sufficiently accompanied by a careful assessment regarding the admissibility of certain procedural proposals; fundamental rules concerning private real property rights are often neglected (Weiß, 2008). Also the manifold international publications concerning land consolidation highlight more the technical circumstances than the legal environment; and the undifferentiated endorsement of the ‘voluntary land consolidation’ (whatever is meant by the term!), in particular through the Food and Agricultural Organisation of the United Nations, reduces the huge possibilities of land consolidation to the common denominator, i.e. the full approval of all participating right holders. That makes the application of land consolidation in case of conflicting interests pretty difficult!

Therefore the article treats, first of all, the categorization of the issue ‘sovereign land re-arrangement’ and its allocation in the frame of the Constitution and legislation. It makes obviously that the implementation of each sovereign land re-arrangement project needs coercively a legal determination of the purpose and the objectives to be pursued.



Figure 1: Wide rural areas throughout Europe were developed with traditional land consolidation approaches (Source: Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection of the State of North-Rhine Westphalia).

2 GENERAL CONSIDERATIONS

2.1 Legal frame conditions

In most Central European countries the actual land policy is determined through a ‘black/white approach’ in case of conflicting interests between public and private land use: on the one hand the principal

guarantee of real property rights, and, on the other hand, expropriation of private real property in case of urgent public need for land.

2.1.1 Guarantee of real property rights

The right on property (real property included) is a human right. Property is the precondition for personal freedom and free unfolding of personality; it is the base and has to be provided for free entrepreneurship to individual and social wealth. In all democratic societies and states that right is constitutionally guaranteed. In the German Basic Law (Germ. *Grundgesetz*) the right is stipulated in Art. 14, paragraph 1, sentences 2, and in the Slovenian Constitution from 1991 in Article 33. To safeguard these property rights the land registry with Land Book and Real Property Cadastre is established either in a unified manner or as separate registers, but closely linked with each other. The geodetic experts are obliged to survey, maintain and update the factual situation so that the subjects of these real property rights are precisely allocated and recorded. This work is not spectacular. It is normally done inwardly, but has to be executed with care and reliability.

2.1.2 Expropriation of real property

The described constitutional rule is one side of the coin. The reality of life lets us experience that the complete free availability of real property and rational land use does not always meet the common interests of the society, and can come into conflict with specific public needs. This is particularly the case once the necessities of the services for public and other urgent public matters are affected – as for example clean water, sufficient housing facilities for the population, protection of the environment, transport needs. To these purposes the state is constitutionally empowered to guarantee these public requirements and to expropriate private real property when necessary.

Such expropriation is permitted only in cases of urgent public needs, and only on the base of the law which allows expropriation as a public measure as such, and which regulates a full and fair (monetary) compensation.

All European constitutions allow for the expropriation of real property.

Expropriation is the strongest land management measure in pursuing public interests. It is – and it has to be – the ‘ultima ratio’, once all other land management measures to fulfil public needs fail. Expropriation creates only ‘losers’, and makes ‘individual particular sacrifices’ necessary: only one or some individuals are regularly hard affected to the advantage of the public. The scope of the encroachment depends only on the given circumstances. The private individual, the land owner (and possibly the lessee), leaves his real property (partly or even completely). The public administration is intensively involved with the case over months or even years. Sometimes, when a recourse to the courts cannot be avoided, 10 or more years are needed until the expropriation decision is definite. During the planning phase of the measure, which makes the expropriation necessary, resistance against it comes up and creates additional problems. It is applied as well to the implementation of a new building area within a municipality; it is applied to the construction of a drinking water basin, flood protection measures or transport construction measures. Such situation is unsatisfactory for the affected individuals, for the public administration and for politicians who have the duty to adopt and make decisions regarding the measures. All of this combined is

why expropriation approaches to public purposes are unpopular and out-of-favour. Nevertheless, there are intelligent approaches to solving land use conflicts.

2.1.3 Determining content and limitations of real property rights

Apart from the expropriation means, the Constitutions of European states foresee limitations of the right on property. The German Constitution regulates in Art. 14, paragraph 1, sentence 2: “content and limitations (of the right on private property) are determined by law”. The Slovenian Constitution, for example, stipulates in Article 15 that “kind and manner of realization of basic rights can be regulated by law”.

Table 1: Land re-arrangement tools facilitate the maintenance of private real property by the owner despite urgent public land need.

Constitution	
guaranteeing real property rights through general legislation, i.e.	determining content and limitation of real property rights through specific legislation, i.e.
<ul style="list-style-type: none"> — Civil Law — Land Register Act — Law on Real Property Cadastre — Law on Mortgaging — etc. 	<ul style="list-style-type: none"> — Water Law — Nature Conservation Law — Soil Protection Law — Forest Law — Mining Law — Highway Act — Railway Act — Energy Supply Act — Expropriation Law
facilitating the maintenance of private real property despite urgent public land need through sovereign land re-arrangement instruments	

This results in two important consequences:

- The public administration does not determine whether the private real property has to serve public interests. Only the sovereign, the elected parliament, has the right and duty to limit land ownership and land tenure rights, and that only by law. Such legal determination of content and limitations of real property rights is stipulated in a couple of public laws as shown in Tab. 1. But not only the factual utilization of land can be restricted; also the manner of treatment of land rights as such can be stipulated. For instance the law that regulates the “selling of agricultural land to foreigners” or the rules regarding pre-emption rights in specific cases, or leasing rules of agricultural land contain specific restrictions by treating real property. It is the issue of the state to provide for the legal frame and to determine the prerequisites to the rational use of land in favour of private citizens and the public.
- The second consequence is as important as the first. By limitation of the content of land rights and determination of land boundaries the rights themselves do not get to be eroded. Each limitation has to leave a substantial residual of the real property right. Once the content of the right (its applicability) goes towards zero, the limitation gets the character of expropriation with the described far reaching consequences. The evidence that the content of an ownership right does

not go towards zero is the fact that the affected land owner remains able to use his land right for private benefit.

'Land re-arrangement instruments' also belong to the category of legal instruments determining the content and limitation of border of property rights. The principle of 'land re-arrangement' is both sophisticated and simple: The parcels, subject to real property rights, are re-designed, mostly dislocated, merged with others and newly shaped. The property rights remain untouched; only the subject of the real property rights is changed. According to this procedure, each right holder generally has to be compensated in land of equal value.

These land re-arrangement instruments, already partly developed during the 19th century in Western and Central European countries, of course restrict the free availability of land ownership and land tenure rights. They were developed as 'land consolidation' to improve the unprofitable agricultural structures through the merging of scattered and fragmented land, and to establish adequate rural infrastructure. That was and still is the public concern to which the free availability of land was temporarily restricted; each land owner had the obligation to participate in the re-design of the area concerned, and to be involved in the re-arrangement process. The compulsory participation is indispensable, because the re-design of the field and landscape structure as well as the comprehensive re-parcelling of land is normally impossible on voluntary basis; it makes the participation of all landowners necessary and obligatory, without any exemption.

During the 1920s the land re-arrangement principles of rural land consolidation were taken to develop an urban land re-arrangement instrument, the so called 'urban land re-allotment'. Also this instrument is allowed to be implemented to a specific, legally determined purpose; the purpose is urban development as well interior re-design of settled areas as external development through new building areas.

2.2 Re-arrangement of urban and rural real property

In Germany, the re-arrangement of real properties occurs:

- for urban areas on the basis of the federal Building Code (Germ. *Baugesetzbuch*) (BauGB, 2004), which comprehends all planning and implementation rules to urban development, and
- for rural real properties on the basis of the federal Land Consolidation Act (Germ. *Flurbereinigsgesetz*) (FlurbG, 1976).

These laws do not represent a general legal base and permission to land re-arrangement activities. The laws determine the purposes to which a formal statutory re-arrangement procedure is allowed to be executed. That is the consequence of the constitutional requirements as described in 2.1.3.

2.2.1 Legal purposes

Within the area of a legally binding land use plan or within a built-up area, an **urban land re-allotment** procedure shall be implemented to acquire access to the parcels concerned or to re-parcelling an area in order to create appropriately shaped parcels regarding location, form and magnitude (Art. 45-84 BauGB): Within the area covered by a binding land use plan or within a built-up area, and in order to facilitate a planned and orderly development, including the provision of local public infrastructure, or

in order to remove the conditions which contravene the building law, the municipality may by adjusting plot boundaries:

1. exchange adjacent plots or parts of adjacent plots where such action serves an overriding public interest,
2. allocate adjacent plots, and in particular splinter plots or parts of adjacent plots, to one party where such action is in the public interest.

The plots and parts of plots may not be capable of independent development, and the loss in value incurred by the owner as a result of the adjustment to plot boundaries may only be minimal. The implementation of urban land re-allotment is a municipal concern and formal duty.

Agricultural land holdings may be re-arranged through **land consolidation** with a view to improving the production and working conditions in agriculture and forestry as well as promoting the general use and development of land (Germ. *Flurbereinigung*) (Art. 1 FlurbG). The implementation of land consolidation is a state concern regarding the development of rural affairs, and executed by state agencies. The legal purpose of a land re-arrangement project has to be concretized in the initiation decision to the specific land re-arrangement procedure; the decision on starting a land re-arrangement project is revisable by court.

2.2.2 Legal prerequisites for sovereign land re-arrangement instruments

In general, a land re-arrangement project has to be of private benefit (Germ. *privatnützig*) (see 2.1.3); it has to be addressed to improve the land use for the land owners – in a well understood sense. Each participant has to be compensated in land of equal value; this is applied to both urban land re-allotment and rural land consolidation. A legally binding land use plan is as a rule the base of an urban land re-allotment procedure. The procedure can be started already during the drafting phase of the plan, but the plan has to be adopted and enforced as local law (Statute) when the re-arrangement decision is stated. The philosophy and the methodology of land re-arrangement exclude any compulsory expropriation of land within the respective procedure. But there are two exemptions: In urban land re-allotment, a land owner can be compensated monetarily when his demand in land does not lead to a rationally usable parcel. Also by land consolidation activities, a compulsory land purchase is possible; to that purpose a specific land consolidation tool, the so-called *Unternehmensflurbereinigung* (see 3.2.3) has to be applied.

The legislation on sovereign land re-arrangement has to follow the so called ‘principle of subsidiarity’, which means that obligatory administrative means are only allowed or permitted when voluntary means fail the objectives. The land consolidation legislation offers a voluntary approach to the participants; land re-arrangement measures on the base of the Law on Adjustment of the Agriculture (see 3.2) have to start with a voluntary approach. Also, the sovereign urban land re-allotment measure is prohibited once the land owners in the area of a binding land use plan find a re-parcelling solution for the realization of the land use plan. For land management experts it is obvious and foreseeable that in cases with some dozen, some hundreds or even more than thousand land owners voluntary land re-arrangement approaches have to fail. That is true for rural land consolidation, and that is also applied to urban land re-allotment.

Table 2: (Urban) land re-allotment and (rural) land consolidation in comparison.

	(urban) land re-allotment <i>(Baulandumlegung)</i>	(rural) land consolidation <i>(Flurbereinigung)</i>
legal base	(federal) Building Code <i>(Baugesetzbuch)</i>	(federal) Land Consolidation Act <i>(Flurbereinigungsgesetz)</i>
purposes	<ul style="list-style-type: none"> — Within the area covered by a binding land use plan and for the purpose of reorganising or opening up specific new areas for development, it is permissible for both developed and undeveloped land to be reorganised through a process of reallocation in such a manner as to create plots suitable in terms of location, shape and size for built development or for other uses. — The process of reallocation may be initiated even where a binding land use plan has not yet been prepared. In such a case the binding land use plan must have come into force prior to the resolution on the preparation of the reallocation plan. 	<ul style="list-style-type: none"> — Improving the production and working conditions in agriculture and forestry. — Promoting the general use of land. — Promoting the development of land (general livelihoods in rural areas) (<i>Landentwicklung</i>).
re-arrangement principles	<ul style="list-style-type: none"> — land re-allotment has to be of private benefit; — compensation in land of equal value; — expropriation in specific cases is principally permitted. 	<ul style="list-style-type: none"> — land consolidation has to be of private benefit; — compensation has to occur in land of equal value; — expropriation is generally prohibited; — exemption: by application of a specific land consolidation tool (see 3.2.3).
institutional implementation	<p>through a specially established communal Land Re-allotment Committee (<i>Umlegungsausschuss</i>)</p> <ul style="list-style-type: none"> — members are one lawyer, one cadastre expert, one appraisal expert and two members of the respective municipal parliament; — implementation of the surveying works occurs by contracting Licensed Surveyors. 	<p>through state Land Consolidation/Land Development Agencies (<i>Flurbereinigungsbehörde</i>)</p> <ul style="list-style-type: none"> — staff: <ul style="list-style-type: none"> — most of them are geodetic experts and technicians; beyond these are — administrative officers, — civil engineers, — ecologists; — implementation of the surveying works mostly <ul style="list-style-type: none"> — through the staff, — by contracting Licensed Surveyors; — building companies, — environmental bureaus. <p>(there are specific stipulations for East German circumstances)</p>

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2.2.3 Implementation authority

Realisation of legally binding land use plans is doubtless a municipal concern. To that purpose a municipal **Land Re-allotment Committee** (Germ. *Umlegungsausschuss*) is established. Its members, a lawyer as the chair person, a cadastral expert, an appraisal expert and two members of the Municipal Parliament are appointed through the decision of the Municipal Parliament. The surveying works are regularly implemented through Licensed Surveyors on behalf of the Land Re-allotment Committee.

The legal objectives of land consolidation touch national, i.e. state concerns. Therefore, implementation of land consolidation is a state duty and executed by state authorities. All German Länder (States) (the City States Berlin, Hamburg and Bremen included) have established a state **Land Consolidation Authority**. Its institutional set up, organisation and equipment with staff depends on the scope of land consolidation need or requests. Due to the fact that beyond land consolidation responsibilities as such most land consolidation authorities are additionally responsible for other rural development duties, most of them are established and named as 'Land Development Administration' (Germ. *Landentwicklungsverwaltung, Amt für Landentwicklung, Amt für ländliche Entwicklung*). The staff includes geodetic and cadastral engineers and technicians, civil engineers, ecological experts and administrative officers. The implementation of the necessary surveying works occurs either through the staff or by Licensed Surveyors on behalf of the Agency on the base of contracts. Construction and environmental works are regularly implemented by private companies. As bearer of single land consolidation projects a Body of Participants is legally established, which comes into being through the land consolidation decision in the very beginning of the project, given by the Land Consolidation Agency. The Body of Participants has specific legally determined consulting, deciding and implementing tasks. The Assembly of the Body of Participants elects a Board of the Body of Participants who is the acting institution of the Body and represents the Body of Participants.

3 LAND CONSOLIDATION

3.1 On the essence and legal character of land consolidation

In contrary to urban land re-allotment, land consolidation does not need a binding land use plan as the planning requirement or precondition; during the land consolidation procedure the planning base is created within. In so far, urban land re-allotment and rural land consolidation differ in their character. Whereas urban land re-allotment is only a tool to implement a plan that was adopted by the municipal parliament, land consolidation is a planning and implementation tool, where planning and implementation are closely connected with each other; the Plan for Common and Public Facilities (as the base for the following re-parcelling of the land consolidation area) is an immanent part of the land consolidation procedure. Thus, land consolidation involves, on the one hand, land re-parcelling measures, but goes beyond concerning its programmatic objectives; land consolidation is a mix of agrarian special planning and land re-arrangement (Thomas, 1995), and makes the procedure to a means of spatial planning (Figure 2).

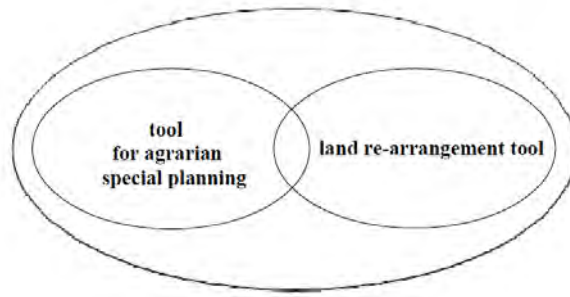


Figure 2: On the character of the instrument ‘land consolidation’.

That gives more performing and designing possibilities to the implementing bodies and allows broader approaches by application of the given land consolidation tools.

3.2 Land consolidation tools

In order to meet the concrete development needs and objectives in a determined developing area, and to avoid overburdening or even the lack of administrative means, the German Land Consolidation Act contains five different ‘tailor-made’ land consolidation tools; for the East-German part with its specific (post-socialistic needs) three additional tools are established through the Law on Adjustment of Agriculture (LwAnpG, 1990).

Table 3: German tools for land consolidation and land re-arrangement measures.

Law	Types of Procedures		Legal basis	Applicable in
	(English)	(Deutsch)		
Land Consolidation Act	Comprehensive Land Consolidation	<i>Regelflurbereinigung</i>	Art. 1, 37	West and East Germany
	Simplified Land Consolidation	<i>Vereinfachte Flurbereinigung</i>	Art. 86	
	Land Consolidation in Case of Permissible Compulsory Acquisition	<i>Unternehmens-flurbereinigung</i>	Art. 87	
	Accelerated Land Consolidation	<i>Beschleunigte Zusammenlegung</i>	Art. 91	
	Voluntary Land Exchange	<i>Freiwilliger Landtausch</i>	Art. 103a	
Law on Adjustment of Agriculture	Voluntary Land Exchange	<i>Freiwilliger Landtausch zur Regelung der neuen Eigentumsverhältnisse</i>	Art. 54	East Germany
	Procedure on Restitution of Ownership	<i>Bodenordnungsverfahren zur Wiederherstellung des Eigentums</i>	Art. 56	
	Joining of Land and Building Ownership	<i>Zusammenführung von Boden- und Gebäudeigentum</i>	Art. 64	

3.2.1 Comprehensive land consolidation

The **Comprehensive Land Consolidation** on the base of Art. 1 and 37 FlurbG (Germ.: *Regelflurbereinigung*) applies the most far-reaching planning approach and will be implemented to ‘integrated rural development’. By this type of procedure “holdings can be re-arranged with a view to improving the production and working conditions in agriculture and forestry as well as promoting the general use and development of land. The land consolidation area will be reshaped with due regard for respective structure of the landscape to serve the interests of the parties concerned as weighted against each other to further general use and development of land and to benefit the general public wealth. The area in question will be re-arranged and scattered or uneconomically shaped parcels will be consolidated to meet modern managerial requirements, and reshaped to obtain units of a more favourable location, shape and size. Ways, roads, water bodies and other common facilities can be provided, soil-conservation, soil-improving and landscaping measures can be taken as well as any other measures improving enterprises, reducing the amount of work and facilitating farm management. Village renewal measures can be taken (Figure 3). The legal situation and relationships will be clarified” (legal purpose).

A comprehensive land consolidation represents a long-term solution to developing agrarian structures. It aims to preserve and enforce the stability of farms, in parallel with the preservation of the environment and landscape and in harmony with agricultural production in the countryside. It aims to enhance the non-productive functions of agriculture, to improve the physical rural infrastructure in general and to promote the creation of off-farm employment (Thomas, 2004; FARLAND, 2007; Thomas, 2008).



Figure 3: Apart from traditional land consolidation measures, a re-design of the parcels within the village opens sustainable development of its interior area (Source: Ministry for Economy, Transportation, Agriculture and Viniculture of the State Rhineland-Palatinate, Germany).

3.2.2 Simplified Land Consolidation

On the basis of the German Land Consolidation Act measures can be implemented to eliminate or to minimize the detrimental impacts on the agricultural structure caused by public request to land use. Classic examples are transport planning, communal land use planning, water management planning or planning concerning nature protection and landscape. Regularly, such tasks are solved by **Simplified Land Consolidation** (Germ. *Vereinfachte Flurbereinigung*) (Art. 86 FlurbG). The legal purposes to which this kind of land consolidation may be carried out are very comprehensive and make the instrument the actually mostly applied tool. A simplified land consolidation procedure may be initiated:

1. to render possible or to carry out land development measures, especially measures to improve the agrarian structure, settlement measures, measures concerning the renewal of rural settlements, urban development, environmental protection, ecological water engineering, nature protection and landscape conservation or measures reshaping the external appearance of the village or the nature scenery (Figure 4);
2. to rectify unfavourable conditions of the general use and development of land resulting from or caused by the construction, alteration or removal of infrastructure facilities or similar measures;
3. to resolve conflicting interest concerning the use of land;
4. to carry out a requisite reorganisation of land holdings in hamlets, small communities, areas with isolated farms, and in communities where a land consolidation procedure has already been carried out (legal purpose).

The procedure shall be governed in particular by following special regulations:

- A simplified land consolidation procedure may be initiated if the party carrying out any of the measures described above applies for a land consolidation.
- The party carrying out a measure shall be deemed to be a participant of a secondary order.
- The valuation results may be made known together with the Land Consolidation Plan.
- A Road and Water Resources Plan with Accompanying Landscape Conservation Plan may be dispensed with. In that case, the respective measures shall be incorporated in the Land Consolidation Plan.
- Projects of bearer of public interests may be disregarded if the respective plans have not been submitted in a feasible form by the date set for the hearing on the Plan for Common and Public Facilities with Accompanying Landscape Conservation Plan and the Land Consolidation Plan, thus causing an undue delay of the land consolidation procedure.
- The party carrying out a project as described above shall be charged with the cost incurred by the implementation of his project to be payable to the Body of Participants.

By starting this kind of land consolidation, the legal prerequisites regarding ‘private benefit’ (Germ: *Privatnützigkeit*) versus ‘foreign purpose’ need a careful assessment (Thomas, 2009).



Figure 4: In order to create the needed space for the natural evolution of water bodies (“resolving land use conflicts”), regularly a Simplified Land Consolidation is implemented (Source: District Government of Cologne and Münster, North-Rhine Westphalia, Germany).

3.2.3 Land Consolidation in Case of Permissible Compulsory Acquisition

“If, for special reasons, it is permissible to acquire land by compulsory purchase and if such a measure would affect agricultural land on a large scale, the authority responsible for the compulsory acquisition may apply for the initiation of a land consolidation procedure, if the loss of land to be incurred by the parties concerned is to be apportioned among a large number of owners or if disadvantages that the project may bring about for the general use of the land are to be avoided: **Land Consolidation in Case of Permissible Compulsory Acquisition** (Germ.: *Unternehmensflurbereinigung*) (legal purpose and prerequisite). The land consolidation procedure may already be ordered when the Plan Approval Procedure or an equivalent procedure has been initiated with regard to the project for which the compulsory acquisition is to be carried out. The Land Consolidation Plan shall not be made known and the new lots shall not be transferred to the participants by provisional transfer of possession until the Plan Approval Procedure for the project or an equivalent administrative decision has become indisputable or has been declared enforceable.

Such kind of land consolidation is exclusively addressed to the realisation of the public project (regularly land consuming infrastructure measure) and herewith this is: ‘to foreign purposes’ (Germ.: *fremdnützig*).

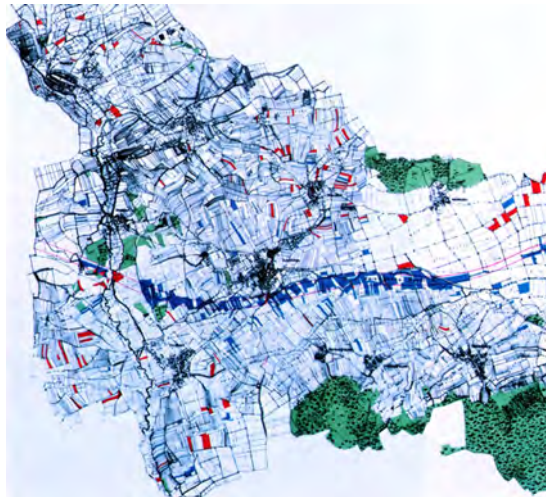


Figure 5: Land purchase situation on the case of construction of the Rhine-Main-Danube-Canal with land which was purchased by the developer in advance (blue) and land which was purchased by the Land Consolidation Agency during the running of the project (red). (Source: Bavarian State Ministry for Agriculture and Forestry, Germany).

The methodology is quite simple; it is based on the exchange of free available land to the place of need (line of the highway or railway, area of the airport or harbour, place of a dam or the area of a reservoir, areas for environmental compensation caused by the project itself etc.). Principally, the rules concerning the comprehensive land consolidation procedure are valid: With the Land Consolidation Decision the Body of Participants comes into being as body corporate and attends to the common affairs of the participants. Members of the Body of Participants are the land owners. A valuation of the original parcels shall be assessed. A Road and Water Resource Plan with Accompanying Landscape Conservation Plan, a plan covering the common and public facilities, especially the removal, alteration and construction of

the public ways and roads, as well as the water management facilities ('rural infrastructure'), soil improvement and landscape facilities, is to be drawn up and the participants have to be heard as to their wishes concerning the later re-allotment. Finally, the Land Consolidation Plan is the compilation of the result of the project; after its Notice and decision on the objections and appeals against it, the plan becomes non-appealable. It is enforced and can be implemented.

Merely some specifications and practical particularities have to be observed. After starting the project, within the area concerned, the responsibility for land purchase passes over to the land consolidation agency; it does free-hand purchase of available private land. This occurs at the place of need (for instance in the line of the highway), if the affected owners are willing to sell; but mainly within the surroundings of the infrastructure project. Normally, the authority responsible for the project ('developer') brings in some land which was bought by himself in advance of the project. Figure 5 shows a typical land purchase situation, on the case of construction of the Rhine-Main-Danube-Canal.

In case that it is not possible to purchase the needed land in its entirety, the remaining difference (between the available and needed amount) is taken from the participants of the land consolidation project. The land shall be provided by the participants relative to the value of their original parcels in relation to the aggregate value of all parcels in the land consolidation project. That 'contribution of land' as percentage of the value of the original parcels shall not exceed 5%. The land provided for the project is vested in the developer at the planned location by the Land Consolidation Plan. Any party contributing land for the project is to be compensated in money for that land by the developer at market value. The following example (Table 4) demonstrates how to calculate the 'contribution of land' within the land consolidation project concerned.

Table 4: Study case – calculation of contribution of land within the land consolidation project concerned.

Needed land of the highway project		
—	in the line	102 ha
—	for environmental compensation	88 ha
	In total	190 ha
Available land for the project		
—	already in ownership of the developer	17 ha
—	purchased by the Land Consolidation Agency	112 ha
	In total	129 ha
Missing land (difference)		61 ha
Magnitude of the land consolidation area		2345 ha
Needed 'contribution of land'		2.6%
		(61 ha/2345 ha) x 100
In order to not exceed the limit of 5% (see above), the land consolidation area concerned would have to get a <u>minimum size</u> of		
(61ha/5) x 100		1222 ha

Within the current land consolidation practice a 'contribution of land' is necessary in not more than 10% of all cases; through the early start of the land acquisition and a sophisticated determination of

the land consolidation area concerned, in most of the projects the needed land can be purchased in entirety by the land consolidation agency. But there is not only the need for land; through the project, the existing road and water body network is often interrupted; the landscape structure is highly affected, and normally the farms are segregated from their fields. This results in uneconomically shaped blocks and remainders of the land intact. Some remainders may be large enough for continued agricultural use, but the reduced magnitude reduces the net proceeds; some become too small for further cultivation. Some parcels will lose its access routes through the project. Altogether, a highly negatively affected situation concerning general use and development of land remains. Concerning these issues the land consolidation agency draws up – temporally parallel – the Road and Water Resource Plan with Accompanying Landscape Conservation Plan. It adjusts the existing rural infrastructure and landscape, and field structure in the project, and often gives a new orientation/design to the field structure in general (see Figure 6).

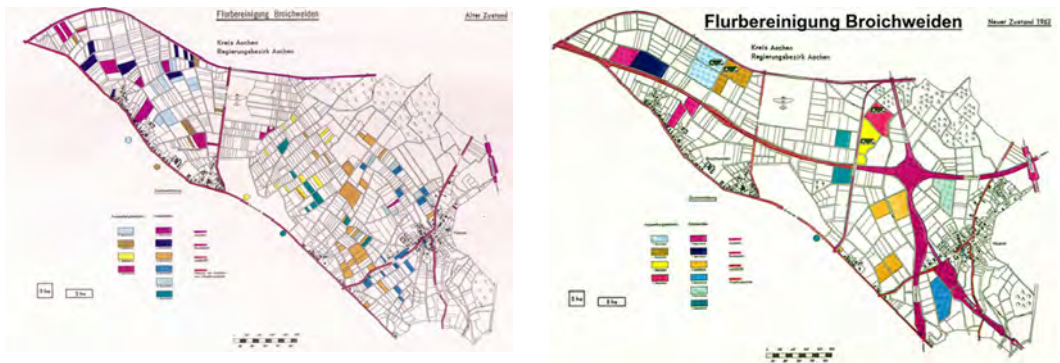


Figure 6: Field structures within the land consolidation 'Broichweiden' – the construction of the highway cross nearby Akken, Germany (before and after); it demonstrates that the general orientation of the rural road network sometimes has to be basically changed (Source: Landesamt für Flurbereinigung und Siedlung, Düsseldorf, Germany).

Through the redesign and re-arrangement of the landscape with its rural infrastructure and re-allocation of the ownership and parcel structure, the disadvantages caused by the project are repaired: No owner has to fear a (part or even full) loss of his real estate property; each one can expect a fair and equivalent compensation in kind. 'Particular sacrifices' of individuals are excluded, which achieves important pacifying effects within the farmers' community.

Due to the early participation of landowners and farmers within the planning process, the acceptance of the project is substantially improved. Segregation of the farms from its fields and meadows can be avoided; through intelligent gathering of the affected parcels, the farm–field distance can be minimized and parcel remainders caused by the project are avoidable. Other scattered real property of the participants can be merged within the running land consolidation process. Due to the Road and Water Resource Plan the area concerned is getting a new adequate design, adjusted in the given structure by the project. The length of the rural road network can be normally reduced and the number of crossing points with the project body (bridges, underpasses etc.) can be reduced also – in consequence with a distinct reduction of the construction costs to the developer (Weiß, 1991; Thomas, 2014).

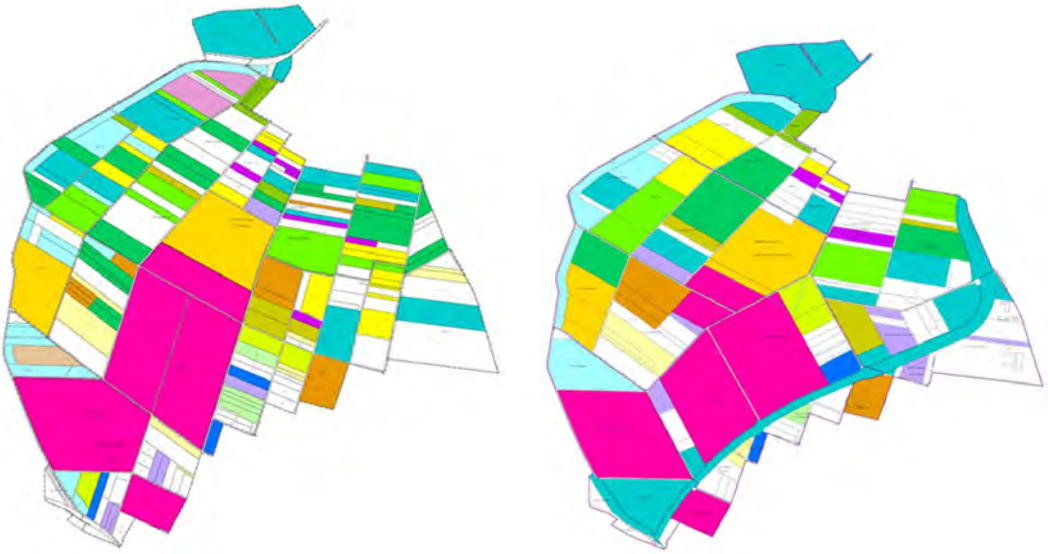


Figure 7: The establishment of a large flood retention area for the Rhine river above the metropolitan city of Cologne was addressed on 'foreign purposes' and was implemented on the legal base described above (Source: District Government Cologne, North-Rhine Westphalia, Germany).

3.2.4 Accelerated Land Consolidation

“In order to ensure that the improvement of production and working conditions in agriculture and forestry aimed at by land consolidation is realized as quickly as possible, and in order to enable necessary measures of the protection of nature and of landscape conservation, an **Accelerated Land Consolidation** procedure may be carried out in communities, where the correction of a new road system and major water resource projects are, for the time being, not required” (legal purpose). Within the given area rural land is to be re-grouped or re-arranged in units of economic size and rational shape as well as in co-operation with all land owners concerned. In this case the land consolidation procedure has to be initiated by an administrative decision ordering and it has to be directed by an authority (Figure 8).

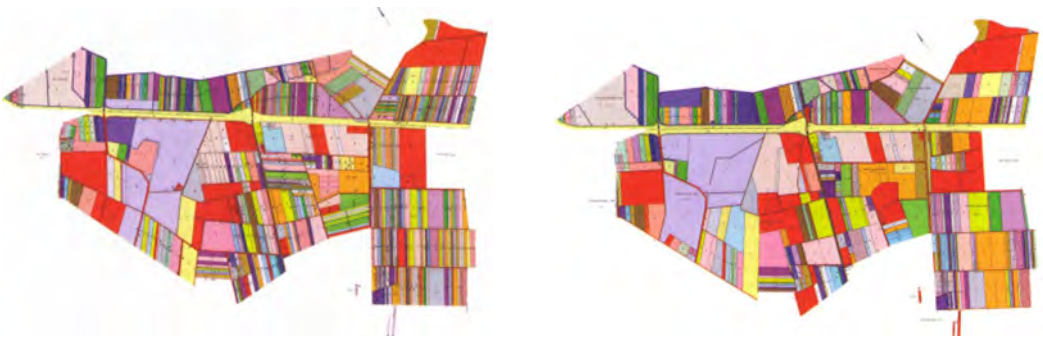


Figure 8: Within an Accelerated Land Consolidation the exchange and merging of parcels occurs regularly within the given blocks – before (left) and after (right) land consolidation (Source: Ministry for Environment, Climate Protection, Agriculture and Consumer Protection of the State Hesse).

Because of the conjugation of all involved parcels and the multiple interdependencies between shape, size, location, valuation etc. of all parcels and the different interests of all involved participants, it is unrealistic to get a full agreement of all participants to the land consolidation plan with a conclusive re-arrangement of the land. Thus, the Land Consolidation Plan has to be enforced through decision ordering by the Land Consolidation Authority on the basis of the Land Consolidation Act.

3.2.5 Voluntary Land Exchange

Voluntary Land Exchange is the simplest and fastest land consolidation measure. Parcels of two (as a minimum) or more owners are exchanged and merged (Figure 9). The procedure is called ‘voluntary’ as the owners concerned have to file and to agree to all measures and decisions necessary to implement the exchange: comparative valuation of the corresponding parcels or shares of parcels, merging of parcels, transfer or extension of rights and the new boundary lines. The state authority or a consultant company plays the role of a middleman. “A Voluntary Land Exchange may be carried out to reshape rural land ownership aiming at an improvement of the agrarian structure. It may also be carried out for reasons of the protection of the natural environment or landscape conservation” (legal purpose). Further details are described in Thomas (1993).

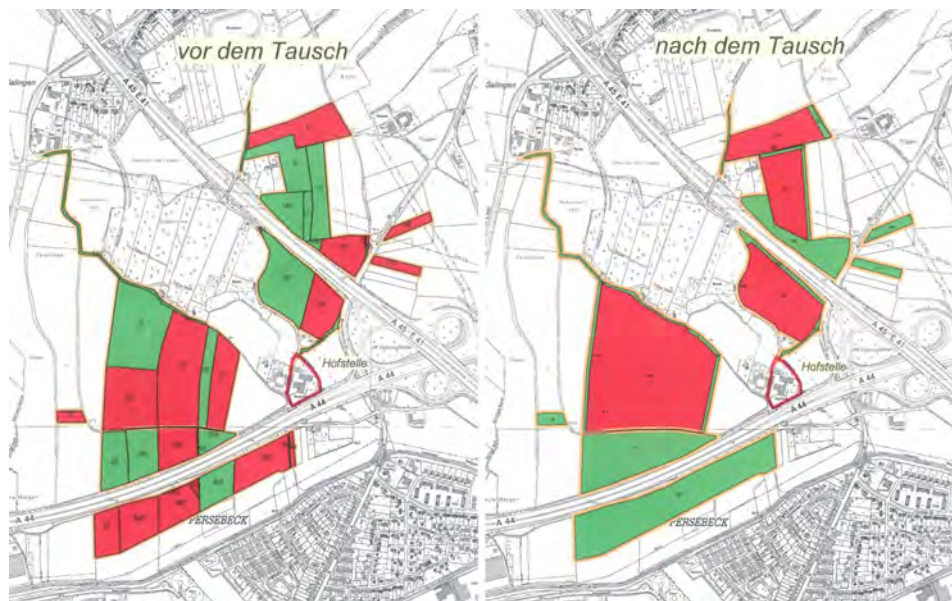


Figure 9: Voluntary Land Exchange pursues very limited objectives (Source: District Government Arnsberg, North-Rhine Westphalia, Germany).

3.3 Land re-arrangement instruments with the analogue application of the Land Consolidation Act

Since the German Unification in 1990, for the East German States (Germ. *Länder*) Brandenburg, Mecklenburg-West Pomerania, Saxony-Anhalt, Saxony and Thuringia there is – additionally to the German

Land Consolidation Act – the **Law on Adjustment of Agriculture** (LwAnpG, 1990) in force; it is a special regulation concerning re-arrangement and adjustment of farms and rural real property. The law is the basis for necessary regulations in the context of restitution requests of former owners. Further details are described in Thöne, Knauber (1996) and Thiemann (2002). By implementation of land re-arrangement procedures on the basis of the Law on Adjustment of Agriculture in East German Länder, the regulations of the Land Consolidation Act are generally analogically applicable; with respect to the specific purposes of the re-allotment needs, specific re-allotment rules are stipulated. A comprehensive description of recent challenges and the established technical working process of the German land consolidation is documented in Thomas (2010, 2011, 2013).

3.4 Final remark

As described above, the Land Consolidation Act is a federal law, based on Art. 74 Basic Law (Germ. *Grundgesetz der Bundesrepublik Deutschland*). In 2008 the German Federal Parliament (Germ. *Deutscher Bundestag*) changed – with regard to recommendations of the Enquete Commission on reforming the Basis Law and against the suggestions of land consolidation experts – apart from other changes – to give the legislative competence to the German Länder (in kind of concurrent legislation). The Länder should be enabled to perform their own land consolidation rules. Until the Länder make use of their legislative competence, the federal Land Consolidation Act remains valid. Today, after six years, none of the Länder made use of the possibility. The legislation valid today is obviously adequate and suitable enough so that the efforts to perform and adopt a new state law are not justifiable. Until now, wishes or requests for single changes have been dealt with to avoid broad legislative and political disputes, without having to give up the uniformity of land consolidation legislation in Germany.

4 CONCLUSION

Land re-arrangement instruments bridge the gap between public needs for land and private land tenure interests, and the human right to free availability of real property. It brings the subject of the rights to the location of demand. It safeguards the property by the right holders. It avoids particular sacrifices and, in case of high needs for land due to major infrastructure projects, it balances the encroachments of the affected individuals to a minimal scope. It harmonises land needs for public interests and those for private interests, and it adjusts the field and spatial structure – affected by planned infrastructure projects. It contributes, indeed, to the best rational and sustainable land use.

Legally regulated land re-arrangement instruments upgrade the land policy of a state.

Such tools were and always are ‘a means to an end’. They were and remain established in order to realize socio-economic objectives and goals. Through the formally regulated procedure (namely by law) the land re-arrangement procedure guarantees a neutral implementation with equal treatment of all involved participants. Land consolidation and urban land re-allotment are the ‘contemporary approach’ to safeguarding the constitutional rights for freedom and free availability of real property rights of human beings in a pluralistic society and a democratic state.

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Remark

The article is a substantial conclusion of two reports presented by the Slovenian Surveying Days 2014 and the 3rd European day of Surveyors and Geoinformation in Ljubljana 3rd and 4th of April 2014 with emphasising land consolidation issues.

Thomas J. (2014). Safeguarding real property rights and rational use by conflicting private and public interests – the German approach Geodetski vestnik, 58 (3): 517-534. DOI: 10.15292/geodetski-vestnik.2014.03.517-534

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