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Policy Paper: Land Rights and Land Use Management in Germany and the Czech Republic, 2019



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1. Introduction

This policy brief addresses how land rights are defined in Germany and in the Czech Republic and how they are managed, governed, adapted and converted. It starts by providing some general principles and concepts and then discusses how land is administered in practice, how land rights and land use conversions take place, and how such conversions fit into an overall strategy of land and territorial development.

2. General concept of land rights, land ownership and property

The thematic domain of "land rights" includes all regulations, laws and legal practices which directly and/or indirectly affect access to land and land use, and those which regulate the legal relationships of the people towards land. This includes both the de jure (legal, formal) rights, but also includes the standards, practices describing the responsibilities on land related decisions, the administrative authorities to allocate or re-form rights, decide on legal quality of the soil, the value of land and the types of land use right one may have on the land (Hofmann-Hoepfel et al. 2013). This policy brief focuses however on what constitutes a land right and how land rights are converted in the context of agricultural and spatial planning policies.

2.1 Definitions of land rights

Properties (i. e. land and buildings) are connected to rights. These rights can be defined as a benefit or claim entitling a (legal) person to treat and use the property in a certain way without the interference of any other. Land and property rights only exist if they are supported by an institutional framework, hence by a system whereby governments allocate or allow the right and whereby others, citizens, accept the right and adhere to the institutional framework connected to it (Sprankling 2017). Most European countries predominantly have individual property rights, whereby the right is linked to a single legal person, being either an individual citizen or a legal entity. Individual land rights define and formalise a property interest (Meinzen-Dick and Knox 1999) on the basis of excludability, i. e. the ability of the right holder to prevent others from using a particular resource; duration, the length of time for which the right is held; assurance, the guarantee given to the rights by institutions that can enforce an individual's rights; transferability, the ability to temporarily or permanently transfer the rights; identification, the accuracy with which boundaries can be defined; and robustness, the number and strength of legitimate uses and benefits. Specifically, land rights include the right to either own, use (fully or partially, individually or jointly), transfer, control, limit, restrict, allow, permit, condone. Land rights may include: formal ownership, apartment right, usufruct, leasehold, or state land. In addition, it may be social tenure relationships like: occupation, tenancy, non-formal and informal rights, customary rights (which can be of many different types with specific names), indigenous rights, religious rights, possession, or: no land rights (no access to land).

A land right regime based on individual rights is different from one which reasons from communal, customary or state rights, whereby an authority allocates, condones or allows rights to legal persons. In an individual rights regime, transactions, mutations and conversions carry the specific needs, interests and requests of individuals rather than common interests. Still, such transactions are not fully free. Often they are bound to social and public restrictions which often also have common interest.

2.2 The way land rights are formulated and regulated in Germany and the Czech Republic

The fundament of land rights is usually anchored in constitutional laws. The German system of land rights is based on individual land rights. A land owner in Germany has complete control of the land and the buildings as its immovable fixtures connected with the land. The right allows for mortgages and hypothecs, it shapes the co-ownership value or capital gain, and it can be subject to servitudes. The regulation of land is contained in various types of laws and regulation in Germany. First of all, there is the constitution (in German: Grundgesetz (GG)). Article 14 of the German GG specifies that (1) Property and inheritance law shall be guaranteed; (2) Property obliges (the so-called social obligation principle), meaning that its use should at the same time serve the common good; and (3) Expropriation is only permissible for the benefit of the general public, indicating that expropriation (by the state) is an exception rather than a rule, and compensation needs to be paid.

Similarly, in the Czech Republic, the fundament of land rights was converted both in 1948 and later again in 1991 with the regime changes. However, this has taken place much more gradual than in Germany. Bartůšková and Homolka (2009), for example, describe that individualisation of land rights, though promoted by the Declaration of Basic rights and Freedoms adopted under no. 23/1991 coll. as a constitutional law, has been a gradual process of removing a system of rights of use, separation of property rights from property use, re-insertion of traditional contract types and renewal of land administration systems. In 2019, the system of property rights in the Czech Republic is highly individualised. Even the state or state entities register as an individual owner of property.

At the second level land rights need to be practically established and transferred. In Germany this is organised through the German Civil Code (BGB). The sections 903, 904 and 905 specify the powers and limitations of a land and property owner. § 903 indicates that the owner of a property may, unless the law or rights of third parties conflict, proceed with the matter at will and exclude others from any action. § 904 indicates that an owner of property is not entitled to prohibit the action of another person on the property if the action is necessary to avert a present danger and the impending damage compared to the damage caused by the action to the owner is disproportionately large. § 905 explains that the right of the owner of a plot of land extends to the space above the surface and to the earth body below the surface. However, the owner cannot prohibit any influence carried out at such a level or depth that he/she has no interest in exclusion. Condominium ownership is captured by a separate law, the so-called Condominium Act (in German: Wohnungseigentumsgesetz – or short: WEG). The law originated in 1951 and was updated in 2014..

The third type of law guiding in particular land use, land allocation and responsibilities for land interventions is the Federal Building Code (BauGB). The BauGB contains amongst others rules on how to plan constructions, how to create and decide on land use plans and land development plans, how to subdivide land, how and under which conditions to expropriate and with which kinds of compensation measures, and how to value land. Complementary to the BauGB, and part of a comprehensive hierarchic spatial planning system, are the Federal Spatial/Territorial Planning Act (Raumordnungsgesetz – ROG), the Federal Land Utilisation Ordinance and the Urban Renewal and Development Act. Together these acts regulate planning, reallocation, building permits, and legal control.

A fourth type of regulation concerns the Land Consolidation Law (FlurbG in Germany and Law no. 139/2002 coll. in the Czech Republic) which regulates land consolidation and village renewal.

The German and Czech systems in comparison:

	Germany	Czech Republic
Fundament of land right	GG, art. 14, para 1	Declaration of Basic rights and Freedoms adopted under no. 23/1991 coll.
Definition of land rights	German Civil Code (BGB)	New civil code - Act Nr. 89/2012 coll. (NCC)
Construction of property	Building Act - BauGB	Act No. 183/2006, the Building Act Act 13/1997 deals with issues of road construction and management and Act 266/1994 with railways Act 20/1987 provides laws relating to the protection of heritage sites
Land use planning	Raumordnungsgesetz – ROG	Act No. 183/2006, the Building Act outlines the spatial planning system Ministerial decree No. 501/2006 provides the general requirements for land use
Land consolidation, land re-allocation	Land consolidation law (FlurbG)	Law no. 139/2002 coll., on land adjustments and land offices
Expropriation	Art. 14 GG, para 3	Act. No. 184/2006, the Expropriation Act
Registration of rights	Federal Grundbuchordnung (GBO) Federal Grundbuchverfügung (GBV) State-specific Vermessungs- und Katastergesetze (VermKatG)	New Cadastral Law – Act Nr. 256/2013 coll., on Cadastre of Real Estate (Cadastral Law)
Valuation of land and property	Real Estate Valuation Ordinance (ImmoWertV)	
Restitution		<ul style="list-style-type: none"> • Law no. 139/2002 coll., on land adjustments and land offices • Law no. 284/1991 coll. • Land law (no. 229/1991 coll.) • Law no. 221/1991 coll.

2.3 Types of existing land rights

The most crucial types of land and property rights in the respective countries are as follows:

	Germany	Czech Republic
Freehold / full ownership (i. e. full range of property rights, including the right to use, encumber or dispose of the property)	Private ownership (=Eigentum) – secured through § 903 German Civil Code (BGB)	vlastnického práva; Private Ownership (‘Osobní Vlastnictví’ (OV))
Co-ownership Joint ownership	Defined as Co-ownership (=Miteigentum, §§ 1008-1011 BGB); Joint ownership (=Gesamteigentum, §§ 718,719, 1408, 1415, 2023 BGB).	přídavného spoluvlastnictví;
Lease - rent	For Housing (rent)- > § 549 to 578 of the German Civil Code (BGB) For Land (lease) -> § 581-597 (Pacht)	Pachtu;
Leasehold - hereditary building right (i. e. long-term leases (often of 99 years) which include the right to erect and maintain buildings on a property)	Erbbaurecht – § 873 BGB - registration § 1 Abs. 1 - Erbbaurechtsgesetz (ErbbauRG) – content of the right	nájemný statek
Easement / right of way / servitude (i. e. a non-possessory right to use a property owned by someone else either for a definite or an indefinite period of time)	Grunddienstbarkeit (§§ 1018 ff. BGB)	věcného břemene
Apartment rights / Condominium ownership	Wohnungseigentumsgesetz – or short: WEG	Cooperative Ownership (‘Družstevní Vlastnictví’ (DV))
Right of construction (i. e. the right to maintain a building on someone's else land (to build it or to own an existing building on the land)	Constructing buildings is regulated through the Building Act (BauGB). Obtaining a building permission (=Baugenehmigung) is an	práva stavby; This right of construction is only temporary as it cannot last longer than 99 years.

	administrative act following an approved land use plan. The permission may affect land use rights of third parties.	
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In Germany, the WEG makes a difference between “Wohnung” (=apartment) and “Gebäude” (=building). This difference is relevant for the kind of rights connected to it. Title to an apartment comprises the separate ownership (=Sondereigentum) of an apartment together with a co-ownership share (=Miteigentumsanteil) of the jointly owned property (=gemeinschaftliches Eigentum) which is an integral part of (§ 1(2) WEG).

In the Czech Republic properties owned by a cooperative (DV) are in fact cooperatively owned. Members of the cooperative purchase the ownership rights to be an owner and use a certain apartment. The apartment is not registered in the Cadastral Register as the private possession of the buyer, but rather as owned by the cooperative in which the member has certain rights (as well as obligations).

3. Land administration systems handling and administrating land rights

The organisational systems handling and recording land rights can be referred to as land administration systems. These refer to the governmental organisations involved in the registration of objects by cadastres (such as parcels and buildings), the registration of rights and restrictions by land registers (in German: Grundbuch) as well as the actors and work flows which provide input to the registration activity process and the customers who require products and services related to land rights (these include notaries, cadastral surveyors). In Germany the cadastres are organised at state level (usually referred to as Landesvermessungsamt (LVermA)), whilst in the Czech Republic these are organised through a central agency (the Czech Office for Surveying, Mapping and Cadastre). Land registers in Germany are organised through the court systems. In Germany the cadastre and land register are separate institutionally and organisationally, whilst in the Czech Republic they are organised in a single agency.

The administration of objects (i. e. geospatial information about buildings and parcels and their location, boundaries and heights) in Germany is administered through state-based surveying regulations. The cadastral surveying laws and regulations are basically uniform, however, the Ministry responsible for surveying differs per state. In Bavaria for example, it is part of the Landesamt für Digitalisierung, Breitband und Vermessung (www.ldbv.Bayern.de). Both in Germany and in the Czech Republic there are two fundamental types of information systems: one dealing with cadastral objects and one dealing with topographic objects. Both are connected through a system of geodetic coordinates.

In Germany the registration of titles is done by the land registries which are part of the local courts. Notaries play an important role in this as well. There are some 9,500 notaries in Germany (less than 500 in Bavaria), who are state-appointed officials. Notaries provide independent, impartial, objective advice for important legal transactions, they draft and execute these transactions. The Grundbuch is an official record of the plots/lots of land and of the legal rights pertaining to these lots. The land register is recorded by the municipal courts (land registry, „Grundbuchamt“), § 1 GBO, and usually handled by civil servants („Rechtspfleger“) under the supervision of a judge. The legal effects of the land register include: 1. Requirement for transfer of ownership (§ 873 BGB), 2. Presumption of true

ownership (§ 891 BGB), 3. Protection of acquisitions in good faith (§ 892 BGB). The principles of the land register are: Changes to rights are not legally valid before being registered in the land register (i. e. positive, title based system); Until otherwise proven, the correctness of all titles recorded in the register is assumed; Contents of land register are based on private contracts certified by public notaries; Contracts are stored in the files belonging to each record (hence not the deeds themselves are stored as separate entities); Registrations are only done by application (so, the land registry only becomes active when someone applies for registration; there is no automatic registration).

In contrast, the Czech cadastre jointly registers technical and legal interests of owners and other legally recognized subjects concerning real estate. Its main attribute is the compulsory title registration based on the adjudication process. The main concept of the system is the recording of the relationship between subjects and real estate objects (parcels, buildings, apartments, right of building, etc.) through formal rights. Details and comparisons are shown in Table 1.

What Germany and the Czech Republic have in common is that they are both using a title-based land rights registration system, whereby a government agency plays a crucial role in securing and guaranteeing the title and other rights to land and property. This is however only possible if a complete coverage of land rights for the entire territory exists and if all information related to land rights, possibly stored in different databases across government agencies, is properly shared. Both countries follow the principles of the European INSPIRE directive which makes the interchange of such data easier.

Aspects	Germany	Czech Republic
National (government) organisations	Bundesamt für Kartographie und Geodäsie (BKG) – for topography only; not for cadastral issues	Czech Office for Surveying, Mapping and Cadastre
Regional or state organisations	Landesvermessungsamt (LVermA) – 16 offices (1 per state – in Bavaria: https://www.ldbv.bayern.de/vermessung/bvv.html)	14 regional cadastral offices
Organisational systems and (local level) Agencies	Organised per state. In Bavaria: 51 Ämter für Digitalisierung, Breitband und Vermessung (ÄDBV)	94 local cadastral offices
Actors involved in checking land rights	In Germany, a notary (<i>Notar/Notarin</i>) is a highly-qualified individual who has been trained as an attorney. A German notary provides advice to clients on legal transactions, as well as drafting, authenticating, and registering legal instruments like wills, deeds, corporate registration applications, trusts, etc.	In the Czech Republic, notaries are appointed by the Minister of Justice, and their activity is supervised by the Ministry of Justice and the Notary Chambers. A notary draws up contracts for the sale of both real property items and agreements establishing easements amongst others. A notary provides services, receives money, documents and securities into his/her custody, and represents in proceedings concerning entering ownership and other rights <i>in rem</i> into the land

Aspects	Germany	Czech Republic
		registry. Notarial records – public documents – are guaranteed by law to be subject to simplified review when an entry with respect to rights <i>in rem</i> is made in the land registry.
Actors involved in surveying objects boundaries	Cadastral land surveyors. This differs per state. In Bavaria these are employed by the ministry, whereas in other states there can also be private land surveyors.	Private surveyors are entitled to carry out survey activities on certain conditions. All cadastral survey results, however, need verification by someone who is authorized by the Czech Office for Surveying, Mapping and Cadastre. Usually this person requires a special examination besides a master's degree in surveying.
Number of parcels	In Bayern: approx. 10 million parcels and 3.5 million buildings (with a population of 11 million)	23 million parcels and 3.7 million buildings (with a population of 10 million)
System of cadastral information	ALKIS	ISKN
Required capacities and educational requirements for handling land matters	Depends on the respective state. A cadastral surveyor (in German: Öffentlich bestellter Vermessungsingenieur (ÖbVI, ÖbV)) usually requires a university degree in surveying or geodesy (1st state examination); After two years as a clerk at the surveying administration (=Refendariat) and the big state examination (2nd state examination), after one year of professional activity in cadastral surveying (with a ÖbVI or cadastral administration) the application for the ÖbVI can be submitted.	According to the Survey Act private surveyors are entitled to carry out survey activities. Professional education and experience in surveying (5 years, or 3 years in case of graduated surveyors) are basic conditions for giving this license.
Registration efficiency ¹	Number of procedures to register property -> 6 Time (in days) -> 52 Cost of registration (percentage of property value) -> 6.7	Number of procedures to register property -> 4 Time (in days) -> 27.5 Cost of registration (percentage of property value) -> 4

Table 1. Aspects of German and Czech land administration systems

¹ <https://www.doingbusiness.org/en/data/exploretopics/registering-property>

4. Organisational aspects of converting and allocating land rights

Land rights can be converted in multiple ways, both through the market and through government interventions (land use planning, expropriation) or government supported procedures (such as land consolidation or village renewal). These various options are discussed.

4.1 Functioning and statistics of land market

Since land and property is highly individualised, the most common mode of mutations in land rights are market transactions. Approximately 74 % of the total territory of Germany is occupied by agricultural activities, in the Czech Republic the total area of agricultural land is about 54 %.

The total area of agrarian land transactions in 2018 in Germany was 83813 hectares, most of which took place in the so-called new German states (Bundesverband der gemeinnützigen Landgesellschaften (BLG) 2019). In western and southern Germany, however, the number and area of transactions in agricultural land is declining. This has to do with increasing market prices, increasing urbanisation (i. e. conversion of agricultural plots into built-up areas) as well as the decrease of land owners as a result of land consolidation. Figure 1 shows the sales of agricultural land in Germany.

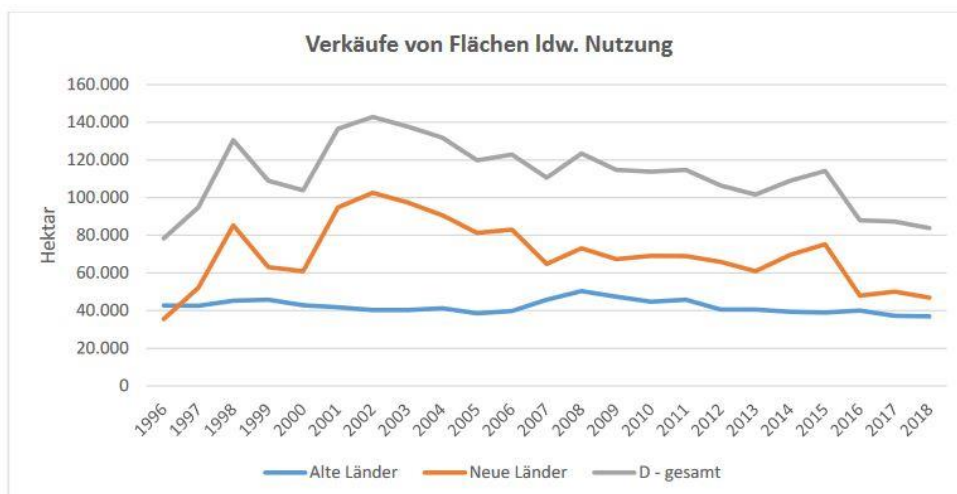


Figure 1. Sales of agricultural land (in hectares) in the “old” and “new” German states

Source: Own illustration with information from Bundesverband der gemeinnützigen Landgesellschaften (BLG) (2019)

Key:

Verkäufe von Flächen Idw. Nutzung = Sales of agricultural land

Hektar = Hectares

Alte Länder = Old states

Neue Länder = New states

In the Czech Republic the number of agricultural areas is also declining steadily. The World Bank reports a decline of roughly 1 % per decade.

4.2 Land use planning procedures and laws

In Germany the land use planning process is guided by a multi-level system of planning in which spatial plans at each level need to be adapted both bottom-up and top-down. This process requires a strong coordination between the different administrative levels. The institutional set-up and administrative responsibilities are regulated by a number of acts and regulations. The German land use planning system depends on both regulated and what can be referred to as informal, or non-documented structures and associated processes. The administrative federal structure of Germany results in three levels of organisation, each bearing a given operational and legal responsibility for spatial planning. This structure ensures the formal development and execution of land use planning, whereby in principle the eventual land use allocation and land use control is conducted at a decentral level. However, the government tiers are institutionally interlinked by mutual feedback interconnectivity as well as through complex requirements of notification, participation, coordination and compliance. These feedback loops result in an interactive formal system whereby different kinds of plans are adapted and aligned. One could refer to these processes, responsibilities and associated activities as the formal coordination. The system works as presented in Figure 2.

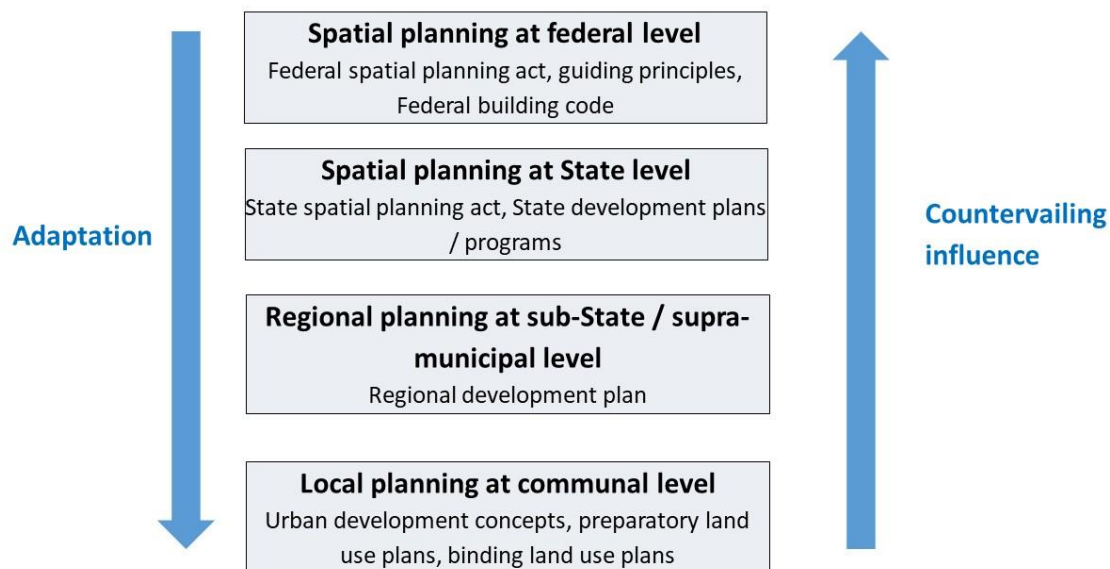


Figure 2. Levels of spatial land use planning in Germany

Source: Own illustration (2019)

In addition to the formal system of multi-level alignment and adaption of plans there is a significant influence of individual citizens, the private sector and multiple groups of stakeholders. These groups influence both the process and the outcome of the planning in various ways. Much of this influence, however, remains undocumented and as a result it makes the overall system of land use planning and control much more complex than the formal responsibilities and requirements suggest. In order to manage this system, different methods or types of coordination are present, in which multiple stakeholders are involved. Even though the management and planning of land and natural resources is amongst the key tasks of the state, de facto they do not operate alone in acting upon this responsibility. They strongly interact and coordinate with stakeholders and advocacy coalitions which are often outside the state's realm.

Many of the recent spatial planning policies in Germany stood in the light of demographic changes. For several years “shrinkage” has been a key word popping up in most strategic documents. So-called “shrinking villages” emerged from structural economic crises, rural outmigration, and a general demographic decline due to the surplus of deaths over births. A direct result was spatial inequity whereby urban regions gained more attention as opposed to increasingly sparsely populated rural communities. At first this was seen as a remnant of the East-West legacy and a simple demographic one-directional trend. However, a number of local variations and nuances gradually became apparent. First of all, the demographic change is by no means spatially universal. Within many local rural regions there is both an internal immigration and outmigration. Demographic statistics therefore need to be looked upon at a much more detailed scale. Secondly, the latest migration discourse in Germany has been largely dominated by the very recent refugee crisis. Thirdly, calls for spatial justice and the reconnaissance of spatial identity have shed new lights on the role of the rural regions as compared to the urban or metropolitan regions.

An issue which plays a large role in current land use planning at local level is land ceiling. In Germany, an average of 58 hectares of land is converted into a built-up area² every day, obviously at the expense of agricultural land. The current policy at national level is to reduce this to a maximum of 30 hectares per day. In Bavaria the current policy is even to limit it up to 5 hectares a day.³

4.3 Expropriation

Expropriation, an enforced state interference of property, which results in the dispossession/expropriation of privately owned land and conversion of privately owned land to state-owned land or to a right for a state-advantaged enterprise is only an ultimate instrument which a government agency can exploit.

In Germany, Art. 4, § 3 of the German Constitution (GG) provides for this possibility. In addition, under the Federal Building Code (BauGB), expropriation is primarily an instrument for the implementation of land use plans such as the general right of pre-emption, land reallocation, or provision of local public infrastructure (Albrecht 2018). Expropriation, however, is only possible if there is a legal requirement, if it serves the benefit of the general public, if it is proportionate and if adequate compensation is provided.

The Czech Republic follows a similar principle. Expropriation is possible under the Expropriation Act. The expropriation office determines the amount of compensation and the time limit during which the expropriator is required to pay the compensation. The compensation is provided based on its market price, if the object of the expropriation is a plot or a building structure (Radvan and Neckář 2018). It is executed only under certain conditions and under certain circumstances. It must lie in the public interest, such as the construction of roads and infrastructure, and be carried out only for certain purposes expressly provided for by law and subject to compensation. Although expropriation is rare in practice, a special type of proceeding for expropriation matters is set out by statute to protect the owner's interests. Recently expropriation has also been suggested for implementing measures to improve the environment and protect against natural disasters (Hanák 2015).

² <https://www.bmu.de/themen/nachhaltigkeit-internationales/nachhaltige-entwicklung/strategie-und-umsetzung/reduzierung-des-flaechenverbrauchs/>

³ <https://www.topagrar.com/suedplus/news/bayern-setzt-5-hektar-ziel-beim-flaechenverbrauch-11609757.html>

4.4. Restitution

Restitution is a complex process whereby land and property rights held under a different regime can be returned to the original owner. Restitution in Germany and Czechia became a possibility after the regime changes in the early 1990s. Essentially it constitutes a complex conversion from a state land right to a private land right. The complexity lies in finding sufficient evidence of the previously held right and the related plot boundaries (there may be no maps available any more, or maps contain different coordinates) and in the tricky laws related to this conversion process. Lee et al. (2019) show that at least 13 different laws are involved in executing this process.

In Germany, the BVVG (Bodenverwertungs- und -verwaltungs GmbH) was established in 1992 as implementing agency responsible for the management and the privatization of agricultural land in state-ownership. The privatization is organised in three phases: leasing, selling at reduced prices under the so-called land purchase programme. The precondition for restitution was the submission of an application by the rightful owner before December 31, 1992. The newly established *Offices for Unresolved Property Issues* on federal and state levels were responsible for processing restitution claims and deciding on the reassignment of property. Besides private persons or legal entities, statutory authorities (e. g. federal states or the municipalities) could be former owners of property. While during GDR times this property was regarded as a state or publicly owned land, after the reunification it had to be reallocated to the statutory bodies. Furthermore, the statutory authorities as part of the public sector needed property to fulfil their administrative tasks. This allocation to regional administrative bodies (statutory bodies) is governed by the *Law on Allocation*.

In the Czech Republic, the possibility for restitution was also organised after 1989, but it was never fully implemented. Restitution is covered by the Land Law (no. 229/1991 coll.) which was passed at the end of 1991. After 1989 the Czech Republic embarked on a strategy to sell most of the land it owned and was left with only around 170,000 hectares of land in 2015. The result was that in many locations restitution was no longer possible as the available land was smaller than the ongoing restitution applications of previous landowners. Consequently, there is now a law about the reserve of land owned by the state which since 2016 cannot drop below 50,000 hectares.

4.5 Rural development laws and instruments

Rights are currently converted often through either land consolidation procedures and/or territorial development and village renewal procedures. In many cases such processes require new types of land and property use and a re-distribution and re-allocation of rights which is strongly related to the conversion of rights (both ownership and use).

4.5.1 Land consolidation (laws, procedures, practices, challenges)

Land consolidation in the narrow sense comprises the processes of re-distributing (mostly agricultural) parcels in such a way that more effective and efficient agricultural production can take place and that both parcel shapes and sizes as well as land rights are more de-fragmented. Land consolidation in a wider sense also involves using the re-distribution alongside systematic socio-economic development and transition processes. The German land consolidation Act (Flurbereinigungsgesetz (FlurbG)) specifies this as follows: § 1 FlurbG: "In order to improve production and working conditions in agriculture and forestry, as well as to promote general national culture and land development, rural land ownership can be reorganised through measures under this law." Hence, in order to pursue or promote land development (section 1, 86 FlurbG), it is necessary to know and

take the development goals and the concretely derived objectives and measures of spatial planning and regional planning into account.

As a result, land consolidation projects in Germany go beyond the mere redistribution of land rights, and there are different shapes and types of land consolidation in Germany: standard LC (=Regelverfahren), simplified LC (=Vereinfachtes Verfahren), LC for improvement of businesses (=Unternehmensverfahren), accelerated LC (=beschleunigtes Zusammenlegungsverfahren) and voluntary land exchange (=Freiwilliger Landtausch). Regular land consolidation processes are largely carried through by a committee of stakeholders and land owners. Those have the authority to make decisions on planning and financing of the land consolidation execution.

Land consolidation in the Czech Republic restarted with the regime change in 1989 with similar principles as it had been conducted before the previous regime change in 1948. According to Act no. 139/2002 coll., the goal of land consolidation in the Czech Republic is to change the legal status of the land, arranging the plots spatially and functionally by blending or dividing them to ensure access to and the use of land, and settling their boundaries so as to create conditions for rational management by landowners. The Czech law has two basic forms of land consolidation: simple land consolidation, dealing mostly with provisional land use, while comprehensive complex land consolidation deals with changes in land ownership, land conservation, flooding control, land reclamation, field road systems, etc. One of the complications of land consolidation in the Czech Republic is that it has to clarify, revise, renew and restore cadastral information on private properties and, at the same time, improve the agricultural landscape (Podhrázská et al. 2015). The complexity of the gradual legal changes results in a slow process of land consolidation and a continuing fragmented landscape.

A difference between Germany and the Czech Republic is the execution of land consolidation. Whilst having different forms of land consolidation, Germany has got much more historical experience in carrying out these processes and gained a broader sense of acceptance in society. Land consolidation has grown into a broad land development and integrated land management instrument.

4.5.2 Rural land development and village renewal

Development of rural areas takes place through a combination of various instruments, such as land consolidation, integrated rural development, regional development programmes and village renewal. Local agencies of rural development aim to implement these instruments, either on their own initiative or in support of an initiative by citizens and stakeholders. This is also regulated by a law, the land consolidation law. In Germany the operational rural development agencies work according to the following basic principles: citizen-centric, active participation, one-stop agency, integrated economic, ecological and social development and active land management. However, results are only considered relevant and appropriate if the activities are also fully accepted among citizens. The integrated approach of the rural development agencies also generates a wide spectrum of operational activities:

- Integrated rural development, largely based on (voluntary) inter-municipal cooperation
- Soil management
- Intercommunal rural road network development and maintenance
- Community development
- Local development and vitalisation of rural regions (using instruments such as the vitality check)
- Support and development of ecological regions
- Biodiversity enhancement
- Support of microenterprises
- Flood management

- Sustainable energy supply

Village renewal and revitalization has therefore developed from focusing on agricultural improvement only in the 1950s and 60s towards the current integrated local and regional development initiatives, citizen's participation and awareness campaigns, strengthening programmes of the economic, ecological, social and cultural potential of rural areas, improvement of the townscape and landscape taking into account the preservation of the independent character of rural settlements, promotion of regional and local branding and improvement of local conditions for agriculture. The so-called integrated rural development initiatives rely on the following building blocks:

1. Short description of the region
2. Analysis of regional strengths and weaknesses, taking demographic trends and opportunities to reduce land use into account
3. Development goals and appropriate test indicators
4. Development strategy, fields of action and lead projects
5. Regional criteria for the selection of projects
6. Criteria for the evaluation of the achievement of goals

4.5.3 EU funding and subsidies for land development

On EU level several programmes can support land development and village renewal:

- LEADER: Goal of the programme is to enhance existing development potential in the subregions (of the EU) through cooperation of different actors from society, economy and politics, and based on bottom-up development and implementation of strategies, local public-private partnerships: the local action groups (LAGs), integrated and multisectoral action, innovation, cooperation, networking and territorial local development strategies. European LEADER regions are selected in EU member states through national competitions. The basis for recognition as a LEADER region is a convincing presentation of a regional development concept. The 68 LEADER areas in Bavaria comprise 86 % of the Bavarian territory and 58 % of the inhabitants.
- European Regional Development Fund (ERDF – in German: Europäischer Fonds für regionale Entwicklung (EFRE)): The ERDF supports regions where development is lagging behind and where structural problems exist. It finances investments to strengthen operational competitiveness, job creation in small and medium-sized enterprises (SMEs), measures to promote energy efficiency, research and technological development, and environmental protection. Germany receives almost EUR 11 billion from the ERDF in the current funding period. In addition, the ERDF (around € 1 billion) supports European Territorial Cooperation (ETC) actions. The ETC aims in particular at cooperations between the member states in border regions, such as Germany and the Czech Republic, as regional challenges do not stop at borders. Thus, the ETC directly contributes to the improvement of relations between European neighbours.
 - European Agricultural Fund for Rural Development (EAFRD – in German: Europäischer Landwirtschaftsfonds für die Entwicklung des ländlichen Raumes (ELER)): EAFRD promotes improving the sustainable management of natural resources and climate change as well as the economic and social development in rural areas. Germany receives around 9.5 billion euros from the EAFRD in the current funding period (<https://cohesiondata.ec.europa.eu/countries/DE#>) whilst the Czech Republic is obtaining 2.3 million euros. (<https://cohesiondata.ec.europa.eu/countries/CZ>)

The European Network for rural Development (<https://enrd.ec.europa.eu>) and the statistical data of Europe (<https://cohesiondata.ec.europa.eu/>) provide a good overview of European funded projects.

5. From national land policy to local policy implementation

The Federal Institute for Research on Building (2016) describes the concepts and strategies of spatial development in Germany. It contains four key principles for Germany: 1) enhancing competitiveness; 2) ensuring the provision of public services; 3) controlling and sustainably developing landuses; and shaping climate change and the transformation of the energy system. Government agencies on all levels have to meet the objective of achieving a convergence of living standards and also include the spatially relevant elements of the principle of sustainability which are equally important. They relate to all types of areas – from rural-peripheral areas to metropolitan areas. The European dimension, a must in every development strategy nowadays, is also an integral part of the three concepts. They are subject to the principle of subsidiarity and do not call the distribution of competencies between the federal government and the federal states into question. Therefore, the key principles neither lay down planning specifications in the sense of objectives and principles of spatial planning nor do they predetermine concrete specifications on land use laid down in state development plans and regional plans.

Especially the third principle (controlling and sustainably developing landuses) is crucial for changes in land rights and land use. It involves a spatially just development through the allocation of appropriate land use and through the support of rural areas in order to obtain equal benefits from the national development as urban areas. In addition, the third principle involves conservation of resources and cultural landscapes. This occurs in four steps:

1. Creation of a Strategic Development Plan. This provides the overall goals both spatially (i. e. where does one foresee a certain development) and thematically (i. e. what kind of development is preferred).
2. Preparatory Land Use Plan. This is a set plan for a time period of about 10-15 years describing the needed expenditure for new buildings considering the time period, differentiating between housing areas, industrial zones, mixed use, etc. (urban land use), areas for technical and social infrastructure, power stations, kindergartens, schools, etc.), regional and local highways and streets, areas of green space and open space and areas for agriculture and forestry. It integrates a landscape plan. The Preparatory Land Use Plan covers the territory of the entire municipality and outlines the type of land use from the intended development. It is typically drawn on a map at a scale between 1: 25 000 and 1: 10 000.
3. Urban Development Plan. This is an informal planning instrument. It involves a master plan for strategic parts of a city.
4. Binding Land Use Plan. This is a formal part of the process. It is to be fully conformant with the Preparatory Land Use Plan, but the details and boundaries of the allocations are now given. As a rule, the Binding Land Use Plan is not limited in time and it also includes the environmental report which describes and assesses substantial environmental impacts. The Binding Land Use Plan determines which developments are permitted at a certain location. It is usually drawn at a scale of 1: 1 000. The existence of a Binding Land Use Plan is not mandatory and often only parts of a municipality are covered by it. The Binding Land Use Plan is the only plan which gives landowners the right to development (construction or alteration of land use).

There are two main authorities dealing with land issues in the Czech Republic - the Ministry of Agriculture and the Ministry of the Environment (OECD 2017). Rural development is the main task of the Ministry of Agriculture (MA). This includes the support for farmers, via financial subsidies for example. The Ministry of Environment (ME) deals with the land itself, i. e. ensuring the quality of the land use and protection. Aligned with the national offices, Czechia has a number of regional offices responsible for the execution of the regional development plans. They can issue planning permissions for developments that affect several municipalities. Regional councils (i. e. elected regional assemblies) approve the regional development principles as well as the regulatory plans prepared by regional offices.

Similar as in Germany, the Czech Republic uses a hierarchical system of (land use) plans at the national, regional and local levels. Lower level plans generally need to comply with higher level ones. The National Development Policy, updated or replaced every four years, specifies the requirements for a national sustainable development, including the key spatial relations within the country and the objectives of the national government related to them. At the municipal level, three types of plans exist, two of which provide legally binding regulations for land owners: Local Territorial Plans, Regulatory Plans, Planning Studies.

In addition to the formal agencies and procedures there are many non-state actors which influence the outcome of land management, and hence also the conversions in land rights and land use in general. Civil society especially in Germany is organised in multiple panels, associations, committees, boards, academies which lobby and promote their interests.

6. Exchange of Chinese-German-Czech experiences and creating win-win opportunities for the further development in land matters

The German examples related to the management of land rights have shown that this activity has been gradually embedded in more integrative and participative (bottom-up) processes of spatial development and village renewal. Gradually, the focus of land (right, use) reform has shifted from agricultural optimization to a more integrative service for and with citizens and stakeholders. The advantage of this approach has been that it has increased levels of trust and acceptance and created a sense of ownership, identity and responsibility to maintain and develop local rural land in particular. The local land development agencies in Germany are guided by principles to take an integrated approach whereby citizens are both responsible and accountable. Such approaches are embedded in a gradually adapted land consolidation act and practices of local development agencies. Such a system may not be immediately transferable to China and its institutional system. However, the principles of development execution, emphasizing acceptability and enhancing locally lived responsibilities and identities may equally apply. Farmers in China to whom land use rights are allocated or re-allocated after a land consolidation process may not always have been equally involved. Zhang et al. 2019 investigated however that this may not always be due to the motivations (or the lack thereof) of the farmers, but also to the opportunity and ability to participate. As a result, acceptance of land re-allocation may not always be optimal. Rural regions can only become attractive and lucrative again with a lot of stimulation, activation and engagement. Local governments and development authorities can play a crucial role in taking up a role of inspiration and aspiration. However, local citizens should also become more engaged and feel more proud and engaged with their local region. This can be done by actively engaging people by positive and optimistic communication and sharing of aspirations, reconstruction and/or restoration of empty buildings, making private investments possible, possibly together with financial credit facilities, supporting the production and marketing of local products and organisation of local events which could attract people from outside (de Vries 2018).

Regarding the administration of land information in China the new article 84 “Land Administration Department” shall be amended to “Natural Resources Administration, Agricultural and Rural Administration”. The assumption is that this agency will have the ability to integrate land related information better than before and thus make more informed-based decisions on land matters. This integration of information responsibility remains an issue in the German context. Although INSPIRE and the development of the AAA system (as a combination of all cadastral, geodetic and topographic information databases) have greatly extended land related information, the inclusion of public rights restrictions, environmental authentic information, information to public heritage buildings is still complex in the German context. There are indeed several portals available through which various sources of information are available, but both strictly abided privacy regulations and conflicting institutional mandates make a full integration and full access to land information for citizens complex and time consuming. A more integrated approach to land information governance would thus be timely, relevant and opportune.

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