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Swiss land governance

a study commissioned by
SDC agriculture and food security network



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ENTWICKLUNG DER LANDWIRTSCHAFT UND DES LÄNDLICHEN RAUMS
DÉVELOPPEMENT DE L'AGRICULTURE ET DE L'ESPACE RURAL
SVILUPPO DELL'AGRICOLTURA E DELLE AREE RURALI
DEVELOPING AGRICULTURE AND RURAL AREAS

„Ihr kauft und verkauft das Land, wie Hosenstoff nach Ellen.
Ein Fetzen da und dort ein Band, als wären's Bagatellen.
Ihr handelt wie mit Speck und Kohl und Fischen und Kommoden
und dabei geht's um ein Monopol und geht's um unsern Boden.
Ihr schneidet gross und kleine Stück' mit wuchtiger Gebärde
und dabei geht's um Menschenglück und geht's um Gottes Erde.“

Hans Bernoulli, architect and urbanist from Basel (1876-1959)

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1 Abstract

Switzerland has a long history of land struggles and debates to come to grips with inclusive land governance. Today the country makes use of a complex system of laws and ordinances, checks and balances, formal and informal processes as well as judicial practices and political procedures to manage land related decision-making. Many of the current challenges demand for a dynamic and systemic approach: They require reliable rules, but also a certain flexibility in order to adapt to future demands has to be assured.

Switzerland of today is characterized by cultural diversity, a high level of welfare and a long period without armed conflicts. But already in medieval times, cooperative structures and common land use have existed and procedures for conflict resolution and joint decision-making were established. This allowed the country to gain experience with the joint management of land and democratic participation, important political rights of the people (optional referendum and popular initiative) have been in force since the end of the 19th century already. Furthermore, the Swiss political system is characterized by a participatory federalism: The cantons – and the municipalities to a certain extent too – are sovereign entities within the framework of the Swiss Constitution. They have their own constitutions as well as legislative, executive and judicial authorities, in order to keep responsibility as close as possible to the people concerned.

This principle also shapes the system of spatial planning in Switzerland. The country's highly developed economy, increasing urbanization and well expanded infrastructure lead to a strong pressure on land use while at the same time they intensify the demand for the protection of landscape and environment. The current Swiss agricultural policy stands between these two opposing forces, trying to promote a sustainable use of land as well as preserving enough productive soil and farming know-how to maintain the potential for self-supply.

Spatial planning is quite comprehensive and includes the responsibility for the whole living space. It is a common task of all three state levels: Confederation, cantons and municipalities. The Federal Law on Spatial Planning represents a framework legislation, setting the principles for spatial planning. However, planning implementation is a task of the cantons, which they fulfil by means of their planning and building laws and the cantonal structure plans, the central instrument for the coordination of spatial development in Switzerland. Additional planning instruments are concepts and sectorial plans on the federal level and land use plans on the communal level. The latter are a core instrument of spatial planning, as they are binding for the general public. They define the delimitation of building and non-building zones and regulate the permitted use of the land. The distinction between building and non-building zone is a key factor in land use planning because it determines which laws are applicable and thus influences the conditions for land tenancy and acquisition, land prices, building permits etc.

The responsibility for the whole living space also implies that spatial planning cannot be regulated exclusively by planning and building legislation. Functional planning law includes all spatially relevant legislations, e.g. legislation concerning infrastructure and installations, agriculture, environment and nature protection, taxation, peasants' land rights, housing, regional policy or tourism. Indeed, planning processes are complex and it's hardly possible to regulate all relevant needs by law. A comprehensive balancing of interests is necessary to consider all relevant public and private interests. Thus the basis for sound political decision-making and the avoidance or resolution of conflicts is laid.

Another important issue influencing land governance in Switzerland is the desire to secure national economic supply, especially food supply. The success of the so called "cultivation battle" during the World War II was one of the bases for the actual "Sectorial Plan for Crop Rotation Areas". Its aim is to preserve a minimum of arable soil (438'560 ha) sufficient to guarantee independent food security. Nonetheless, arable land is under severe pressure and the people clearly express their discomfort with urban sprawl and loss of cultivated land. A revision of the Law on Spatial Planning in 2013 strengthened the protection of arable land.

These general outlines of Swiss Land Governance are explained more in detail with a series of exemplary **Case Studies**, which are summarized below:

Common Land Use: The "Oberallmeindkorporation Schwyz" (OAK), the biggest land corporation of the country, is over 900 years old, has more than 16'000 members (hereditary citizenship) and actually holds a 24'000 ha of land. Its history runs parallel to the development of Switzerland from its origins to the current democratic state. At the beginning stands a 250 year long conflict with the monastery of Ein-

siedeln about – land rights! A battle that rallied other local farmer communities against clergy and nobility. Over the centuries OAK developed the democratic participation of its members and the inclusive assignment of land use rights.

Spatial Planning: Land ownership is recorded in local land registers open to the public. Spatial planning regulates the land owners' potential use with a set of plans and additional legislations. Formal and informal procedures of checks and balances assure the participation of concerned citizens and land owners. Several planning levels with differing functions provide stability as well as flexibility. While the Confederation promotes and coordinates the spatial planning of the Cantons, the latter issue structure plans which give the Municipalities guidelines to develop their land use plans and define the zones.

Inheritance law and farm transfer: Basically, the civil code of Switzerland defines inheritance rules, fixing legal and compulsory shares as well as free quotas for the distribution of legacies. Non-dividable assets will be assigned to one of the heirs who will compensate his co-heirs at market value. Farm land however is subject to a specific "Law on Peasants Land Rights" (LPLR). It strives to guarantee access and affordable conditions to the user of agricultural land, by giving the heir who is capable and willing to manage the agricultural land personally the right to claim its undivided allocation. And it limits the price for agricultural land by fixing the capitalized earnings value (CEV) as valuation for the transfer of an agricultural business to an heir, resp. double the CEV in case of agricultural land parcels.

Farmland Market and Voluntary Property Consolidation: The LPLR regulates the free market too: Buyers of agricultural land have to be self-managers, and the law sets a dynamic price limit (max. 5% above the average prices in the past 5 years for comparable agricultural parcels or businesses in the concerned area). Farms therefore have limited opportunities to consolidate their parcelling on the market. In order to facilitate the improvement of parcelling, the administration offers various procedures: One of the less complex methods is the voluntary property consolidation: The municipality initiates the process by proposing perimeter and consolidation aims and inviting concerned property owners to an assembly which will decide whether to proceed with the consolidation or not.

Expropriation and Water Protection: The Law on Expropriation allows expropriations in case of superior public interests. They must be appropriate to attain the public goals, and they shall in principle be fully compensated. The law differs between "formal expropriation" (full compensation), "material expropriation" (compensation), and "public law property restrictions" (without compensation). The protection of groundwater resources is clearly of public interest. Their contribution areas are divided into a number of zones with different requirements: the restrictions decrease from zone S1 (catchment sector, material expropriation with compensation) to S2 (inner protection zone with restrictions, compensation) to S3 (outer protection zone (compensation possible)).

Constructing outside Building Zone: In principle, the law does not allow constructing outside the building zone. But it allows exceptions for: residential and economical farm buildings, buildings for energy production and infrastructural works for agriculture and forestry. New constructions, renovations or extensions of limited residential areas are permitted only when the concerned farm has a certain size. Economical farm buildings are zone compliant when they mainly serve for soil-dependant production. If they involve exclusively soil-independent production, they are only compliant in a "special agricultural zone". All new constructions or alterations of animal keeping facilities have to respect minimal distances (odour emissions).

Nature Conservancy and Ecological Balance: Switzerland's agricultural policy guides farmer's decisions with a system of direct payments. The improvement of ecological standards is supported first by connecting general payments with compliance to the "proof of ecological performance" (basic ecological and ethological requirements). Then other payments compensate specific voluntary performances with regard to environment and livestock. In addition the government applies a number of mandatory regulations with defined aims of water and soil protection, biodiversity improvement and animal welfare.

Farm cooperation: According to economists, Swiss farms should grow in order to improve their competitiveness. But the restricted agricultural land market gives them almost no leeway to do so. That's why the agricultural policy tries to promote cooperation among farms by creating incentives for farmers tackling joint projects: easing of thresholds for direct payments, access to additional interest free credits, non-refundable subsidies for the foundation of corporation initiatives. The Federal Office for Agriculture has started a campaign to promote cooperation and overcome emotional barriers hindering farmers to start joint production.

2 Part 1 – Swiss land governance – overview

2.1 Introduction and background

According to the Global Land Tool Network, “Land governance is the process by which decisions are made regarding the access to and use of land, the manner in which those decisions are implemented and the way that conflicting interests in land are reconciled.” (Global Land Tool Network) Thus, when speaking of land governance, procedures, policies, processes as well as implicated institutions come into focus, which are decisive for the management of land and for land tenure, for land ownership and for the access to land.

For land governance, the question of good governance is as important as legal, socio-cultural and economic issues. Therefore five principles should be considered “in order to implement good governance: accountability, transparency, non-discrimination, participation and efficiency.” (SDC 2012, p. 6)

The aim of this study is to give a general overview of land governance in Switzerland and to give an answer to the question how, in the case of Switzerland, competing interests between land users and land uses are handled. For this purpose, in the following sections, the history of the tenure of land and of the political system in Switzerland will as well be described as legal frameworks and procedures and the system of spatial planning or mechanisms for conflict resolution.

2.2 History of tenure of land and democracy in Switzerland

Switzerland is a federal state since 1848 and was constituted by the people and the cantons. The Swiss federation often is described as a nation of will, as there is no unifying ethnic, linguistic or religious core which holds it all together. Quite to the contrary: The nation is formed by several ethnic groups with different languages and religions. Switzerland has four national languages (German, French, Italian and Romansh) and two main religions (Roman Catholic and Protestant) which influenced the history of the Confederation.

In order to relate a brief history of tenure and of land in Switzerland, some aspects particularly need to be emphasized: common land use and the management of common resources as well as cooperative structures (corporations) which shaped, already in the Old Confederation (from the 13th/14th century until 1798), political institutions as well as the everyday life of people. This even goes so far, that these structures could be seen as the cradle of Swiss democracy.

In medieval times, farmers usually did not own their land. Only the liberation of the peasants implied the transfer of the land to their free individual property and thus facilitated individual, market-oriented farming. Nevertheless national food supply, which has been influencing land governance in Switzerland already for a long time, was and still is an issue. The debate about the protection of cultivable agricultural land dates back to the First World War. However, it still took several decades until the Law on Spatial Planning finally came into force and laid the basis for a stronger protection of agricultural land.

2.2.1 Common land use and cooperative structures: a practice field for democracy

Even though these common cooperative structures were guided by a common interest, conflicts were part of the daily life too and the premodern confederation also knew strong centrifugal forces, especially owing to its own heterogeneity (e.g. the two main confessions). Structures and procedures for conflict resolution were thus essential and already present in the Old Confederation (e.g. arbitrations). Despite legitimate criticism (e.g. privileges or lacking integration of women in decision processes), these cooperative structures and the joint management of the commons can also be seen as a practice field for democracy and public participation. They somehow shaped the development of the state in Switzerland.

One important and still existing example for the common management of resources is the joint management of common land. The so called “Allmende” (usually common land, e.g. grazing land, alpine pastures, forest, roads, water bodies) was intended for communitarian use either by the entire community or by the holders of usage rights and thereby also contributed to absorb social problems and helped to reduce economic dependency. As in this context conflicts are virtually inevitable, processes for conflict resolution and joint decision-making were crucial.

The historic – and in some cantons still practiced – “Landsgemeinde”, the general assembly of a district or canton, or rather of all holders of usage rights in the territory, actually was a school on democracy and participation. For instance, the handling of majority votes or being part of the minority could be trained (cf. Daniel Schläppi). The “Landsgemeinde” can be described as one of the prototypes of direct democracy and dates back to medieval times. It developed from the medieval corporations, which also could be described as kind of a preform of modern organizations. In Switzerland some of these corporations still exist and they are either organized under private or public

law. They can be, for example, cooperatives for the common use of forests, meadows, pastures and other similar matters (see also chapter 3.6).

In summary, it can be ascertained that already in the Old Confederation structures, processes and practices for the common use of resources and land and for collective decision-making have been practiced. They contributed not only to equality of access and opportunities for use but somehow also were a precondition for the modern Swiss state.

2.2.2 Liberation of the peasants and land property rights

Even though common land use and cooperative structures may be seen as the cradle of Swiss democracy, parts of the population were excluded from political participation. They still were serfs and had to perform compulsory labour. Quite often patrician families, guilds or simply the established families dominated political life – even in small Cantons with the democratic “Landsgemeinde”. Also women for a long time had no voice in this political structure.¹

Serfdom was above all an economic burden for the rural population. During the peasants` war and rebellions, peasants demanded particularly the abolition of this burden, which means the abolishment of payments in case of death and of compulsory labour. But all of these revolts were not really successful and only brought some small relief for the rural population.

Only the period of the Helvetic Republic (proclaimed 1798 and dissolved 1803) brought the abolishment of the duties of feudalism, including the tithe (Zehent). This was realized by new legislations which repealed the inherited bond to the lords of the manor. Though the land usually was not transferred without any compensation, in fact peasants had the right to redemption. As farmers often were poor and redemption was not readily possible, this actually did not lead to the immediate liberation from dependency for all peasants.

In fact, the Helvetic Republic failed to fully implement a new order. The change finally was in the responsibility of the Cantons, which usually abolished the tithe while at the same time introducing new taxes as a substitute. And liberation from feudal bonds was of varying duration, depending on the region, conditions for redemption, harvest and finally also on increasing inflation.

By the end of the period of Regeneration (from 1830 until the “Sonderbundskrieg” 1847, a Swiss civil war and the last armed conflict in Switzerland), the liberation of the peasants and the abolishment of feudal duties almost completely prevailed. The land reform transferred land ownership from the landlords as free property to the peasant. Thereby also the barriers for individual and market-oriented farming were finally removed. (cf. Anne-Marie Dubler)

Also the distribution of common land was pushed in the 18th and 19th century. Initial efforts for this division already existed since the 16th century either by lease of land or by allocation of usage rights, though the land remained property of the community. But over time and by inheritance this land was transferred to individual ownership. This enclosure of the commons often was appreciated by the government as well as by the peasants, because it allowed the intensification of farming and improved living conditions too. But it also needs to be stated that this process would not have been possible without the expansion of the cottage industry (usually silk weaving), which created additional income for the poor population (Prass 1997, S. 140f).

With the implementation of the Swiss Civil Code 1912, the introduction of the land register was decided too. Land register survey became a task of the Confederation, whereas implementation was transferred to the Cantons. Since then land property is guaranteed with the record in the land register.

2.2.3 Development of direct democracy

The development of the system of direct democracy had a significant impact on land governance in Switzerland. With the end of the restoration period (1814 until 1830), the liberal movement came to power in several Cantons. The resistance of the conservative catholic cantons against the strong liberal movement and the efforts to create a central federal state, finally culminated in the “Sonderbundkrieg” in November 1847. The end of this civil war led to the unification of Switzerland from a federation of states to a federal state by means of the Federal Constitution of the Swiss Confederation from 12th September 1848.

The continuing resistance of conservative circles against the efforts of the liberals to centralize political and economic power led to continuous improvement of the system of direct democracy and thereby stabilized the new democratic fundamental order. The most important political rights of the people were established in the second half of the 19th century: the optional referendum in 1874 and the popular initiative in 1891. In this period Switzerland became the state with the most pronounced system of direct democracy worldwide.

¹ The Canton of Appenzell Innerrhoden was the last canton to grant women the right to vote in 1990.

The supremacy of the people even goes so far as to weight democracy higher than the constitutional state: Federal laws must be recognized by the Federal Court (and all other courts), even when they are contradictory to the constitution. A constitutional jurisdiction for federal laws does not exist in Switzerland.

That the people exercise their democratic rights and that this has considerable effects on land governance in Switzerland can be shown by the example of recent initiatives like the cantonal Initiative on Cultivated Land in the canton of Zürich 2012, the national Initiative on Secondary Residences 2012 or the Initiative on Space for People and Nature (Landscape Initiative). The latter led to the revision of the Law on Spatial Planning, which was adopted by the Swiss people in 2013 and entered into force in 2014. This law is meant to contain land speculation and land consumption in an increasingly urbanized Switzerland.

2.2.4 From the “Cultivation Battle” to the Sectorial Plan for Crop Rotation Areas

Another important issue, which has been influencing land governance in Switzerland, is the question of the national economic supply (especially food supply). Due to unfavorable climatic and topographical conditions, the security of supply already has been an issue since the late middle age. The construction of railways and steamships promoted the international division of labor in the 19th century and also led to the decrease of the cultivation of cereals. The working class engaged in the question of bread provisioning from the 1870s onward. The worsening situation of the working class during the First World War, increasing food shortages as well as inflation cumulated in the national general strike of 1918. Although approaches to solve the shortage of food were discussed, they were implemented only fragmentarily and certainly too late.

The Confederation learnt from the bad experiences in the First World War. During the Second World War the national security of supply was pursued more vigorously and with all available instruments of the war economy. One of these instruments was the famous “Anbauschlacht” (cultivation battle), the Swiss war-time farming campaign, which truly mobilized most of the Swiss agricultural resources and led to the intensification of agricultural use.

This “Plan Wahlen”, how the program for the promotion of food production was named after its inventor Friedrich Traugott Wahlen, later to be elected federal councilor, was one of the bases for the Nutrition Plan for Times of Disturbed Supply and thus finally also for the Sectorial Plan for Crop Rotation Areas which was implemented in 1992. This Crop Rotation Plan was the first sectorial plan that created after the introduction of the Law on Spatial Planning. Its aim is to preserve a minimum contingent of arable soil that is sufficient to guarantee independent food security (438'560 ha) for the future.

Nonetheless the arable land is under severe pressure in Switzerland, as the above mentioned initiatives show. A second stage of the revision of the Law on Spatial Planning, which included, among others, topics like building outside the building zone, planning in functional spaces and the protection and use of cultivated land, was widely criticized during the consultation process from Dec. 2014 until Mai 2015. In a reaction to this, the Federal Council decided that the topics of the protection of cultivated land and of crop rotation areas should be treated separately. That is why the Sectorial Plan for Crop Rotation Areas now is being revised and should be strengthened that way.

2.2.5 Implementation of spatial planning in Switzerland

Legal basis for this sectorial plan was the above mentioned Law on Spatial Planning which was adopted by the people in 1979 and came into force in 1980. This law is based on the article on spatial planning of the Swiss Constitution, which transfers the responsibility for the framework legislation to the Confederation whereas practical implementation of spatial planning remains a matter of the Cantons. Yet the Confederation may regulate key areas in detail which are important for the whole of Switzerland, for example the constitutional principle of the separation of building zones and non-building zones.

The first legislations that influenced spatial development on a federal level were the Law on Water Protection (1955) and the Law on Measures for the Promotion of Housing Constructions (1965), together with the corresponding enforcement ordinances. 1969 the article on land rights (later renamed article on spatial planning) was included in the constitution through a referendum and thus the foundations for a federal legislation on spatial planning were laid. But still many years passed till its implementation. Against a first version of the law a referendum was launched, but on the second try the Law on Spatial Planning finally was adopted by the Swiss population.

Besides the Law on Spatial Planning there are various other legal matters that are decisive for the system of land governance in Switzerland. Particular mention should be made of the Federal Forestry Law (Forstpolizeigesetz) that already was implemented in 1876. The novelty of this law was the introduction of the principle of sustainability and a strong protection of the forest (with the aim of securing water resources and preventing erosion and slides), as only the re-growing timber was meant to be used, but not the timber stock. This strong protection of the forest is still existent and thereby also has an influence on the use of agricultural land.

2.3 Swiss Constitution and land tenure

The Federal Constitution of the Swiss Confederation dates back to 1848. The constitution represents the top level of the Swiss legal system. All regulations and decrees of the federation as well as the constitutions, laws, regulations and decrees of the Cantons are subordinated and must not be contradictory to the Federal Constitution. However, federal laws are an exception of this principle, as they must be recognized by the Federal Court (and by all other courts), even when they are contradictory to the Federal Constitution. A constitutional court for federal laws does not exist in Switzerland and thus democratic decisions stand above the constitution.

The Swiss Constitution contains certain regulations that are important for the tenure and management of land. Particularly noteworthy in this context are the articles which concern property rights, agriculture and spatial planning. They formulate the basic objectives for land governance in Switzerland which are specified by related laws and regulations.

2.3.1 Property guarantee and Expropriation Law

One of these basic articles deals with property guarantee. The constitution recognizes property guarantee as one of the fundamental rights (art. 26), securing the continued existence as well as the value of property. Thus expropriation or restriction of property, which has a similar effect as expropriation, have to be fully compensated. According to a Federal Court decision from 2005, a restriction of property may also be understood as a reduction of benefit or usability in terms of the intended use and thus reduces the value of the property².

The article on property guarantee constitutes the legal basis for the Expropriation Law, which regulates the requirements under which expropriation is permitted, whether and to what extent expropriation has to be compensated and also how the procedure is structured. The law makes a distinction between formal expropriation, material expropriation and expropriation without compensation (see more details in chapter 3.2).

2.3.2 Swiss agricultural policy

The so called agricultural article states that "The Confederation shall ensure that the agricultural sector, by means of a sustainable and market oriented production policy, makes an essential contribution towards: a. the reliable provision of the population with foodstuffs; b. the conservation of natural resources and the upkeep of the countryside; c. decentralized population settlement of the country." (Swiss Constitution, Art. 104)

Article 104 emphasizes the multifunctional duties of agriculture which include ensuring a secure food supply, preserving natural resources, taking care of the landscape and encouraging decentralized settlement. The Confederation shall support and organize measures in a way that ensures that the agricultural sector fulfils its multi-functional duties. This can be done, for example, by direct subsidies or by remuneration of the services provided, provided that they fulfill ecological requirements. It also can be done by the encouragement of production methods that are near-natural and respectful of environment and livestock. Additionally the article states that the Confederation may legislate on the consolidation of agricultural property.

The Law on Agriculture specifies, that the Confederation shall ensure that agriculture contributes to a secure supply of the population, to the preservation of the natural resources and the maintenance of landscapes as well as to a decentralized settlement of the country and to the safeguarding of animal welfare by means of a sustainable and market oriented production. Direct subsidies for public services of soil-dependent agricultural businesses, support for sustainable use of natural resources and animal as well as climate friendly production, structural improvements, research and advisory services as well as a common quality strategy and the orientation towards the principle of food sovereignty in order to take into account customers' needs for varied high-quality and sustainable domestic products are measures that are, among others, specifically mentioned in the law.

Direct subsidies represent specific incentives, remunerating farmers for services of public and common interest. They are a key element in Swiss agricultural policy. In order to receive direct payments, farmers have to fulfill certain requirements: inter alia, a minimum need of manpower on the farm (0.2 standard manpower – see more in chapter 3.4.6), a formal agricultural education, the execution of at least 50% of the farms workload by in-house labour as well as the proof of ecological performance ("Ökologischer Leistungsnachweis ÖLN", see more in chapter 3.8.2). Exception are the payments for summering³.

A distinction is made between general and ecological direct payments. Services provided by agriculture for the common good are remunerated through general direct payments. They aim at ensuring the appropriate use of all

² The settled case law of the Federal Court constitutes an important part of the planning legislation.

³ Summering means the grazing of livestock (sheep, goats, cattle, horses etc.) in alpine areas during summertime and is one of the forms of extensive livestock farming.

agricultural land. Additional payments are made for more difficult farming conditions in hilly and mountainous areas. In order to promote biodiversity, reduce negative environmental impact, and promote animal-friendly conditions as well as to ensure sustainable use of summer pastures, farmers receive additional payments, provided that they fulfill further criteria beyond the stipulations for the proof of ecological performance.

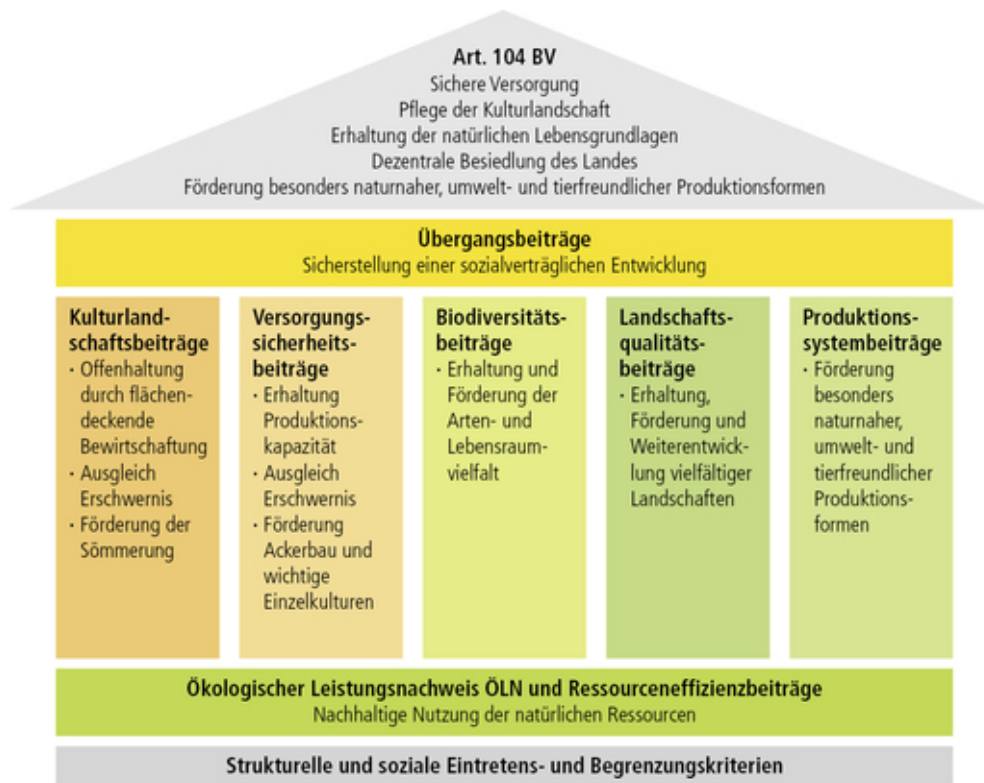


Figure 1: Concept and structure of the system of direct subsidies in Switzerland (<http://www.blw.admin.ch/themen/00006/index.html?lang=de>)

2.3.3 The Law on Peasants` Land Rights

The Law on Peasants` Land Rights aims at supporting agriculture to fulfill its multifunctional role. It concerns agricultural land and agricultural businesses. The law provides rules for the promotion of agricultural land property and for the preservation of family farms, strengthens the position of owner farming and combats excessive prices for agricultural soils. Furthermore the law aims at preventing the division of the agricultural property and defines what can be considered as an agricultural business ("Landwirtschaftliches Gewerbe") under this law. This definition is important, as it also is adopted in other laws. Particularly worthy of mention is the Inheritance Law, but also tax legislation, the Law on Agricultural Tenancy and the spatial planning legislation.

Agricultural businesses according to the Law on Peasants` Land Rights enjoy special privileges, for example the principle of capitalized earnings value ("Ertragswertprinzip"), which is applied in Inheritance Law. This principle stipulates, that descendants who want to run the farm themselves may take it over on the capitalized earnings value and thus to a far lower price than a market-oriented price would be (see also chapter 3.4).

The definition of agricultural businesses also has an influence on building permits for buildings outside the building zone. A new residential building may only be built and a new non-agricultural side business may only be approved in the agricultural zone, when the farm fulfills the criteria of an agricultural business. Furthermore leasing payments are lower for agricultural businesses and they also enjoy tax advantages. All these regulations aim at keeping production costs low and thus contributing to the maintenance of a viable farming community.

2.3.4 Article 75 on spatial planning

The principles on spatial planning find their legal basis in the Swiss Constitution too. The article on spatial planning (Art. 75) stipulates that the "Confederation shall lay down principles on spatial planning. These principles are binding on the Cantons and serve to ensure the appropriate and economic use of the land and its properly ordered settlement." (Swiss Constitution, Art. 75)

The aims and principles for spatial planning are laid down in the Federal Law on Spatial Planning. This law must be seen as a framework legislation, whereas practical planning implementation remains a task of the cantons. The principles of the federal law concern especially the aims and principles that need to be considered for any spatial planning, the planning instruments and procedures, the rules for coordinating measures with spatial impact on all state levels as well as all general questions that are crucial for the functioning of spatial planning in Switzerland (e.g. obligation for building permits, size of building zones etc.)

Besides spatial planning legislation itself, there are numerous other laws with spatial impact which altogether represent functional spatial planning law in Switzerland. The Law on Motorways and the Law on Railways are as well part of it as laws which regulate the protection of nature and the environment or legislations concerning housing, agriculture, regional policy or tourism. Provided that these laws are federal laws, they all find their basis in the Swiss Constitution, e.g. the articles on water, forests, protection of natural and cultural heritage, national roads etc.

2.4 Swiss federalism and direct democracy

The Confederation is built by 26 cantons and 2400 municipalities. Confederation, cantons and municipalities represent the three political and administrative levels, which are decisive for Swiss federalism. Federalism and subsidiarity are basic principles of the Swiss federal state since its foundation in 1848.

2.4.1 The “united states of Switzerland”: sovereign cantons, close to the people

Swiss federalism is based on Article 3 of the Swiss Constitution, which states that “The Cantons are sovereign except to the extent that their sovereignty is limited by the Federal Constitution. They exercise all rights that are not vested in the Confederation.” The basic idea behind this is, that responsibility is transferred to structures, which are as close as possible to the people concerned: from the Confederation to the cantons and from the cantons to the municipalities. Ideally this leads to solutions, which meet the local needs and thus are well accepted. Furthermore the competition between cantons and communities may lead to more efficient and better solutions. But certainly the resulting structures are small and varying and thus administrative effort may be higher than in a more centrally governed state.

The federal government (or Federal Council) consists of 7 members which are elected by the parliament. The Federal Parliament (or Federal Assembly) is composed of two chambers, the National Council (“Nationalrat”) and the Council of States (“Ständerat”). The parliament also elects the 38 judges of the Federal Supreme Court.

All domains that are not assigned to the Confederation by the Federal Constitution and not regulated by federal laws, are in the competence of the cantons. The latter are constituent units with their own constitutions and their own legislative, executive and judicial authorities. They all have a unicameral parliament, a cantonal government as well as a two level juridical system and an arbitration authority which is upstream of the court. The cantons in turn may delegate a number of tasks to the municipalities.

2.4.2 Cooperative and participatory federalism

Swiss federalism can be described as a cooperative and participatory federalism. Cooperative federalism includes vertical (mostly sectoral) cooperation as well as horizontal cooperation, whereby the latter is mainly due to the smallness of the cantons. This may be for example the conference of the cantonal governments or the cooperation of cantonal ministers or of public servants.

Participatory federalism means the participation of the cantons in federal decision-making and is enshrined in the constitution. It includes the participation of the cantons in drafting federal law, hearings and consultations as well as participation in foreign policy. A minimum of any eight cantons may request a referendum and every canton has the right to submit initiatives to the federal parliament.

The political rights of the people are quite comprehensive on the federal as well as on the cantonal and municipal level. The people elect the members of the National Council and of the Council of States, all constitutional amendments must be approved by a majority of people and an approving majority of people in a majority of cantons (compulsory referendum). A minimum of 50`000 citizens can sign a call for a national vote on a bill approved by the Federal Assembly (optional referendum). And a popular initiative can be submitted by at least 100`000 citizens, calling for a national vote on a constitutional proposal. For the approval of a popular initiative the same rules are applied as for a compulsory referendum. The political rights of the people on the cantonal and municipal level are comparable to the ones on the federal level.

2.4.3 Decentralized administrations, rights and obligations

The system of direct democracy also has an influence on federalism in manifold ways. Whereas all actions of the Confederation need to be based on the Federal Constitution, cantons may take action without that basis. For the abolishment of a compulsory referendum a majority of people and a majority of cantons with an approving majority of people is necessary – a constellation that also prevents centralization. New competences are only transferred to the Confederation, when the cantons are not able to solve the problems themselves (principle of subsidiarity). Furthermore competences are only transferred to the Confederation, when they are necessary on a federal level to solve the problem.

Thus federalism and direct democracy have contributed to a system of decentralized administrations as well as rights and obligations and also to the fact that the competences of the Confederation are quite fragmented or partial, depending on the specific policy area. Energy, environment, transportation and economy, including regulations on agriculture, for instance, are in the competence of the Confederation, whereas the cantons are responsible for the implementation of federal law, the protection of nature or for infrastructure (roads, water, construction, planning). This also has an effect on the question of land governance, as all administrative or political levels are concerned and several legal matters on different levels have an influence on it. Thus intense vertical and horizontal cooperation and well coordinated proceedings are a must, in order to prevent conflicts.

Furthermore the model of administrative supervision over activities of local authorities is important for conflict resolution. Cantons and municipalities have their self-elected political authorities, no federal power may remove them. Yet "Federal law takes precedence over any conflicting provision of cantonal law" and "The Confederation shall ensure that the Cantons comply with federal law." (Swiss Constitution, Art. 49) The compliance of the actions of the cantons with federal law is assured by courts, by the approval of cantonal constitutions by the Federal Assembly and by the supervision of the cantons by federal authorities.

From this perspective federalism as well as direct democracy can be seen as a great strength, as opposing interests have to be balanced and common solutions respectively majorities have to be found. Besides the long history of cooperative structures as a practice field for direct democracy, the long absence of war as well as the relatively high level of wealth, may also have been important framework conditions for the development of this sophisticated system of close coordination and participation. As the system of spatial planning shows: planning proceedings are crucial for the integration of all relevant interests and for the prevention of conflicts. They are an essential basis for political decision making.

2.5 Swiss system of spatial planning

"Switzerland's landscapes are under threat. As a result of the constantly growing and increasingly mobile population, combined with the demand for land by trade and industry, the need for living and commercial space, as well as for transport infrastructure, is on the rise. In addition, the demand for residential space per person is continuing to increase. Every second, around a square metre of agricultural land is lost, and this means that spatial development in Switzerland is by no means as sustainable as called for in the Federal Constitution." (UVEC 2016) This is how the Federal Department of the Environment, Transport, Energy and Communications describes the challenges of spatial planning in Switzerland.

In fact, the area suitable for settlement is limited, especially in the densely populated Swiss plateau (Mittelland). Environmental and landscape protection as well as a "greener" agriculture are of growing importance, in order to preserve attractive landscapes for leisure activities as well as for tourism. However, other regions like the Alps, the Jura or the alpine foothills face different challenges in connection with spatial planning. Furthermore the political and cultural diversity as well as regional differences and the partly very small administrative units represent a challenge for spatial planning in Switzerland, but also may lead to a variety of innovative planning solutions.

With the article on spatial planning in the Swiss Constitution, implemented in 1969, the responsibility for framework legislation on spatial planning was transferred to the Confederation. "The Confederation shall lay down principles on spatial planning. These principles are binding on the Cantons and serve to ensure the appropriate and economical use of the land and its properly ordered settlement." (Swiss Constitution, Art. 75). Another task of the Confederation is the promotion and coordination of the spatial planning of the cantons. Furthermore Confederation and cantons shall cooperate and they shall take into account the demands of spatial planning in fulfilling their duties. The implementation of spatial planning remains in the responsibility of the cantons, which may, in turn, delegate certain tasks to the municipalities.

Actually, vertical and horizontal cooperation are a must for spatial planning in Switzerland and it needs to be emphasized that spatial planning only can be successful when the related tasks are understood and treated as common tasks of all administrative levels. Consequently, Confederation, cantons and municipalities share the responsibility for ensuring economical land use and the separation of building zone and non-building zone, as established in the Federal Law on Spatial Planning. They also shall coordinate their activities which have an impact on spatial planning and they shall implement a planning of settlements "which is orientated towards the desired development

of the country". In doing so, they shall pay attention to the natural conditions as well as to the needs of the population and of economy. (Law on Spatial Planning)

The tasks of spatial planning are specified in the law as follows: In particular they include, among others, the protection of the whole living space, inward urban development, reasonable decentralized settlement, and securing appropriate economic supply for the country. Planning obligation for all three levels of public authorities as well as a procedural approach to spatial planning are important principles of spatial planning in Switzerland, considering the fact that a final state of planning does not exist. Furthermore all planning authorities need to be concerned about legal certainty, which means that utilization plans must not be changed in an arbitrary, unfounded way.

In addition, the Federal Law on Spatial Planning lays down certain principles for planning, which also act as important criteria for decision-making. These include the preservation of the landscape, the organisation of human settlements in accordance with people's needs, the limitation of settlements as well as the definition of appropriate location for public buildings and installations. The loss of agricultural land should be slowed down and better use should be made of existing land reserves for construction. Regional needs should be considered and inequalities reduced.

2.5.1 Planning instruments and spatial planning tasks on federal, cantonal and municipal level

The Federal Law on Spatial Planning stipulates that the Confederation shall develop and coordinate the required concepts and sectorial plans. In doing so the Confederation shall cooperate with the cantons and provide timely information on its concepts, sectorial plans and construction projects for the cantons. (Law on Spatial Planning, Art. 13) Furthermore the law names structure plans ("Richtpläne") and land use plans (Nutzungspläne") as planning instruments for the cantonal and communal level. The regulations of the law only are applicable for these instruments mentioned in the law.

Federal concepts, sectorial plans as well as cantonal structure plans are legally binding for public authorities, but not for individual persons, whereas land use plans (including special land use plans) are binding for the general public. Federal concepts and sectorial plans as well as cantonal structure plans can be seen as strategic management tools to control spatial development, either for a certain sector or for a certain territory.

That also may apply to land use plans, as strategic planning becomes more and more important on communal level. But basically land use plans regulate the permitted land use, and particularly they define the delimitation of the building zone from the non-building zone (agricultural zone as well as protection zone) and determine the type and extent of specific building use in the building zone.

Besides the framework legislation the planning tasks of the Confederation are to promote and coordinate of the spatial planning of the cantons and to approve the cantonal structure plans. The cantons, however, are responsible for the actual implementation of spatial planning. They develop spatial planning and building regulations and prepare the cantonal structure plans.

The structure plan

The structure plans can be seen as the central hub for the coordination of the spatial development in Switzerland. By means of these plans, all tasks with a spatial impact are controlled and coordinated and they have to be taken into account on all administrative levels. The cantonal structure plans contain information on the state of planning work in different sectors as well as proceeding instructions. They can be seen as process plans and they are meant to support the coordination and harmonization of planning beyond municipal, cantonal or may be even the national border.

Generally speaking, structure plans contain a future scenario, a strategy and an action plan. According to the Law on Spatial Planning the cantons have to define in their structure plans at least following aspects: They shall explain the general spatial development policy of the canton, illustrate how they intend to coordinate their spatially relevant activities with regard to the desirable development and timing and show which resources they provide for it. All intended projects which have a strong impact on space and environment require a basis in the cantonal structure plan.

The land use plan

By means of land use plans, the cantons define how the land actually can be used. Cantons may develop land use plans themselves, but mostly they delegate this task to the municipalities, as knowledge of local conditions is crucial for the development of these plans. The Federal Law on Spatial Planning contains detailed regulations concerning land use plans, as they are the main instrument for defining the boundary between building and non-building zones. "Building zones must respect the planning aims and principles and must not exceed the size laid down in federal law." (VLP-ASPAN, p. 6)

Municipalities may also develop concepts and structure plans for their territory, but these only are binding for the superordinate authority when they are approved by these authorities. Municipalities, however, have to respect plans of the superordinate level. Further tasks of the cantons, which they mostly delegate to the municipalities, are

the infrastructure provision for building land or the issuing of building permits, whereby cantons often offer technical support to the communities. An exception here are building permits for buildings outside the building zone (e.g. on agricultural land). The federal law specifies, that building permits in non-building zones require at least the approval on cantonal level: The cantonal authority decides whether the building project complies with the zoning requirements or if an exemption permit can be granted. (Art. 25)

Besides the formal instruments for spatial planning there are informal instruments that gain in importance, as planning tasks and challenges do not stop at municipal and cantonal borders and planning in functional areas is of growing importance. Informal planning may take place on different levels (e.g. intercommunal, regional, as well as on regional, supra-regional or supra-cantonal as well as on the level of the Confederation).

The Spatial Concept of Switzerland (Raumkonzept Schweiz), the first strategy document for spatial planning in Switzerland that was jointly developed by all the state levels and that defines the basics for spatial cooperation of Confederation, cantons and municipalities is, strictly speaking, just as much part of it as agglomeration programs, regional and communal strategies, or a cooperative development plan for a single urban district. Informal planning instruments meanwhile are quite common in Switzerland. They may be the precursor of formal planning and sometimes they are also part of it. They may lead to jointly developed better solutions which are well accepted but there is also a risk, that the developed concepts remain noncommittal. Yet, the solutions developed by means of informal planning instruments may also be made legally binding by the integration into the formal planning instruments.

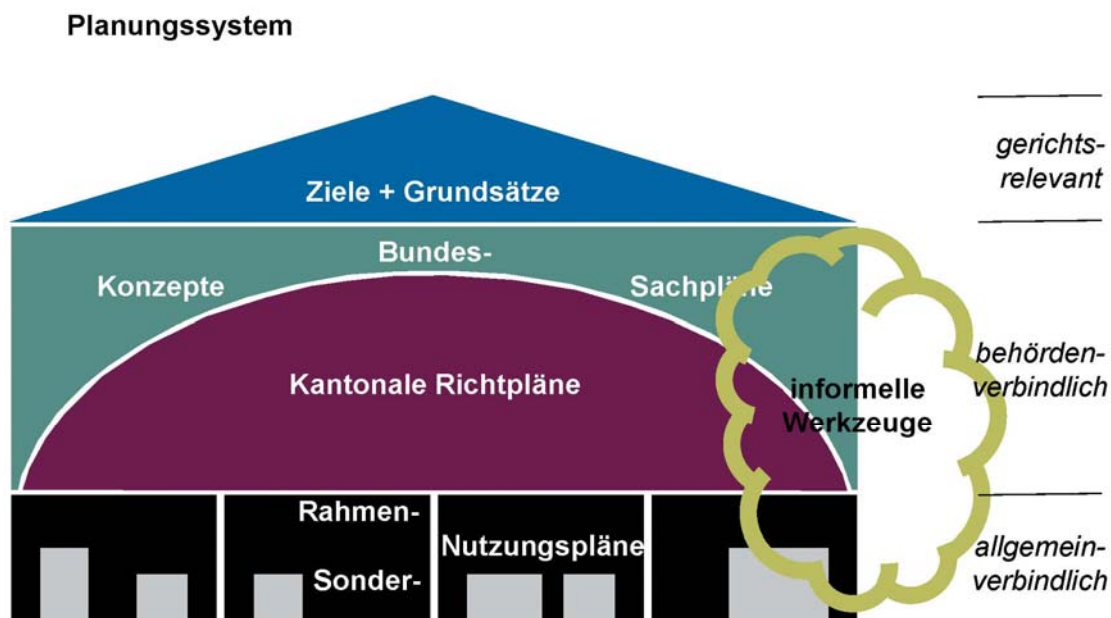


Figure 2: Swiss planning system (A. Schneider 2015)

2.5.2 Nominal and functional planning law

Spatial planning in Switzerland is a crosscutting issue. Besides spatial planning legislation (nominal planning law), also several other matters of law with spatial significance, the so called functional planning law, are of major importance. The nominal planning law comprises all legislation, which is explicitly named that way. This includes, for example, the corresponding article of the Swiss Constitution, the Federal Law on Spatial Planning and the corresponding ordinance as well as the zoning and building laws of the cantons. Functional planning law includes all legislation which aims at inducing an intended spatial development or which has spatial effects.

“Since spatial planning in Switzerland is rather understood to mean state responsibility for the living space in a wide sense, functional spatial planning includes in particular the spatially relevant areas of environmental law, infrastructure law, agriculture law and nature and habitat law as well as land law and tax law.” (VLP-ASPAN, p. 11) Also laws which regulate technical infrastructure and installations, e.g. Railways, Aviation etc., Peasants` Land Law and regulations concerning housing, regional policy or tourism are part of the functional planning law.

The example of environmental legislation gives an impression of the extent of functional planning law: Legislation on noise protection, air pollution, radiation, technical risks or waste are as well part of it as the Law on Nature and Habitat Conservation, Law on Water Pollution Control, Law on Environmental Protection, Law on Forests or the Ordinance on the Pollution of Soil. All these legal bases also need to be taken into consideration when developing planning projects or putting them into practise. For instance, important principles of the environmental legislation

as the polluter-pays principle, the precautionary principle or the sustainability principle are applied. That means, for example, that the environmental compatibility of a planning project needs to be checked early on, if this project may pollute the environment to a significant extent.

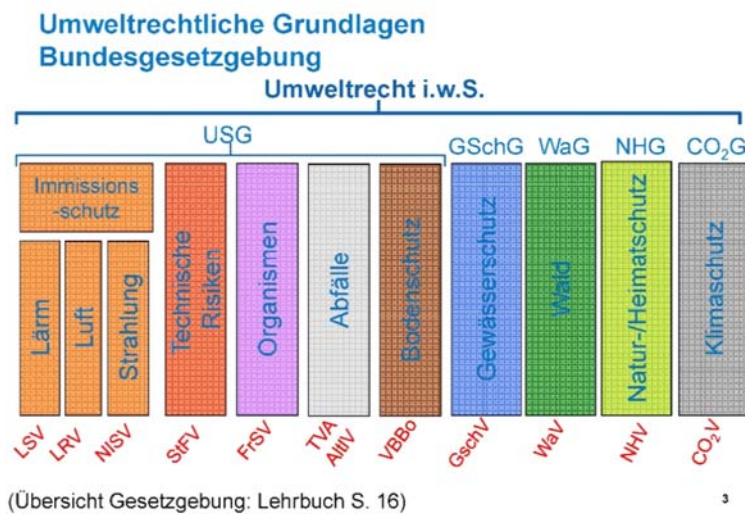


Figure 3: Environmental law in a wide sense (VLP-ASPAN)

2.5.3 Subsidiarity and Counter-Current Principle: Two important principles in spatial planning

Spatial planning always has to adjust to societal, economic or political changes that have impact on our environment. Planning principles can contribute to a constructive handling of conflicts and to find the solutions which work best for the environment and the people. Subsidiarity and the “counter-current” principle are two principles which shall contribute to a responsible handling of planning tasks.

The principle of subsidiarity states that planning and decision-making competencies should be as close as possible to the actors concerned and that superordinate supervising bodies only shall intervene in a subsidiary manner. Achieving this principle is not always easy and particularly not always politically accepted, as the subordinate level may in fact undertake planning measures and decisions for the subordinate level, but the latter should bear the costs.

Another essential principle is the “counter-current” principle (Gegenstromprinzip). It assumes that planning on local, regional and supra-regional or national level mutually influence each other. Developments on a local and regional level shall be integrated into the requirements of the whole territory and, in turn, the development of the whole area also needs to consider the local and regional conditions and requirements.

Thus, the essence of this principle is, that top down and bottom up approaches shall be used in parallel and in an equivalent and complementary manner. In concrete terms, that means that Confederation, cantons and municipalities have to coordinate their planning and that they have to take into consideration planning on all other relevant levels. Thus, cantons and municipalities have to consider federal planning and in turn the Confederation also has to take into account planning on cantonal and municipal level.

2.5.4 Formal and informal participation in spatial planning

The purpose of participatory spatial planning is to understand the real needs of relevant actors respectively of the population, to ensure the integration of people concerned in planning and decision-making processes and to prevent conflicts and promote the finding of consensus. Furthermore participatory planning may contribute to safeguarding the public space and the environment as well as to a better quality of the settlements. It is important to stress, that the process may be designed and performed in a participatory way, whereas the result needs to be a binding plan which necessarily has to correspond to existing law.

Basically, a distinction can be made between formal participation, on the one hand, and informal participation on the other hand. Formal participation is regulated by law, the procedure is clearly defined. Informal participation, however, is applied voluntarily and can be seen as complementary to formal participation.

Article 4 of the Federal Law on Spatial Planning sets the framework for information and formal participation of the population. It states that authorities which are entrusted with planning tasks, shall inform the public about the aims and the course of planning under this law. They shall ensure that people may participate in an appropriate manner.

Furthermore the article determines that all plans in terms of this law can be viewed by the public. Formal participation includes consultation processes in planning, substantial objection rights for organizations and private individuals as well as participation in project development.

Informal participation aims at creating a broader basis for planning projects and at achieving more acceptance of the people concerned. Informal participation includes, inter alia, cooperative planning processes with land owners, participative planning, the creation of a common understanding e.g. by means of the development of guiding principles, the development of utilisation or landscape development concepts, future workshops or conferences, and various other voluntary cooperation and participatory procedures.

Essential requirements for successful participation processes are political support, sufficient scope for action for the people involved as well as the availability of the personnel and financial resources required. Participation shall be a useful supplement to the project, however, the role of the participants must be clarified and clearly communicated and transparency on the results as well as suitable methods which are appropriate for the target group are crucial. Also external moderation and professional accompaniment for the working groups have an important supportive effect. Overall, it can be stated, that informal participation, if well implemented, can contribute to increasing confidence in planning processes and thus to better and well accepted planning solutions.

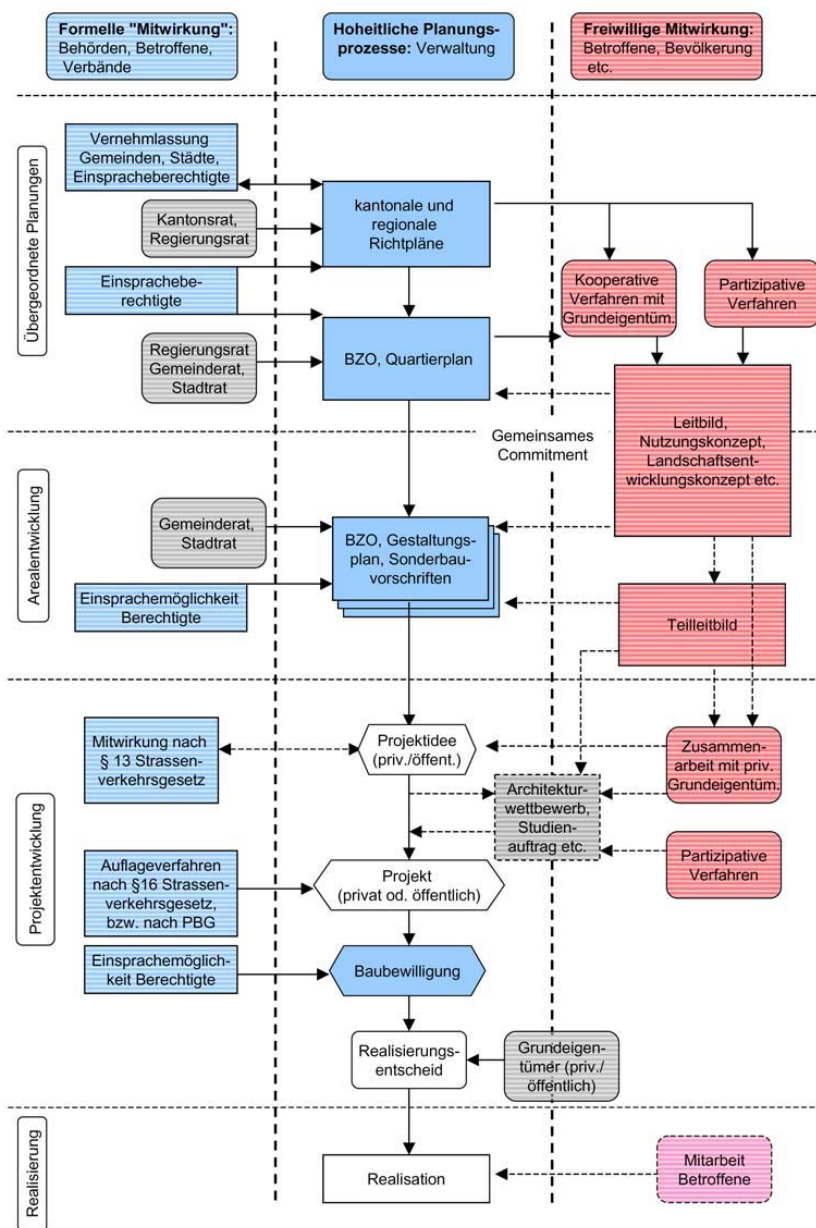


Figure 4: Formal and informal participation (Stadt Zürich)

2.5.5 Balancing of interests and conflict resolution

Diverging interests and competing utilization demands for the available land may lead to conflicts, thus instruments for conflict resolution are crucial in spatial planning. The balancing of all relevant interests therefor is particularly important.

According to the Spatial Planning Ordinance, Art. 3, authorities shall balance all relevant interest, given that they have the necessary scope for action in the performance of their spatial-planning related duties. The balancing of interests is composed of several stages: First of all, all interests involved need to be identified, secondly they must be evaluated especially concerning their effect on the desired spatial development. Next, a decision has to be taken, taking into account all interests as comprehensively as possible, and, finally, the balancing of interest has to be published and explained in a planning report.

It is important to stress that knowledge of applicable law as well as comprehensive planning basis (e.g. studies) are necessary for the balancing of interests. A correct performance of the balancing of interests is of legal relevance and it also can be subject of juridical review. There are several sources of errors: the balancing of interests may be lacking completely, interests insufficiently identified or assessed or they may be wrongly weighted.

“Such an examination makes clear the limits of the legal examination of spatial planning decisions: technical problems, consideration of special local conditions and the planning judgment of the competent political authorities demand restraint from the judiciary. A balancing of interests which encompasses all major interests and has weighed them with the necessary care is therefore generally upheld by the courts, even if it results in significant interference with the legal positions of third parties.” (VLP-ASPAN, p. 10).

Thus, key in the balancing of interests is that all major interests involved are identified and assessed, in particular with respect of the desired spatial development, as well as the publication of the balancing of interests in an explanatory report.

This also shows, that planning proceedings play a crucial role for the resolution of conflicts. Planning processes are complex and it is not possible to regulate the relevant needs by law. However, the law may specify principles and proceedings that are helpful for conflict avoidance and resolution.

Last but not least it has to be noticed, that conflicts in connection with land may also be family or inheritance conflicts, conflicts over farm succession or gender issues. In addition to legal questions, cultural, social or even mental aspects are key factors here. Thus, besides awareness raising regarding the legal situation and existing rights as well as clarifying legal aspects, advisory services as well as professional coaching and mediation are important and may offer appropriate support.

2.5.6 Public and private interest in land tenure

The term of “public interest” plays an important role in planning legislation. On the one hand it is a precondition for government action⁴, on the other hand it can serve as a justification, e.g. for expropriation or for the command of a demolition of an illegally built building. Still, the term of “public interest” is not clearly defined and legally not exactly determined.

In order to concretize it, the comparison with private interests can be useful. If private interests outweigh public interest, the latter is no longer applicable. Also the spatial planning article in the Swiss Constitution and spatial planning legislation of the Confederation and the cantons are useful bases for the definition of the public interest. The law, for instance, defines planning principles that serve as criteria for decision-making in the process of balancing interests. This applies to cantonal structure plans, too, as their results can be seen as an expression of public interest in space.

According to the case law of the Federal Court, all aims and interests, which are incorporated in federal law, are classified as public. The article on spatial planning mentions “the appropriate and economic use of the land and its properly ordered settlement”. But also other constitution articles describe relevant matters like the protection of the environment, forest conservation or the protection of natural and cultural heritage. They all can be seen as aims or criteria for decision-making, which have to be taken into account in planning processes and which have to be just as considered in a comprehensive balancing of interests as all other interests that are decisive in the particular case.

Thus, it can be noted, that the responsible authorities have a certain scope for interpretation in defining the public interest. The public interest has to be assessed in the individual case and the assessment also takes into account

⁴ State activities must be conducted in the public interest and be proportionate to the ends sought. (Swiss Constitution, Art. 5, paragraph 2)

the factual circumstances and the social or political development of the particular area as well as the previous practice.

The Federal Law on Spatial Planning explicitly requires a balancing of interests only in the case of exemption permits for buildings outside the building zone. But that a balancing of interests also is required for cantonal structure plans as well as for the different versions of land use plans, clearly results from the Swiss constitution, as "state activities must be conducted in the public interest" (Swiss Constitution, Art. 5).

In fact, in Switzerland the area suitable for settlement is limited, urbanisation advances and also the highly developed economy leads to strong land use pressure. In reaction to this, environmental and landscape protection as well as water and forest protection, and the greening of agriculture gain in importance. And also the people clearly express their discomfort with urban sprawl, e.g. by means of initiatives like the Initiative on Cultivated Land in the Canton of Zürich or the Initiative on Space for People and Nature (Landscape Initiative). The Initiative on Cultivated Land demanded the preservation of valuable arable land and was approved by the people of the Canton of Zürich in 2012.

The initiators of the so called Landscape Initiative view the continuing urban sprawl in Switzerland and the loss of cultivated land as a major problem, which has to be tackled by means of effective spatial planning instruments. With the partial revision of the Law on Spatial Planning, which aimed at stopping land consumption and for an improved protection of the landscape, the Federal Assembly presented an indirect counterproposal to the initiative. This revision of the Law on Spatial Planning was adopted by the Swiss people and came into force in Mai 2014. The law contains, inter alia, clear guidelines for the maximal size of building zones and demands their reclassification, when they are oversized. Whereat it is to say that reclassification, when actually necessary, normally also implicates financial compensation.

Another notable example is the revised Law on Water Protection, which came into force in 2011. Based on this law, the cantons now are obliged to define and ensure the space requirement of water bodies and to consider it in their structure and land use plans (Law on Water Protection, Art. 36a). The corresponding ordinance contains more specific provisions, for example that the required space has to be determined by the end of 2018. The definition of the space requirement for water bodies can, for example, have an effect on agricultural use, as the land concerned only can be farmed extensively and fertilisers as well as pesticides and herbicides must not be used.

All these examples show that, on the one hand, the number of diverse and divergent interests in the field of spatial planning is high, and that, on the other hand, comprehensive balancing of all relevant interests is crucial, in order to be able to consider all relevant interests at all and to balance public and private interests and thus laying the foundations for sound decision-making.

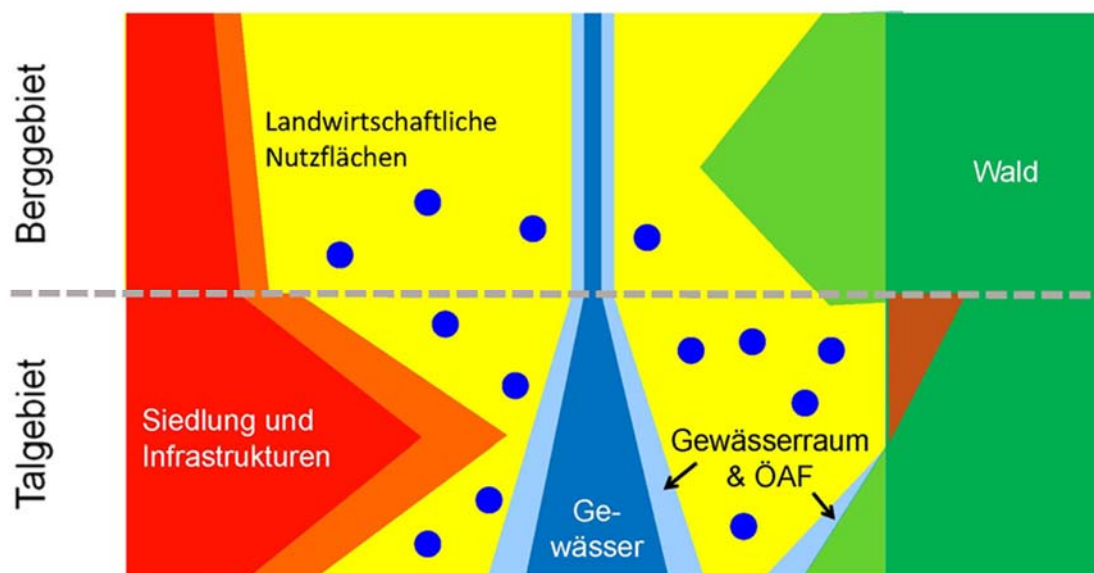


Figure 5: Cultivated land under pressure (Source: BLW, additions by SBV)

2.5.7 Zonation

The Federal Law on Spatial Planning contains quite detailed regulations on land use plans, because they are the main instrument for defining the zonation. The law specifies, that "land use plans regulate the permitted use of the soil. They distinguish, in advance, building, agricultural and protection zones" (Law on Spatial Planning, Art. 14). Thus, by means of land use plans, the actual use of the land is determined. In particular they define the delimitation of the building zone from the non-building zone (agricultural zone as well as protection zone) and determine

the type and extent of specific building use in the building zone. Some cantons develop land use plans themselves, but mostly this is a task of the municipalities.

The Law on Spatial Planning mentions three types of zones: the building zone, the agricultural zone and the protection zone. With these three zones, the most important zones are already listed. The law also states, that "cantonal law may determine further land use zones" (Law on Spatial Planning, Art. 18). Depending on the particular cantonal legislation, in some cantons the municipalities are free or partly free to define further zones, whereas in other cantons they do not have this choice (see more details in chapter 3.1.3).

This led to a variety of zones, which makes planning in Switzerland even more complex. Also planning proceedings differ from canton to canton, which has a relevant impact on the everyday work in the field of spatial planning. Attempts for harmonization of the zones and their presentation in the maps exist, but realizing this request is not easy. One example for this are the cartographic illustration guidelines of the SIA, the Swiss society of engineers and architects.

The central question: building or non-building zone?

But nevertheless it is obvious that a wide variety of zones makes application more complicated and that the allocation of a particular area to the building zone or to the non-building zone is a key question in land use planning. The importance of the principle of the separation of building zones and non-building zones is also underlined in Law on Spatial Planning, which sets this separation as one of its main aims (Law on Spatial Planning, Art. 1).

The delimitation of building and non-building zone also is crucial for the Law on Peasants' Land Rights and for the Law on Tenancy, as it also determines the scope of application of these laws and thus sets the basis for the strict separation of the agricultural land market from the market for construction land, which is key in keeping agricultural land prices low. Thus, the separation of building and non-building zones also is of great importance for agriculture policies, as it is a precondition for the preservation of sufficient and affordable arable land for Swiss agriculture. Furthermore from 2014 onwards, land that is newly allocated to the building zone, is no longer entitled to any direct payments.

Building zones

In order to further describe the different land use zones, these also can be divided into zones according to Article 14 and zones according to Article 18 of the Law on Spatial Planning. Zones in compliance with Article 14 are the above mentioned building, agricultural and protection zones. The law states that "building zones must be defined in a way that they meet the need of the coming 15 years. Oversized building zones have to be reduced. The position and size of building zones have to be coordinated beyond the borders of the municipalities." (Law on Spatial Planning, Art. 15) The law emphasizes that areas for crop rotation as well as nature and landscape have to be preserved and that new building zones only can be defined when the land is suitable for construction and its availability is legally ensured. Building zones include, inter alia, residential zones, working or commercial zones, core zones and zones for public buildings.

Agricultural zones

"Agricultural zones serve for the long-term safeguarding of food supply of the country, for the preservation of landscape and of space for recreation or for ecological compensation and they shall be kept free of building development, in accordance with their various functions." (Law on Spatial Planning, Art. 16) These zones include land which is suitable for agriculture or horticulture and which should be agriculturally used. The law clearly defines which kinds of buildings and installations comply with the zoning requirements.

According to it, all buildings and installations for the soil-dependent agriculture as well as for the selling, storage and processing of agricultural products are compliant with the agricultural zone. Also buildings and installations for the soil-independent production are permitted, provided that this is a subordinate part of the agricultural business. Furthermore and under certain conditions, which are defined in the law, also biomass plants and buildings for horse husbandry comply with the regulations. Exemption permits are possible for buildings which are site-dependent, e.g. mountain restaurant or a dog home. In addition to this, special agricultural zones may be defined, when soil-independent production becomes dominant by a particular building project. For zones of this kind a planning procedure is obligatory and they have to be approved by the canton.

Also for existing buildings, construction measures may be authorized, whereas different regulations are relevant here and thus the matter becomes quite complicated. A key term in this area is the "non-agricultural subsidiary business", whereby a distinction is made, depending on whether it is a non-agricultural subsidiary business with or without close objective connection with the agricultural business. The former is privileged, as, for instance, also a moderate expansion is possible. Furthermore the Law on Spatial Planning contains provision concerning changes in use. Buildings and installations, which are not used in compliance with the zoning regulations any more, are no

longer allowed to be used. In the case of a temporally limited permission, these buildings have to be removed, when permission expires. (Law on Spatial Planning, Art. 16b).

The regulations concerning buildings in the non-building zone often are perceived as complex. Their simplification was one of the objects of the second stage of the revision of the Law on Spatial Planning, which was widely criticised during the consultation process. A new version of this second revision step shall be drafted until the middle of the year 2017. Furthermore some people consider the regulation concerning buildings in the agricultural zone as a continuous softening and thus, as a risk, on the one hand for the separation of the agricultural land market from the market for construction land and on the other hand for the protection of the cultivated land.

Besides the agricultural zones, also special defined "non-building zones" (Freihaltezone) and recreation zones or "green zones" may be part of the non-building zone, depending on the particular canton and municipality.

Protection zones, forest and further land use zones

Protection zones may be nature or landscape protection zones or zones for the protection of lakeshores. They also include places of historical interest, natural and cultural monuments as well as habitats for animals and plants, which are worthy of protection. The object and purpose of the protection here is decisive as well as if the protected area is of national, cantonal or local importance. Protection can be best assured for objects, which are included in one of the national inventories for objects of national importance. This clarifies, that the object deserves best possible protection, that it must be maintained and treated with care or that, if unavoidable, measures for restoration or compensation have to be taken. (Law on the Protection of Nature and Cultural Heritage, Art. 5)

Further land use zones can be designated by cantonal law. These may also contain provisions for areas, for which the use is not yet determined or will be allowed later on.

The federal law also notices that forest areas are protected under forest legislation. Forest is strongly protected in Switzerland and clearing generally forbidden. Only in exceptional cases exemption permits are possible, e.g. for buildings for public benefit. When clearing is authorised, compensation is generally required, and only exceptionally also alternative measures or the waiver of compensation for clearance may be permitted.

Also the cantons may determine land use zones. These may be, for instance, landfill or mining sites, or other uses, that are important for the canton. Here it is important to say, that these land use zones take precedence over the land use zones of the municipalities. Furthermore it needs to be emphasised that they necessarily need to be designated in the cantonal structure plans.

In summary it can be stated that zoning is not only a question of allocation of land to the building or to the non-building zone. It also can be seen as an instrument for the strategic management of a municipality, as during the process of allocation different questions may arise: How will the population develop? Which infrastructures will be needed? How do we protect areas for recreation or the cultivated land? And how to promote inward urban settlement? To name but a few. Answers to these questions are precondition for a reasonable zoning and thus ensure quality of life and living as well as scope of action for future development.

3 Part 2 – Case studies

3.1 Spatial planning, land register, taxation of land - “Governing scarce land resource”

Field day example: **Spatial planning and zoning in Willisau**

3.1.1 The land register in Switzerland:

The land register is the registry of parcels and of the private law rights and encumbrances (servitudes and liens on property) attached to them. It is not one single register, but consists of:

- the journal (“Tagebuch”), containing the land register announcements listed in the order of their entry
- the main book (“Hauptbuch”), containing all land register folios
- the plans of registered parcels which are based on official surveys
- the records (“Belege”), containing sale contracts, mortgage deeds etc.
- the auxiliary registers (“Hilfsregister”), containing lists of owners, creditors etc..

The Swiss register has a parcel-related structure in the so called real folio system (“Realfoliensystem”), meaning that there is one register folio per parcel. The owner can be identified through one of the auxiliary registers, the so called owner register (“Eigentümerregister”).

How is the land registry sector organized?

The installation, the definition of the land registry districts, the appointment and remuneration of the employees as well as the organization of the cantonal superintendence is a duty of the cantons, the Federation merely supervises the land registry.

There is no central land registry for the whole of Switzerland. The registers are maintained by the land registries in the cantons. In some cantons there is but one land registry, other provide land registry districts for several municipalities together or one registry per municipality, and some big cities have more than one registry.

Which data of land registries are public?

Any person can without proof of authorization get information about a parcel's owner and its encumbrance with servitudes and mortgages (see example below directly from the internet). That applies to most of the notes in the land register (“Grundbuchanmerkungen”) too. Registry notes inform about property restrictions under public law like for example measures in connection with nature, landscape and cultural heritage protection or the acceptance of boundary and survey marks etc.

The screenshot displays the 'GEOPORTAL KANTON LUZERN' interface. On the left, a cadastral map shows a parcel labeled 'Hagi' with parcel number 77. A blue information icon is placed over the parcel. On the right, a window titled 'Abfrageresultate' provides detailed information for two parcels.

GRUNDSTÜCKBESCHREIBUNG	
Grundstücknummer	77
Eidg. Grundstück-ID (EGRID)	CH827449503546
Gemeinde (BFS-Nr.)	Alberswil (1121)
Grundbuch (GB-Nr.)	Alberswil (501)
Flurnamen	Allmend
Bodenbedeckung	
Gebäude (Nr. 163)	2'360 m ²
Strasse, Weg	15 m ²
übrige befestigte Fläche	2'947 m ²
Acker, Wiese, Weide	18'138 m ²
Fläche (grundbuchlich)	23'460 m ²

Selbständige und dauernde Rechte ("Baurechte")	
Art	Beurecht
Grundstücknummer	392
Eidg. Grundstück-ID (EGRID)	CH154250743548
Gemeinde (BFS-Nr.)	Alberswil (1121)
Grundbuch (GB-Nr.)	Alberswil (501)
Fläche (grundbuchlich)	13272 m ²

Bodenbedeckung	
Art	Acker, Wiese, Weide
Gemeinde	Alberswil

Information on the parcel with the collective stable of APMB Alberswil (chapter 3.6), obtained in 3 minutes (source: <http://www.geo.lu.ch/map/grundbuchplan>)

Whoever can establish a legitimate interest is entitled to get further information from the, in particular about mortgage deeds or priority notices (“Vormerkungen”). Priority notices don’t establish rights themselves, but they secure the rights they refer to, like for example rent or leasing contracts, pre-emptive rights, seizure of the parcel by a debt enforcement office etc. Furthermore: Who holds claim to additional information can demand an extract from the land register as well. And the cantons can preview the publication of the purchase of real estate (usually in the official journal of the canton).

How to purchase real estate in Switzerland?

The purchase of real estate in Switzerland has to be entered into the land register. In some cases, for example by way of inheritance, the purchaser already gains ownership before his new land property is registered. He will have to properly enter his land into the land register later in order to have the real estate at his disposal.

The transfer of property contract, which normally provides the basis for the ownership acquisition, needs a public certification (“öffentliche Beurkundung”). The public certification runs according to specific proceedings based on qualified written forms in front of a notary. As the cantons are responsible for the organization of notary’s offices, they differ in procedures and status: some cantons have free professional notaryships, in others notary’s offices are official bodies (their costs differ as well...).

Basically the public certification should guarantee the highest degree of legal security and serves various aims:

- true and unbiased notification of the intentions of the parties
- protection of clients against haste or carelessness in legal transaction with important values at stake
- legal instruction of clients about all legal consequences of an intended obligation
- clarity and certainty of documents to avoid misunderstandings
- objective determination of relevant facts by an independent person’s evidence by inspection

These aims can be ensured by obliging notaries to comply with severe professional standards, including observing professional confidentiality.

The notary will demand a number of relevant documents from seller and purchaser. Subsequently he will invite the concerned parties to a counselling interview and set up a draft contract. After its adjustment and approval by the parties a date for the signing and executing of the contract will be set. This usually includes the entering of the transaction in the land register.

3.1.2 Taxation of agricultural land

General wealth tax:

Agricultural land is an asset and thus subject to a general wealth tax in Switzerland. The wealth tax is basically calculated by multiplying the taxable assets with the tax rate. The taxable assets are determined as follows:

value of gross assets
 ./ . debts
 = net assets
 ./ . deductions (differ from canton to canton – either based on social criteria or defined as a general tax allowance)
 = taxable assets

The tax rate on assets in Switzerland is generally designed as a progressive tariff, increasing with growing taxable assets. The actual rate varies from canton to canton between 0.1 and 0.5 percent.

Tax value of agricultural assets:

As a general rule, real estate is assessed by its market value for tax dispositions, and movables by their carrying value. For agriculture, extra rules apply: As long as agricultural land and buildings are in use (meaning that they are managed by the owner himself and subject to the law on peasants’ land rights), they are assessed at their capitalized earnings value (see chapter 3.4.6), which is considerably lower (around 1/3 – 1/5 of the market value). However, should the agricultural land be transferred from business to private assets (for example when a farmer gives up his agricultural business but keeps the real estate of his farm in possession), the value assessment will change from capitalized earnings value to market value and alter the sum of taxable assets for general wealth tax accordingly.

Income tax on restored depreciations (“wiedereingebrachte Abschreibungen”):

As depreciations on real estate lower the yearly income of a farmer (and subsequently income tax), the sale of the real estate restores the depreciations to the seller. That’s why these restored depreciations are subject to income taxation in the year of sale. And because income tax runs on a progressive tariff, an exceptional rise of earnings due to restored depreciations can increase income tax considerably, even multiply it if need be.

The restored depreciations are calculated as follows:

initial investment costs of real estate
 ./ . carrying value of real estate in the year of sale
 = taxable restored depreciations

Income tax on restored depreciation is also due when the real estate is transferred from business to private assets. This can occasionally force an owner to sell the concerned real estate just to be able to pay his tax bill...

Real estate profit tax:

When real estate is sold with a profit, the seller has to pay real estate profit tax with a tariff varying from canton to canton again. But basically the cantonal tariffs are all following a progressive system that increases the tax rate with growing taxable profit: rates starting from about 5% can thus rise up to 40% of the taxable profit.

The taxable profit is calculated as follows:

- proceeds from the sold real estate
- ./. purchase price and costs (including restored depreciation)
- ./. value-adding expenditures
- ./. sales costs
- = raw real estate profit
- ./. deduction depending on duration of ownership (the longer the ownership, the higher the deduction)
- = taxable real estate profit

In case of a sale, real estate profit tax comes in addition to the income tax for the related restored depreciations (provided there is a profit...).

3.1.3 Zoning plan of Willisau

As an example, the section of the zoning plan of Willisau below shows the different building zones with houses, "green zones" (in grass green: non-building zones inside the building zone), public zones (in dark grey), the boundary to the non-building zone and some buildings outside the building zone on the upper left.

1. Building zones:

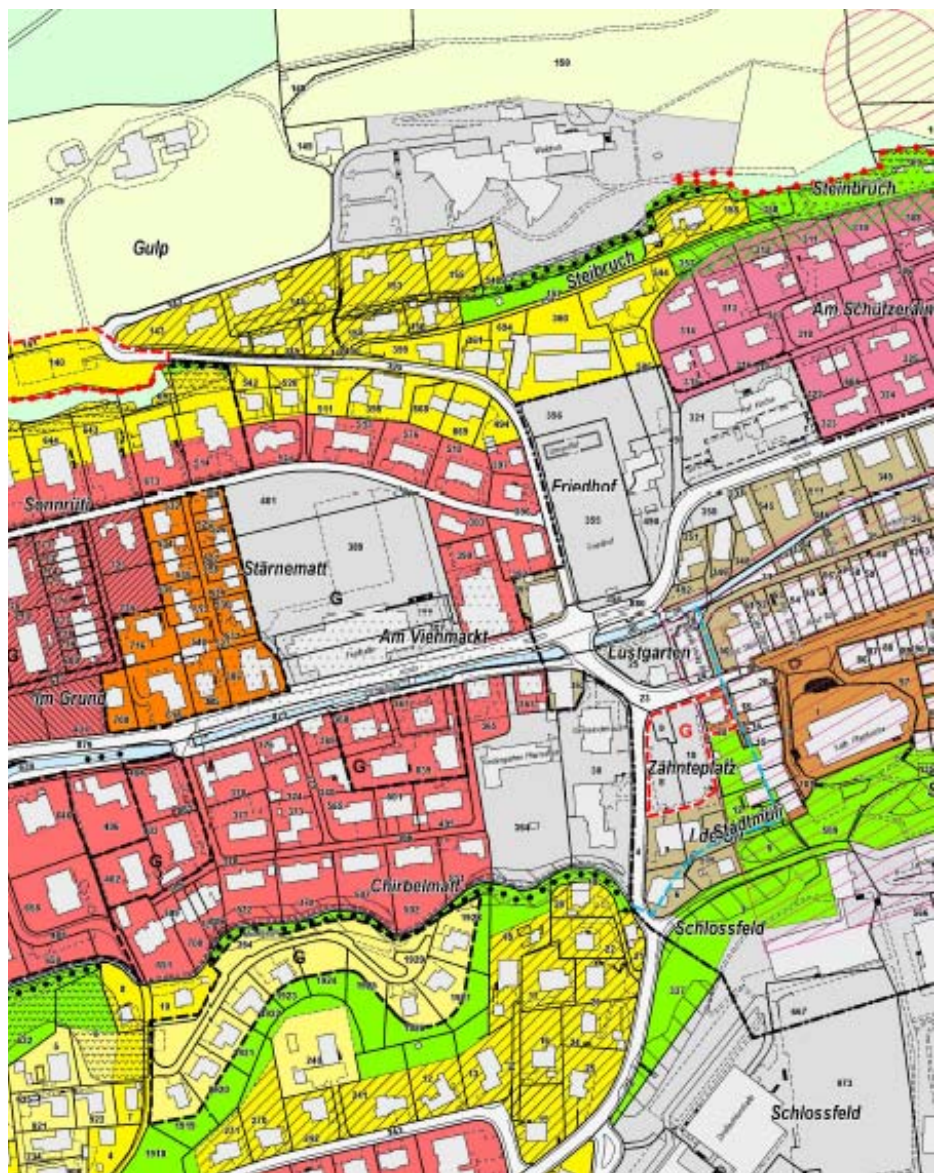
- Old town zone:
- Surrounding zone of old town
- Residential zone 1 storey
- Residential zone 2 storeys A
- Residential zone 2 storeys B
- Residential zone Adlermatte
- Residential zone 2 storeys C
- Residential zone 3 storeys A
- Residential zone 3 storeys B ZA
- Residential zone 3 storeys B ZB
- Residential zone 3 storeys B ZC
- Special building zone Sonnmatte
- Special building zone Railway Station
- Working and living zone 3 storeys
- Working and living zone
- Working zone III
- Working zone IV
- Hamlet zone
- Zone for public purposes
- Zone for sports and leisure facilities
- Green zone

2. Non-building zones:

- Agricultural zone
- Remaining area A
- Remaining area B
- Remaining area C
- Danger zones:
- Flood medium risk
- Gravitational processes medium risk
- Slipping medium risk
- Low risk
- Open space zone
- Open space overlapping

3. Protection zones:

- Agricultural zone overlapping
- Archaeological protection zone overlapping
- Landscape protection zone
- Nature protection zone
- Nature protection zone overlapping forest



3.2 Expropriation – “public versus private interests”

Field day example: **Groundwater protection in Schlossrued**

While the property guarantee was an important issue of the founding constitution of the Swiss Confederation in 1848, the government issued only two years later a law on “liabilities from the surrender of private rights” which was mainly needed to push early industrialisation projects like railway construction, electricity, water utilisation. In the meantime the legal background has developed quite a bit, presenting today a complex set of regulations for property restrictions.

3.2.1 Basic principles

Guarantee of property and value (full compensation)

The present constitution, dating from 1999, states in its art. 26 that property is guaranteed and that “expropriations and ownership restrictions that amount to an expropriation shall be fully compensated.” And the law on spatial planning determines that if “planning leads to ownership restrictions that amount to expropriation, there shall full compensation.” The current “federal law on expropriation” dating from 1930 specifies that expropriations can be asserted for works that are in the confederation’s interest or in the interest of a major part of the country or for other reasons of public interest.

Public interest

The law on expropriation lists the following general causes for expropriations:

- creation, alteration, maintenance, operation and future enlargement of a work
- production and deposition of the necessary building materials
- acquisition of the necessary building materials
- in connection with a work for measures of protection, restoration and substitution in compliance with the federal legislation on the protection of environment, nature and landscape
- measures required for substituting expropriated rights or safeguarding public interests

Proportionality

Art. 1.2 of the law on expropriation declares that “the right of expropriation can only be exercised insofar as it is necessary to attain the purpose”. Or as the federal court explains in an opinion of a judgement: “Principle of the mildest means: there may never be a suitable and less interfering measure”. The expropriation must be appropriate to realise the public interest, it may only reach so far as necessary for the attainment of the goals, plus the gravity of the interception and the relevance of the aspired result should be in reasonable proportion.

Types of property infringements

According to the law on expropriation there are three types of property infringements:

- Formal expropriation - the withdrawal of rights and their transfer to the dispossessor or their elimination
- Material expropriation - restriction of property rights affecting the concerned right holder like an expropriation
- Public law property restriction without compensation - restriction of property rights with lesser impact

3.2.2 Formal expropriation

The polity can withdraw property rights (landed or moveable property, limited material rights, neighbouring rights, rights of use) fully or partially and transfer them to itself (or exceptionally to a third party), provided that this expropriation serves a public task and is necessary, proportionate and reasonable.

Compensation

The formal expropriation is always fully compensated, usually as a monetary substitute, in exceptional cases as a compensation in kind. Assessing the value of the compensation can be a complex task: first the market value of the withdrawn right (land, work etc.) must be determined, than possible additional damage (inconveniences like complications of management, obstructed access to parcels, transaction costs etc.) must be assessed (loss of calculated earnings value), finally there might also be reasons for a surcharge for involuntariness, meaning that the loss of one’s possessions and the associated rupture of affective attachment demands an indemnity as well.

Procedure

The process of formal expropriation passes the following steps:

1. Initial decision to carry out an expropriation with assessment of the prerequisites – suitability, necessity, proportionality – and determination of the legal basis
2. Request to the estimation committee (“Schätzungskommission”) for the determination of the compensation
3. Plan publishing procedure (“Planauflageverfahren”) in coordination with the approval procedure for the public work, wherein the draft plans are presented for inspection and the involved parties have the possibility to:
 - submit an objection against the construction project

- submit an objection against the expropriation
 - place a request for plan modification
 - place a request of compensation
4. During the subsequent conciliation procedure (“Einigungsverfahren”), which includes a visual inspection, the parties have the opportunity to reach an agreement, else
 5. Final decision by the guiding authority (“Leitbehörde”) in a so called coordinated process, or else by the concerned ministry (“Departement”) on
 - objections against the admissibility of the expropriation
 - the entitlement for a compensation and its extent
 6. Implementation of the expropriation including the payment of the compensation and the subsequent transfer of the rights from the former holder to the dispossessor
 7. Legal protection on the federal level allows the following steps of appeal:
 - in case of conflicts about applicability and scope of an expropriation: guiding authority or ministry decides on objections → next appeal to the Federal Administrative Court → last appeal to the Federal Supreme Court
 - in case of conflicts about the extent of compensation: first decision by the estimation committee (“Schätzungskommission”) → next appeal to the Federal Administrative Court → last appeal to the Federal Supreme Court
 8. Legal protection on the cantonal level may vary, but in general it allows the following steps of appeal:
 - in case of conflicts about applicability and scope of an expropriation: first decision by the Governing Council of the canton → next appeal to the Cantonal Administrative Court → last appeal to the Federal Supreme Court
 - in case of conflicts about the extent of compensation: first decision of the estimation committee (“Schätzungskommission”) → next appeal to the Cantonal Administrative Court → last appeal to the Federal Supreme Court

Examples for formal expropriations:

- doubling of rail network (loss of land, noise immission et.)
- construction of a new freeway (loss of land, distance to parcel, form of trimmed plot, noise immission etc.)
- expansion of an existing road with a cycle lane (loss of land, distance to parcel, form of trimmed plot)

3.2.3 Material expropriation

Contrary to the formal expropriation, property rights in a material expropriation are not withdrawn and transferred to the community, but merely restricted, while the property title remains unchanged. Furthermore, the dispossessor might also be a private project. The Federal Supreme Court discerns two statements of facts when defining the material expropriation:

In the first place, material expropriation occurs when the owner's previous or in the near future foreseeable use of an item is prohibited or restricted in such a way that the concerned person is deprived of an essential power linked to the affected property – *particularly serious infringement*

And secondly, even when the interference with the property rights is less severe, a material expropriation is still assumed in case a single person's sacrifice for the community would seem unacceptable and incompatible with legal equality should there be no compensation for it – *special sacrifice*

Compensation

Material expropriations are always fully compensated, following the same principles as in case of formal expropriations (see there). However, should the interference not be strong enough to justify a material expropriation, there will be no entitlement for compensation.

Procedure

The process of material expropriation follows in principle the same steps as the formal expropriation.

Examples for material expropriations:

- construction ban in zone 1 of ground water protection areas (loss of building right)
- closing of railway-crossings (loss of direct access to land)
- servitude for a tunnel (vibration immission, restriction of geothermal probes etc.)
- creation of danger zones (flooding, avalanches etc.) and subsequent loss of building right

3.2.4 Public property restriction without compensation

When a material expropriation can be excluded – because the imposed property restrictions represent neither a particularly serious infringement nor require a special sacrifice from the owner – the public property restriction will not be compensated.

Compensation

Public property restrictions without compensation are – as the name not compensated. But there is a possibility to place an objection against the restriction measures and to demand an indemnity for the infringements. But in these cases the burden of proof is with the concerned property owner.

Examples for public property restrictions without compensation:

- Building distances, construction lines
- Groundwater protection zones 2 and 3
- Watercourse corridors
- Interventions to protect police issues (“Polizeigüter”) like public order, security, health etc.

3.2.5 Example field trip: Public property restrictions for groundwater protection

The law on water protection prescribes that concerns of the protection and management of groundwater have to be coordinated with other spatial planning interests and to be integrated in the structure plan as well as in the land use plan. Conflicts of interest – for example between excavation of raw materials (like gravel), revitalisation of watercourses, agricultural cultivation and the protection of crop rotation areas – can thus possibly be solved in an early planning phase.

Groundwater supply has to be secured on a regional level through a prudent planning, taking into consideration the future water needs as well as the possibilities of utilisation of water resources. For this purpose the cantons are obliged to prepare an inventory of the existing water supply facilities. Based on this so called “water-supply-atlas”, an assessment of municipal or regional water catchments has to decide on appropriate sites for such facilities and on the necessary protective measures to secure quantity and quality of the groundwater resources.

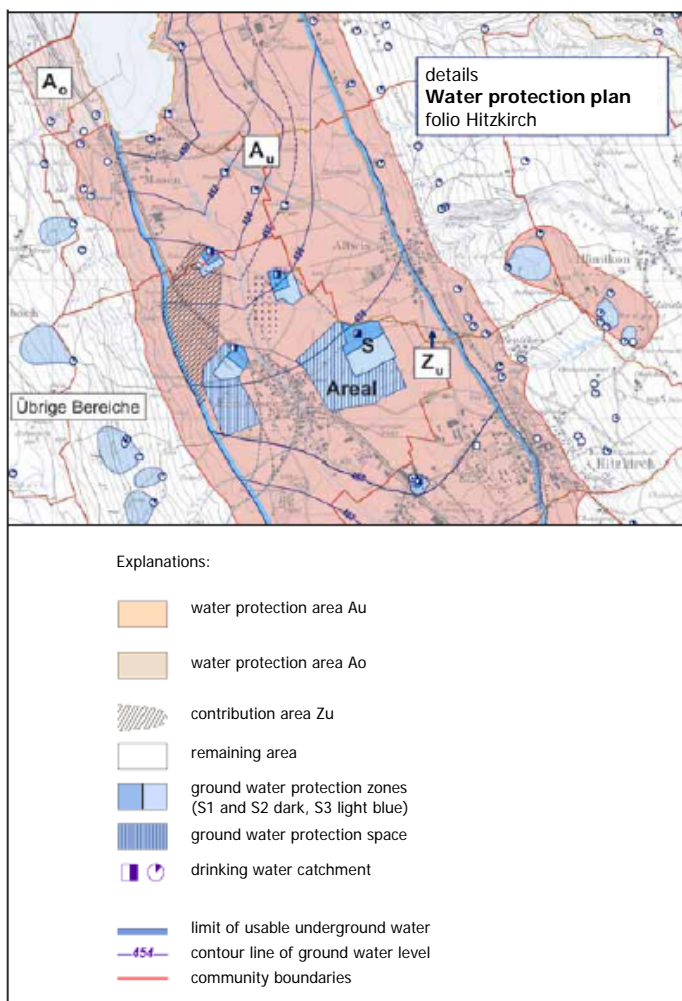
Protective zones:

Considering hydrological data, the cantons denominate specially endangered areas and differentiate between water protection sectors (“Gewässerschutzbereich” = A) and water contribution sectors (“Zuströmbereich” = Z), and for both sectors make a difference between necessary protection of surface water (A_o , Z_o) or underground water (A_u , Z_u).

Located within these water protection sectors are the proper ground water protection zones, designed to guarantee the quality of the drinking water. They are placed around the water catchments of public interest and necessity and divide into zone S1 (catchment sector), S2 (inner protection zone) and S3 (outer protection zone) and shall ensure that

- S1: the catchment facilities are not damaged and direct pollution of the water
- S2: contamination of drinking water with pathogenic microorganisms is prevented and groundwater flows are not adversely affected or obstructed as they approach the well“
- S3: in the event of an accident, sufficient time and space are available to ward off any hazards to drinking water (buffer zone for S2 and S1)

The installation of the ground water protection zones is based on the hydrological report, the protection zone plan and the protection zone regulations defining the protective measures.



Ground water protection space (Grundwasserschutzarea):

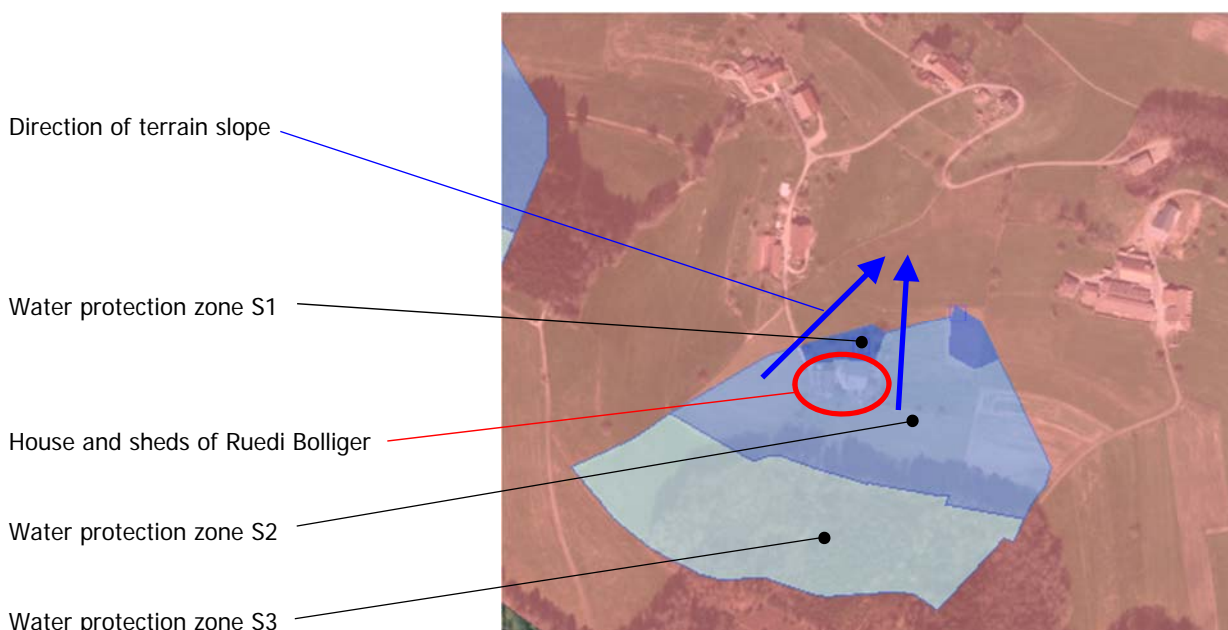
Defined areas where the future groundwater management (utilisation or accumulation) is secured in advance. In this areas building and the extraction of gravel, sand and other material is prohibited.

Protective measures:

- A_u: cantonal permit for buildings and facilities, no facilities that are particularly hazardous for water, special requirements for the extraction of gravel, sand and other material
→ *no compensation*
- Z_u: the cantons decide on the necessary water protection measures (application restrictions for pesticides and fertilizers, restrictions of agricultural and horticultural production)
→ *no compensation*
- S3: no extraction of gravel, sand and other materials, no landfill sites, no industrial operations with potential dangers for groundwater, no installations below the highest groundwater level
→ *compensation possible (depending on gravity of interference)*
- S2: in addition to S3: ban on construction (with exceptions), no digging nor modifications of the terrain, no activities prone to endanger the quality or quantity of the drinking water, no mobile and persistent pesticides, no liquid manure (with exceptions)
→ *compensation possible when a developed building zone is touched; but restrictions of agricultural production are usually not compensated*
- S1: only activities for the management and use of drinking water allowed
→ *compensation necessary (material expropriation) – but as a rule the area of S1 is purchased by the owner of the water catchment*

Fieldday-example: Situation in Schlossrued:

Visit to a farm owner Ruedi Bolliger, who's farm is situated in water protection zone S2, right at the edge of zone S1 (see plan below). He has construction plans, but gets no permit and is in difficult negotiations with the authorities of the municipality of Schöftland (neighbouring community and owners of the water catchment) about eventual compensation for the property right restrictions he has to accept.



3.3 Constructing on agricultural land – “Building outside building zones”

Field day example: **Agricultural construction activities in- and outside of building zone in Alberswil**

The separation between construction areas and non-construction areas is one of the fundamental principles of the spatial planning law (SPL) in Switzerland. Of course this separation made a major contribution to safeguarding a minimum of productive agricultural land and to maintain an attractive landscape with a high recreational value. Another important effect is the comparably low prices for agricultural land, giving farmer families the opportunity to purchase their agricultural businesses on favourable and cost effective terms (which is of course also owed to the regulations of the law on peasants' land rights (“Bundesgesetz über das Bäuerliche Bodenrecht” – see more in chapter 3.3).

But agricultural production needs buildings and new constructions too, so the spatial planning law and assigned ordinances and directives have to allow and explain exceptions – and this complicates matters quite a bit... The law declares the following types of constructions as compliant with zoning requirements in non-building zones:

- residential buildings for farmer families and their agricultural employees
- economical farm buildings
- economical buildings for energy production gained from wind, sun or biomass
- infrastructural works for agriculture and forestry

On the other hand, there are buildings in non-building zones that are not in compliance with the zoning requirements and none the less legal, like for example: buildings constructed before the enactment of the spatial planning law, conversions of former economical farm buildings, buildings for subsidiary enterprises with or without relation to the agriculture business, constructions and facilities for hobby animal keepers etc.

Ok so far – but talking of details: How much space does a farmer's family really need? What defines an agricultural employee? Where is the limit for farming activities and allocated buildings? For what type and size of subsidiary business can a farmer build facilities in the non-building zone? Will a lawyer be allowed to build stables for his two horses outside the building zone? That's where things get tricky...

3.3.1 Regulations for building outside building zones in the canton of Lucern

As usual the cantons, who are commissioned to implement spatial planning outside the building zone within their territory, enact slightly different interpretations of spatial planning regulations. We will in this chapter follow the canton of Lucern as an example and explain the Lucern instructions on the regulations for building outside the building zone published by the cantonal department for space and economy in 2016, based on the cantonal law and ordinance on planning and building (“Planungs- und Baugesetz” resp. “Planungs- und Bauverordnung”) which specify the standards of federal legislation.

3.3.2 General principles

Building permits outside the building zone are subject to strict requirements and only valid when issued by the responsible cantonal authority (communities can't decide on their own). Whoever builds or makes changes to a building without permit risks to have to restore the legal state, even decades back and even when legal successors are concerned.

There is a number of building types and corresponding sizes that are zone compliant or not zone compliant whose realisation is permitted in the non-building zone and whose specifications are given in the instructions of the cantonal administration.

Buildings and facilities outside the building zone have in general to be integrated into the surrounding landscape, because they will characterise it with their size, proportions, design, type of construction, roof shape or colour. Constructions that interfere with the landscape will not be permitted.

3.3.3 Residential buildings

The most interesting (financially) use of buildings outside the building zone is residential. That's why restrictions to create living space here are subject to a lot of strain. New residential buildings are permissible if:

- they serve an “agricultural business” according to the law on peasant land rights (→ see chapter 3.4.6)
- the residential building is necessary for operational reasons
- no preponderant interests are opposed to their installation or expansion

Renovations, moderate extensions and reconstructions of existing agricultural residential buildings are permissible too. The same applies for residential buildings already standing at the time of implementation of SPL (“altrechtliche Wohnbauten”).

Standard values for the permissible size of residential buildings:

- for agricultural businesses of up to 3 SMP (standard manpower → see chapter 3.4.6): a maximum of 300 m² for new constructions or 350 m² for expansion projects and a maximum of 3 residential units
- for agricultural businesses of more than 3 SMP (standard manpower → see chapter 3.4.6): a maximum of 350 m² for new constructions or 400 m² for expansion projects and a maximum of 4 residential units
- businesses with a very high seasonal manpower requirement (such as vegetable or berry production) shall be assessed on a case-by-case basis.

bestehend (Ausgangslage)	altrechtlich (vor 1.7.1972 erstellt)	neurechtlich (nach 1.7.1972 erstellt)
Um-, An- und Aufbau bestehendes Wohnhaus		
<p>200 m² aGf im EG und OG bestehend, 50 m² in DG zu Wohnzwecken ausbaubar (ab 1.5 m Raumböhe). Erstellung einer zusätzlichen Wohneinheit (z.B. Altenteil)</p>	<p>maximal 350 m² / 400 m² und 3 bzw. 4 Wohnzweckheiten Denkmal bis 3 SAG Ausbau DG (50 m²) Faktor 1/2 = 25 m² und Anbau EG/OG (125 m²) Denkmal mehr als 3 SAG Ausbau DG (50 m²) Faktor 1/2 = 25 m² und Anbau EG/OG (175 m²)</p>	<p>max. Ausbau max. 350/400 m² Denkmal bis 3 SAG Ausbau DG (50 m²) bis auf total 350 m² möglich Denkmal mehr als 3 SAG Ausbau DG (50 m²) bis auf total 400 m² möglich</p>
Um-, An- und Aufbau bestehendes Wohnhaus mit angebautelem Ökonometeil		
<p>300 m² aGf im EG und OG bestehend, 100 m² in DG zu Wohnzwecken ausbaubar (ab 1.5 m Raumböhe). Erstellung einer zusätzlichen Wohneinheit (z.B. Altenteil)</p>	<p>maximal 350 m² / 400 m² und 3 bzw. 4 Wohnzweckheiten Denkmal bis 3 SAG Ausbau DG (100 m²) Faktor 1/2 = 50 m² und Ein-/Umbau in Ökonometeil (100 m²) Faktor 1 = 100 m² Denkmal mehr als 3 SAG Ausbau DG (100 m²) Faktor 1/2 = 50 m² und Ein-/Umbau in Ökonometeil (150 m²) Faktor 1 = 150 m²</p>	<p>maximal 350 m² / 400 m² und 3 bzw. 4 Wohnzweckheiten Denkmal bis 3 SAG Ausbau DG (100 m²) und Ein-/Umbau in Ökonometeil (50 m²) Denkmal mehr als 3 SAG Ausbau DG (100 m²) und Ein-/Umbau in Ökonometeil (100 m²)</p>
Ersatzneubau anstelle eines bestehenden abzubrechenden Wohnhauses		
<p>200 m² aGf im EG und OG bestehend, DG zu Wohnzwecken nicht ausbaubar, Gebäude in einem eher schlechten Zustand Erstellung eines neuen Wohnhauses mit zusätzlicher Wohneinheit (z.B. Altenteil)</p>	<p>Denkmal bis 3 SAG Neubau anstelle des abzubrechenden Wohnhauses mit maximal 300 m² aGf und 3 Wohnzwecken Denkmal mehr als 3 SAG Neubau anstelle des abzubrechenden Wohnhauses mit maximal 350 m² und 4 Wohnzwecken</p>	
Neubau „Stöckli“		
<p>150 m² aGf im EG und OG bestehend, DG vollständig ausbaubar (ab 1.5 m Raumböhe) Erstellung eines separaten Wohngebäudes (Stöckli)</p>	<p>maximal 300 m² / 300 m² und 3 bzw. 4 Wohnzweckheiten Denkmal bis 3 SAG Neubau „Stöckli“ (100 m²) Denkmal mehr als 3 SAG Neubau „Stöckli“ (150 m²)</p>	

The Lucern instruction delivers detailed explanations of how to calculate the size of the residual area. The example on the left of this page demonstrates the permissible constructing activities for new residential buildings, renovations or expansions, depending on:

- the initial situation (see left column)
 - residential building (top frame as well as third and fourth frame from top)
 - Residential building with attached economical farm building (in blue; second frame from top)
- the permissible living space depending on planned project (column in the middle and right):
 - renovation/expansion of a residential building existing before SPL (top line, middle column)
 - renovation/expansion of a residential building built after SPL (top line, right column)
 - renovation/expansion of a residential building with an economical expansion existing before SPL (second line, middle column)
 - renovation/expansion of a residential building with an economical expansion built after SPL (second line, right column)
 - replacement of an existing building which will be demolished (third line, right column)
 - new construction of residential building (for the old generation) in addition to an existing house (fourth line, right column)

3.3.4 Domestic sewage:

In principle, domestic sewage has to be connected to the public sewage system. Again, agricultural dwellings profit from an exception: Domestic sewage may be utilized, together with liquid animal manure, for fertilizing purposes in agriculture. To get this type of sewage management approved, the following conditions must be fulfilled:

- The concerned farm buildings are situated outside the building zone and are utilized by the agricultural business
- The liquid animal manure (undiluted) amounts to at least 25% of the total quantity
- The available storage capacities are sufficient and in good order
- In case the farm is situated in the parameter of a public sewage system, the domestic sewage must be mixed with at least the liquid manure of 8 livestock manure units (corresponds to the output of 8 milking cows)

3.3.5 Zone compliant economical farm buildings

The most obvious use of buildings outside the building zone is for agricultural production. Still there are limits to what can be erected under this purpose. Buildings are zone compliant when they serve for:

- soil-dependent production
- so called inner increase of production (“innere Aufstockung”), meaning that a soil-dependent business can build extensions for a soil-independent branch of production that does not exceed a defined dimension:
 - the contribution margin of the soil-independent production is smaller than that of the soil-dependent one
 - The potential of own plant production (dry matter) must cover at least 70% of the animal production demand
 - In case of soil-independent horticulture, the concerned production may amount to a maximum of 35% of the total vegetable and horticulture acreage or an absolute limit of 5'000 m²
- soil-independent production exceeding the limits of the “inner increase of production”, provided the relevant buildings are situated in a special agricultural zone (see below).

3.3.6 Special agricultural zones (“Speziallandwirtschaftszonen”)

In these special agricultural zones all buildings and facilities are zone compliant that serve for agricultural production, regardless of the method of their production (for example greenhouses for hors-sol cultivation or soil-independent animal keeping like chicken or pig fattening).

The installation of these zones has to follow the land use planning procedure (“Nutzungsplanverfahren”): it is subject to a comprehensive balancing of interests which has to take into account concerns of ecological compensation as well as protection of landscapes and historical sites, and it is finalized with a political decision.

3.3.7 Emission restrictions

Switzerland’s environmental protection law (“Umweltschutzgesetz”) declares the goal of limiting emissions (art.11), and it demands the definition of thresholds for air pollution in such a way that neither man, animal nor plant are endangered and the well-being of the population is not considerably disturbed (art. 14).

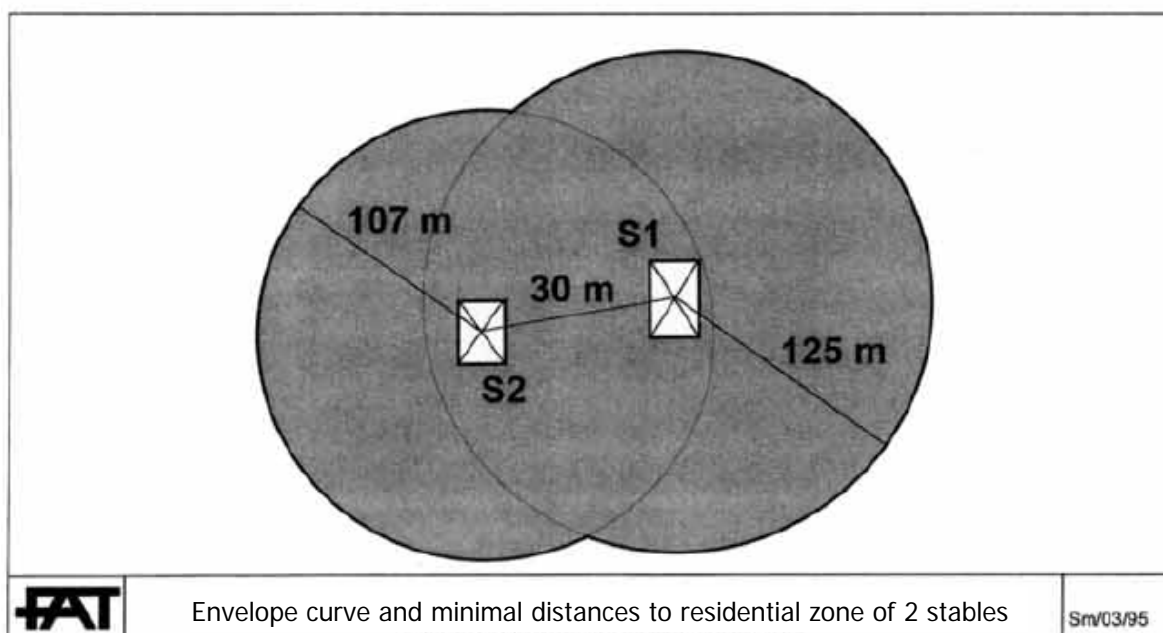
Complaints about annoying odour are among the most frequent problems the responsible authorities have to deal with in practice. Especially agricultural animal keeping close to residential zones is prone to provoke appeals. As measurements are extremely complex and specific odour emission thresholds for animal husbandry are missing, livestock keeping facilities have to respect minimal distances to avoid odour nuisance. The clean air act (“Luftreinhalteverordnung”) demands in its paragraph 51 of annex 2 that for new installations or alterations of existing facilities for animal husbandry, the recommendations of the federal research institute for agricultural economics and engineering concerning required minimum distances have to be applied (FAT-Bericht 476 “Mindestabstände von Tierhaltungsanlagen”). In addition, ventilation systems of stables have to meet the approved requirements of ventilation techniques.

The minimal distance is calculated in four steps:

1. Determination of the odour load factor (OLF) according to animal type – for example:
 - Bovines per livestock unit: 0.15 OLF
 - Pigs per animal: from 0.15 to 0.35 OLF, depending on age and weight
 - Poultry per animal: fattening chicken 0.007 OLF, laying hens 0.010 OLF, turkey 0.015 OLF

	Switzerland	Canton of Lucerne	
		absolute figures	% Switzerl.
Agricultural businesses (n)	59'065	5'088	8.6
Agricultural surface (ha)	1'051'747	77'582	7.4
Agricultural surface/farm (ha)	17.8	15.2	
Arable land (%)	25.9	16.6	
Milking cows (n)	726'875	76'238	10.5
Other bovine cattle (n)	877'412	74'864	8.5
Pigs (n)	1'540'129	412'248	26.8
Poultry (n)	8'474'239	965'765	11.4
Earnings (billion CHF)	10.8	1.08	10.0
Inhabitants	7'701'856	368,742	4.8

The canton of Lucerne has a high animal density compared to the national average and thus faces a difficult challenge concerning agricultural air and water pollution.



Example: Graphic display of minimal distance around an installation with two stable buildings

Stable 1: 30 cows and 110 fattening pigs (TOL = 26.5, ND = 100.9 m, CF = 1.238, MD = 125 m)

Stable 2: 1'000 laying hens (TOL = 10, ND = 59 m, CF = 1.813, MD = 107 m)

2. Calculation of Total odour load (TOL):
= sum of TOLs of each species kept in the concerned building (= number of animals * OLF per species)
3. Calculation of norm distance (ND):
 $ND = 43 * \ln(TOL) - 40$
4. Determination of minimal distance by rating the norm distance with correction factors (CF) for husbandry system, type of ventilation, utilisation of filters and location of stable (flat, slope or basin):
Minimal distance MD = $ND * CF_1 * CF_2 * \dots * CF_9$

The responsible cantonal authority has issued an EXCEL-program to calculate minimal distances around stables.

3.3.8 Lucerne Sub-plan Ammoniac (“Teilplan Ammoniak”)

With an action plan “air pollution control, sub-plan ammoniac”, the government of Lucerne has passed different measures to comply with the thresholds for immissions in 2007. The goal was to stabilise ammoniac emissions on the level of the year 2000 till 2010, and then to reduce the emissions by 30% till 2030. The long-term objective will be to reduce emissions below the critical loads.

Among the adopted actions of sub-plan ammoniac are measures that bring further restrictions for agricultural construction projects:

- **Limitation of ammoniac emissions for buildings and facilities of individual farms**

As of 2010, construction permits are coupled with the duty to reduce ammoniac emissions of the concerned farm by 20%. This requirement only concerns new constructions or conversions with direct relation to animal keeping (stable buildings and facilities).

- **Limitation in special agricultural zones for livestock keeping**

Agricultural buildings and facilities that require first the designation of a special agricultural zone have to reduce the ammoniac emissions of their overall production by 70%.

- **Guidelines for calculation of ammoniac emissions**

The Canton of Lucerne provides a tool for the calculation of ammoniac emissions of individual farms called “Agrammon” and has expanded it with specific cantonal amendments. A calculation with Agrammon (and subsequently no reduction of ammoniac emissions) is required in case:

- the project aims at an improvement of animal welfare and brings no increase in livestock
- low livestock density (below the limits for basic direct payments on permanent pastures and grassland, which are defined depending on production zones: lowland = 1.0 livestock units (LU)/ha, hills = 0.8 LU/ha, mountain zone (MZ) 1 = 0.7 LU/ha, MZ2 = 0.6 LU/ha, MZ3 = 0.5 LU/ha, MZ4 = 0.4 LU/ha)
- Construction projects with less than 10 livestock units

3.4 Agricultural inheritance law – “keeping the farm in the family”

Field day example: **Transfer of the family farm of Remo Annen in Unterägeri canton of Zoug**

3.4.1 General Background

Since the abolition of feudalism in Switzerland early in the 19th century and the transition to a new democratic governance including a liberal system of property with widely spread private land ownership, a variety of inheritance regulations and succession rules have been applied in different regions of the country. Land property was traditionally not divided among the heirs, but was passed on to the oldest (or youngest) male successor, in order to keep the family farm together. But there have been exceptions in some communities, where the estates were split and distributed by way of inheritance to a selection of heirs (e.g. all children, male children...). These differences had a formative effect on the development of landownership, economy and society, which are partly still visible today (example: small-scale parcelling in the canton Wallis).

With the instauration of the civil code in Switzerland 1912 the property and inheritance rules were nationalised. Over the past 100 years the Swiss inheritance law has undergone a number of changes (concerning inheritance of farmland in particular), but the general principles have remained the same.

3.4.2 Who is entitled to inherit?

The civil code differs between legal heirs and heirs designated by the decedent via testament or contract of inheritance. Legal heirs are relatives, surviving spouses or registered partners and, if none of the former legal heirs are present – the community. If the decedent decides to favour some of the legal heirs or a third party, he can do so only in the limits of his “free quota”, because the legitimate portions of the legal heirs (children, spouse, partner and parents, but not siblings and grandparents) are protected.

3.4.3 What shares of the legacy will the heirs get?

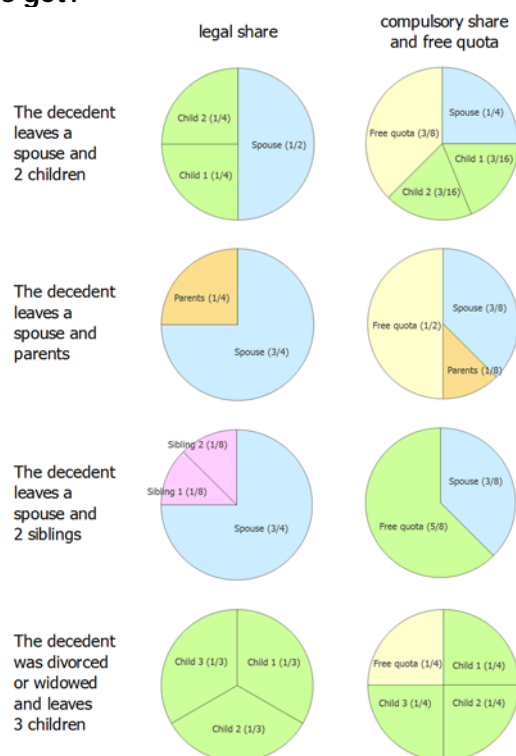
After the death of a decedent his heirs form by law a community of heirs. But any heir can at any time demand the dissolution of the community and in consequence the distribution of the estate the decedent left behind.

The legal heirs will inherit according to their defined quota and their hierarchic position in the parental order (Stammesordnung). For example: When a decedent dies without testament or contract of inheritance, his legacy is distributed, depending on what heirs he or she leaves behind, as follows:

1. Descendants (1/2 in equal parts) and spouse (1/2)
2. Spouse (3/4) and parents (1/4)
3. Spouse (3/4) and siblings (1/4 in equal parts)
4. Parents (1/1)
5. Descendants (1/1 in equal parts)

The legitimate portions of the legal heirs are the following:

1. Descendants (3/8 in equal parts) and spouse (1/4)
2. Spouse (3/8) and parents (1/8)
3. Spouse (3/8) and siblings (0)
4. Parents (1/2)
5. Descendants (3/4 in equal parts)



3.4.4 Distribution of the legacy:

The heirs are in principle free to take the final partitioning of the estate in their own hands – as long as they all agree with the solution and respect the legal quota. In case of dissent, any heir can demand the participation of the responsible authority which will organise a just drawing of lots.

When the inheritance contains assets that can't be randomly portioned (like houses, machines, land etc.), they will be assigned to one of the heirs under obligation of compensation in order to comply with the legal quota. The inheritance law prescribes to assess such components of the legacy at market value.

If one of the heirs has received important donations from the decedent before the latter's death, they will have to be brought into account during the testamentary partition as well. The other heirs are entitled to plead for appropriate reduction of the hereditary portion of the donee ("Herabsetzungsklage").

3.4.5 Special legislation on agricultural inheritance

Under these general inheritance regulations, the take-over of the family farm at market value was a huge investment. Consequently, during the economic depression of the thirties of the last century, Swiss farmers suffered a debt crisis. An alarming number of peasant families were unable to pay the increasing interest rates and went bankrupt.

The strong agricultural lobby convinced the parliament to discuss measures to protect farmer's property of their estates. Corresponding legal modifications were decreed during World War II and in the early fifties: The federal law on debt relief for rural homesteads in 1947 ("Bundesgesetz über die Entschuldung landwirtschaftlicher Heimwesen") and the federal law for the maintenance of peasant landholding in 1951 ("Bundesgesetz über die Erhaltung des bäuerlichen Grundbesitzes"). They introduced, among other things, the capitalised earnings value as the relevant price for agricultural businesses in a testamentary partition as well as a debt limit for agricultural real estate.

In the seventies and eighties, the continuing constructing boom reached an alarming level: although the law on spatial planning slowly got the spreading of the rampant building areas under control, investors speculating on growing construction zones bought agricultural land for horrendous sums, thus forcing farmers out of the market. An initiative against land speculation ("Stadt-Land-Initiative gegen die Bodenspekulation") was clearly rejected by the people in 1988, but the discussions of the preceding campaign made an impact: the law on peasants' land rights ("Bundesgesetz über das Bäuerliche Bodenrecht") was enacted in 1991, unifying the badly coordinated existing laws on related topics and at the same time intensifying the protective impact for agriculture and farmland.

3.4.6 The Law on Peasants' Land Rights (LPLR) today

The LPLR embeds a few exceptions into the general framework of inheritance law and land-market regulations. It was passed with the general aim to forward the land ownership of competitive family farms, to strengthen the position of the self-managing user or tenant as a buyer of agricultural land as well as to fight overcharged prices.

It strives to protect the structure of Swiss agriculture by way of a ban on fragmentation of parcels and de facto splitting of whole estates. These measures are clarified with the following definitions:

- **Agricultural parcel** ("landwirtschaftliches Grundstück") – any parcel that can be used for agriculture and does not belong into a building zone
- **Agricultural business** ("landwirtschaftliches Gewerbe") – an ensemble of agricultural parcels, buildings and facilities that serve for agricultural production and whose management needs at least one standard manpower SMP (standard manpower being a normalized measure for the size of an agricultural business based on surface and type of land and on number and type of animal keeping facilities multiplied with a set of factors provided by the ministry of agriculture – see example in chapter 3.4.9)

Note: The definition of the "agricultural business" and the standard manpower are decisive for a number of other agricultural measures and subsidies too: Investment loans and business relief credits are issued only to farms with 1.0 SMP, with an exception for marginal regions at 0.6 SMP. Direct payments ("Direktzahlungen"), the most important way of subsidising Swiss farmers, are only granted for farms that require at least 0.2 SMP. The law on spatial planning allows the construction of residential buildings or structures for subsidiary enterprises in the agricultural zone only in case the request comes from an approved agricultural business with more than 1.0 SMP. The SMP-number of a farm is also crucial in of land rental matters: the law prescribes a maximum permissible rent for agricultural parcels and whole farms, which is calculated on the basis of the capitalised earnings value (see below). That's why the rent for an independent parcel of agricultural land is considerably higher than the rent for the same parcel being part of an "agricultural business". Thus the decision whether a farm is considered being an "agricultural parcel" or an "agricultural business" is important for landlord as well as tenant. The same dependence on the decision "agricultural business" yes or no is holds good for the agricultural land market: whether a parcel can be sold independently or has to be included in the package of an agricultural business makes a huge difference because the demand for a single parcel will be a lot higher than the demand for a whole farm.

→ In short: it's hardly surprising that each modification of the basic SMP-factors triggers a chain of changes for the administrative framework for farms and is observed with much suspicion and dread.

- **Ban on fragmentation** ("Zerstückelungsverbot") – Agricultural parcel may not be partitioned into segments smaller than 25 ares
- **Ban on de facto splitting** ("Realteilungsverbot") – single parcels may not be cut off from agricultural businesses

Furthermore, the LPLR promotes the user of agricultural land by way of restricting the purchase of agricultural parcels or agricultural businesses to self-managers only and by granting preference to family members:

- **Self-manager** (“Selbstbewirtschafter”) – somebody who works the agricultural soil with his own hands and manages personally the agricultural business. The law regards persons with approved competence (by formation or experience) to work the soil and manage a farm as qualified for self-management
- **Claim of allocation** (“Zuweisungsanspruch”) – every heir can in the process of testamentary partition claim the allocation of an agricultural business being part of the legacy, if he is willing to manage the land himself and seems able to do so. He can furthermore claim the allocation of the businesses inventory too. If the land in question is an agricultural parcel, the self-managing heir can claim its allocation, provided is in command of an agricultural business already.

Then – very important point – the LPLR guarantees affordable conditions for the successor of an agricultural parcel or business by fixing a preferential price for transfers within the family:

- **Capitalised earnings value CEV** (“Ertragswert”) – the capitalised earnings value corresponds to the capital who’s interests (at an average mortgage rate) can be paid with the earnings of an agricultural business or parcel which is managed according to local standards. The agricultural ministry publishes an official guide for the estimation of the CEV, which is regularly updated. As a general rule, the CEV reaches only about one third to one quarter of the market value.
- **Preferential price for heirs** (“Anrechnungswert für Erben”) – an agricultural business shall be taken into account of the self-managing heir by its CEV, an agricultural parcel by double its CEV. The CEV can be increased under certain conditions (like recently made important investments etc.)
- **Profit participation right** (“Gewinnanteilsrecht”) – to protect the interests of the coheirs, they have the right to a share of the profit in case an agricultural business or parcel that has been transferred for a price below market value, is sold later on for market value
- **Right of residence** (“Wohnrecht”) – the parents selling their estate (by law at a low price) to a descendant can demand a beneficial use of an apartment or a right of residence on the family estate

The LPLR should moreover prevent the over indebtedness of family farms by setting a limit to mortgage loans on agricultural land:

- **Debt limit** (“Belastungsgrenze”) – Agricultural parcels may only be mortgaged up to a defined debt limit. This limit is established at 135% of the agricultural capitalised earnings value. Exception: Mortgages to secure agricultural investment loans or business relief credits officially issued under agricultural law for agricultural purposes can surpass the debt limit

In addition, the LPLR slows down the rise of agricultural land prices in general by setting a dynamic price limit:

- **Overcharged price** (“übersetzter Preis”) – the purchase price in the free agricultural land market is considered overcharged when it surpasses the average price for comparable agricultural parcels or businesses in the concerned area in the past five years by more than 5 percent (can be heightened to 15% by the cantons). The cantonal administration is responsible for control and approval of agricultural land sales

3.4.7 The transfer of the family farm – a process with many facets

The transfer of the family farm unites different spheres in a decisive process which has an important impact on all persons involved. The ceding generation will try to secure the continuity as well as their own livelihood for the old age. The young generation taking over the family business will try to have an advantageous start and to establish living and working conditions according to their own visions. The coheirs want to be sure that their renunciation of an important part of the expected inheritance (capitalised earnings value instead of market price for the family estate) will be appreciated with a successful continuance of the family farm and their interests safeguarded by sufficient profit participation rights, should the family farm or parts of it be sold to market value later on.

Moreover, the role and interests of the women in the family are at stake at this decisive transition too. The influence of patriarchal tradition in Swiss rural society remains strong, the patrilineal transmission of the family farm still prevails. And on many farms, two or even three generations live together, often under the same roof. The continued existence of the family farm is a very important objective, a powerful mission from the past generations to be handed down to coming offspring. Women’s interests are often considered marginal under the exigencies of this ancient instruction.

Questions arising under these circumstances are: Who is going to be the owner/the manager if the family farm – the son of the old manager, or the young couple together? What about the investments of the mother (financial

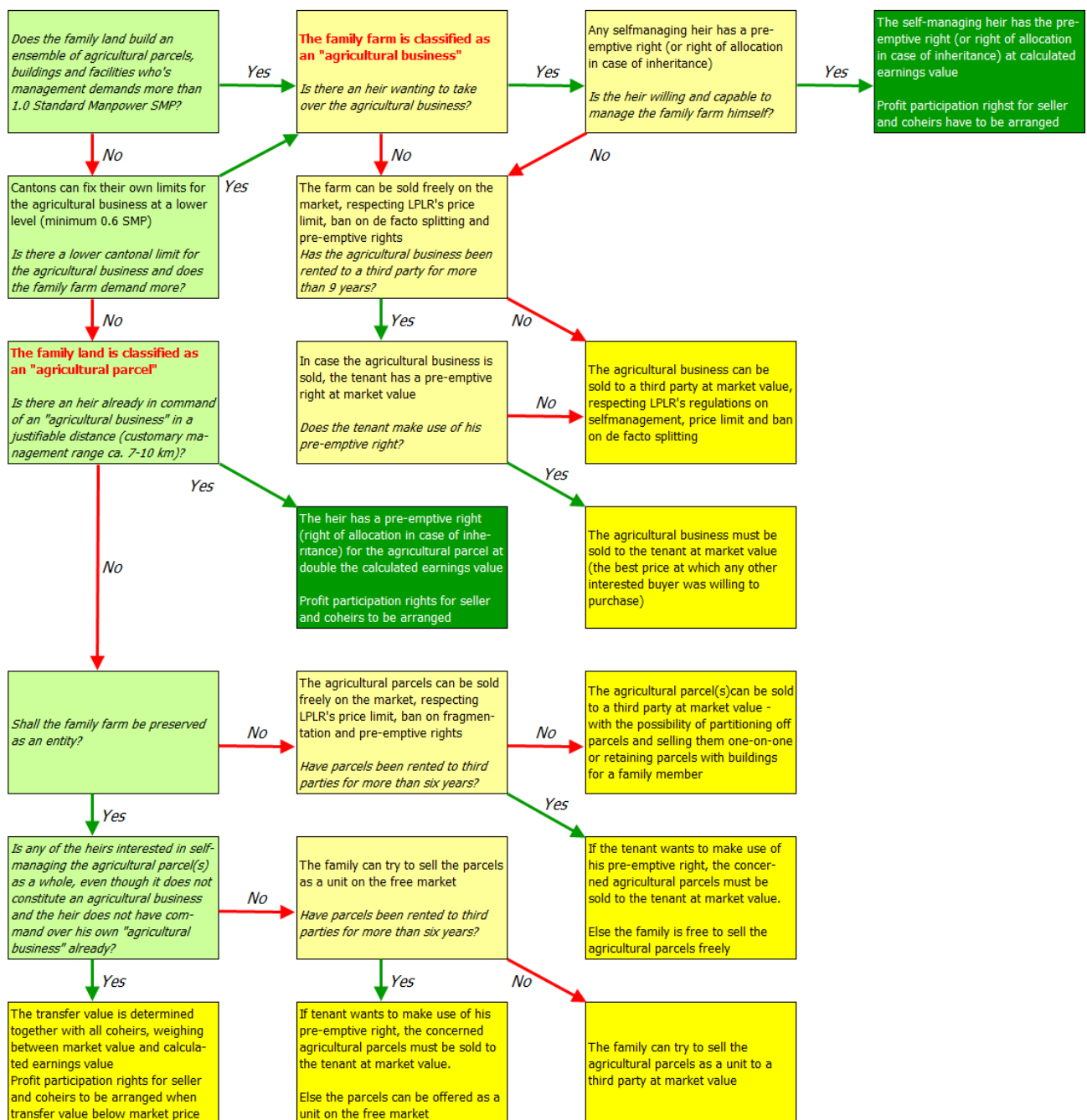
and workwise) into the family estate – is she going to receive her fair share in the transfer process? How is the ceding couple positioned concerning their pension plan – can the mother maintain her standard of living in old age? How are the generations going to live and work together – have mother-in-law and young farmer’s wife discussed and organised the coordination of their domestic tasks and how they will communicate in times of stress?

Changing traditional behaviour takes time – and these outdated role-models are still present among agricultural advisors. Therefore, the Swiss Consultancy Forum (“Beratungsforum Schweiz BFS”), the national umbrella association of agricultural advisory services, has accepted in 2014 a “Charter of holistic consultancy”, which recommends always to congregate and include the whole family for advisory meetings concerning strategic decisions for the family farm. The impact of this initiative remains yet to be seen...

3.4.8 Process of transfer and inheritance of a family farm

The challenge of how to organise the social and financial details of the family farm’s transfer notwithstanding – at the end its hard legal facts that set the frame for the individual solutions of each farmer family. The Swiss inheritance law and the law on peasants’ land rights set the following decision-making pattern:

Determination of who is going to take over the family farm and at what price (Law on Peasant’s Land Rights LPLR):



3.4.9 Field visit: Transfer of the Annen family farm in Unterägeri

Remo Annen...

?? Kommt noch etwas mehr nach meinem Vorgespräch auf dem Betrieb nächste Woche (kleiner Abschnitt) ??

Basic operational data of the Annen family farm:

Farm location:

Altitude above sea level: 750 m

Production zone: Mountain zone 1

Average precipitation: 1500 mm/year

Farm size:

Area: 34.22 ha utilised agricultural area

Animals: 75.0 livestock units

Milk delivery contract: 256'606 kg/year

Workload: 3.1 standard manpower

Plant production:

Total utilised agricultural area	34.22 ha	
Permanent grassland (w/out pastures)		28.86 ha
Permanent pastures		1.98 ha
Low-intensity permanent grassland		1.29 ha
Extensive permanent grassland		0.20 ha
Litter meadows		1.82 ha
Hedgerows		0.07 ha
Old standard fruit trees		94 Pcs
Forest	4.02 ha	

Animal production:

Animal category	Average number
Milking cows	43
Cattle rearing > 2 year	4
Cattle rearing < 1 year	25
Fattening calves	120
Fattening pigs	150

Standard manpower (SMP) calculation for the Annen family farm:

Standard manpower (2016)

Activity sector	Quantity Ares/LU*	SMP factor	Total SMP
Utilised agricultural area			
Remaining area ¹	3'422.00 *	0.000220 =	0.752840
Vineyards on slopes or on terraces	0.00 *	0.010770 =	0.000000
Other special cultures ¹	0.00 *	0.003230 =	0.000000
Livestock			
Milked animals	41.5589 *	0.039000 =	1.620797
Fattening pigs, young pigs, weaned piglets	23.8000 *	0.008000 =	0.190400
Breeding pigs	0.0000 *	0.032000 =	0.000000
Remaining Livestock	8.4838 *	0.027000 =	0.229063
Supplements			
Supplement sloped terrain 18-35%	963.00 *	0.000150 =	0.144450
Supplement sloped terrain >35%	228.00 *	0.000300 =	0.068400
Supplement organic farming	0.00 *	20% von ¹ =	0.000000
Supplement trees	94.00 *	0.001000 =	0.094000
SMP			3.099950

3.5 Farmland market – “tight rules for a small offer”

Field day example: Agricultural land market and voluntary property consolidation in Reiden

In principle, the Swiss legislation protects the claims of owners/users of the resource soil with the property right. The fundamental right of property is guaranteed by the Swiss constitution (art. 26) and sets one of the cornerstones of the liberal social order in Switzerland. This guarantee is very strong in fact, giving landowners a strong position in political negotiation processes to enforce their user's interests. Thus the proprietor can – within the limits of the remaining legal system – freely dispose of the object he owns, and the land market is basically free.

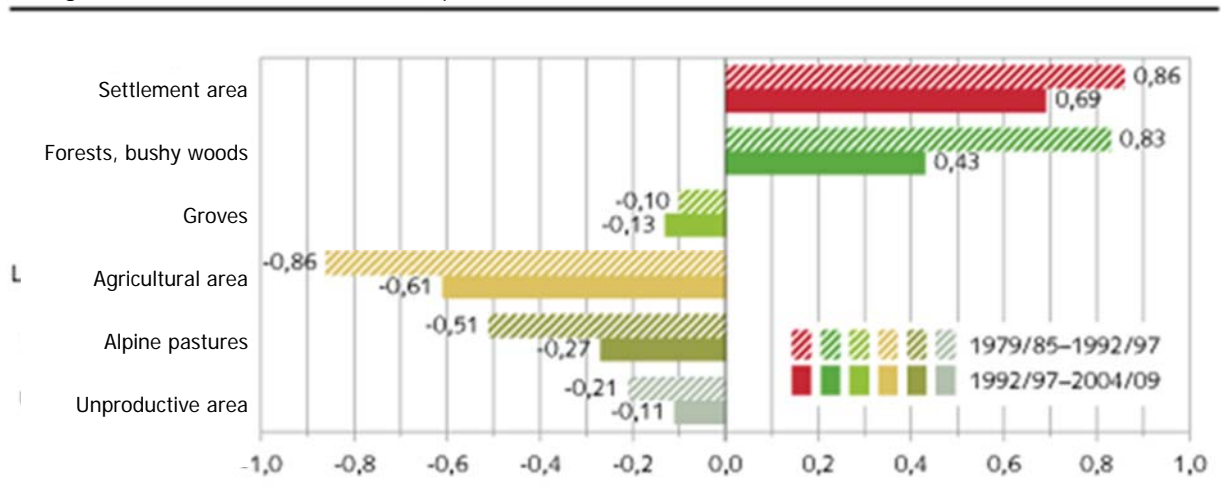
The general details around property and ownership are regulated in the civil code. Landed property comprises parcels of land, including estates and permanent and independent rights and obligations (e.g. building leases, easements, mortgages, rights of way etc.). Property rights as well as easements are entered in the land register, and sales contracts concerning parcels of land have to be drawn up and certified in due legal form.

The basic data of the land register are publicly accessible (see also chapter 3.1). Thus it is relatively easy to get an official and reliable record on ownership, size and rights or obligations for a specific parcel.

3.5.1 Restrictions of the free market for agricultural land

But there are essential limitations to property rights concerning the market with agricultural land as well. The law

Change of land use in Switzerland, in m² per second



Quelle: BFS – Arealstatistik

© BFS, Neuchâtel 2013

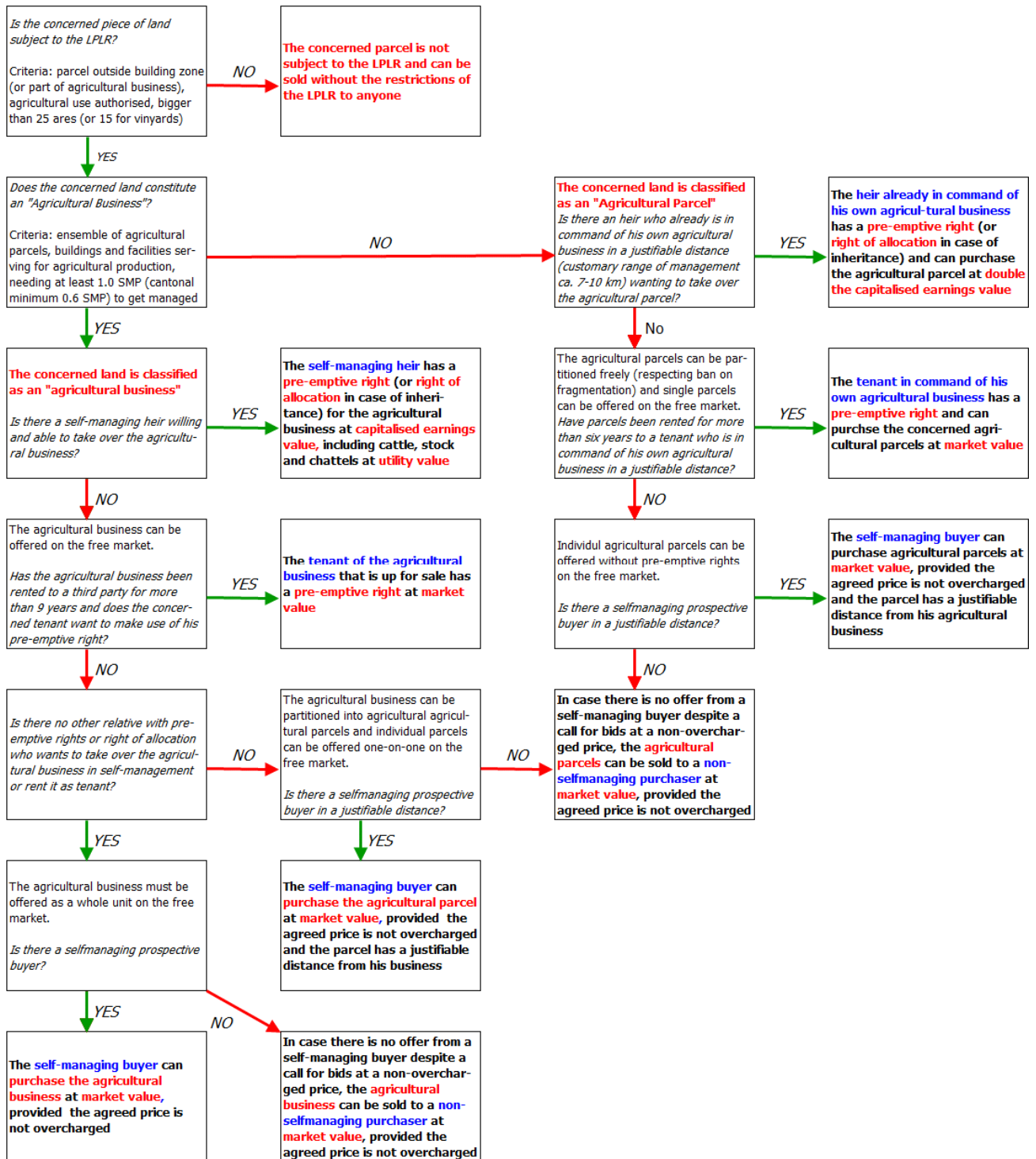
on spatial planning (dating from 1979 only) in particular has separated agricultural land from building areas and clearly divided the land market (see also chapter 2.5). Still, the settlement area is constantly increasing at the expense of agricultural land. On the other hand, the strict protection of the forests, which has been in force since 1902 (in the mountain zones already since 1874), sets the line for farm land against the “wild”: Since the clearing of forests is prohibited, but not their growth in surface, the forested area in the mountain zones has increased at the expense of the agricultural land as well. So the agricultural land market faces an ever dwindling offer.

3.5.2 The law on peasants' land rights (LPLR)

On private-law level, the market for agricultural land is further restricted by the law on peasants' land rights LPLR (“Bundesgesetz über das Bäuerliche Bodenrecht”), which came into force in 1994 and confines property rights as well as selling and purchasing possibilities for agricultural land. It was passed with the general aim to forward the land ownership of competitive family farms, to strengthen the position of the self-managing user or tenant in the acquisition of agricultural land as well as to fight overcharged prices.

Important details of the LPLR have already been explained in chapter 3.4, and the decision making for a family wanting to sell agricultural property is best explained again with the following diagram:

Decision path for an owner wanting to sell land outside the settlement zone (Law on Peasant's Land Rights LPLR)



The diagram shows clearly that not much agricultural land should reach the free farmland market, considering that the established farmer families profit from pre-emptive rights and price privileges. In fact it is almost impossible for an outsider to purchase farmland, and if an opportunity arises, the price is often prohibitive (despite the price limit).

3.5.3 Importance of the agricultural land market

In Switzerland, according to the newest available statistics (2000) in a study published in 2002⁵, around 44% of the utilised agricultural surface are owned by non-farmers – by private individual landowners, but for the most part by collective bodies (corporations etc., see chapter 3.6) and public authorities (communes, cantons, federal government). On an average, farmers have taken over 55% of their actual operating area from their parents and are leasing 40% of their land from third parties, whereas only 5% has been purchased on the free land market. The author of the study referred to above estimates that per year, only about 0.2% of the whole agricultural area actually reaches the free market.

These general observations suggest that the agricultural land market in Switzerland is a seller's market where the vendor decides in most cases whether a deal is closed and for which price – although the LPLR's concept of the overcharged price sets a limit to farmland price development.

In fact the agricultural office of the canton of Zurich observed that prices for arable land – which before the implementation of the LPRL had reached 20.00 CHF/m² in 1990 – had sunk from an average of 10.00 CHF/m² in 1999 to only 7.90 CHF/m² in 2007 (grassland sold at around 2.00 CHF less per m²).

So apparently the measures taken to control the rise of land prices (LPLR's ban on overcharged prices, see chapter 3.4.6) had had an effect. But critics claimed that deep prices prevented some owners to put their land on the market, even though they would in principle be willing to sell, thus unnecessarily delaying the process of structural change in agriculture. What's more, prices for good arable land in the neighbouring cantons of Thurgau and Lucerne were around 20% higher than in Zurich. That's why the authorities of the canton of Zurich lifted the increase factor of the "overcharged price" mechanism from 5% to 15%, hoping to promote the mobility of agricultural land.

Up to now this policy change has shown little effect on the land market of the canton of Zurich. Apparently it is still the emotional bonds that make families hold on to the inherited land, even though they're not farming any more.

3.5.4 Voluntary property consolidation

The voluntary property consolidation is one of several possibilities to improve the parcelling of agricultural land. It comprises a consolidation and reallocation of the parcels of farm units in a defined perimeter and of the related servitudes, but usually doesn't include the improvement of access roads and other land infrastructure. In contrast to overall land improvements ("Gesamtmeliorationen"), soil evaluations ("Bodenbonitierungen") are not mandatory for voluntary property consolidations. A mere coextensive trade-off is possible – which simplifies matters considerably and lowers costs too.

The difficulty of the procedure however is to get the necessary consent of all concerned land owners to the compiled draft of reallocation. Therefore, intensive negotiations and hearings are compulsory for a successful property consolidation.

Procedure:

The first impulse for a voluntary property consolidation often comes from land owners themselves. But the official procedure will be started by either the municipal council or the responsible municipal department (of building, transport, environment etc.), who have to define the perimeter and to provide a report that describes the planned property consolidations and its aims as well as relations to the subordinate land use plan. A public presentation of all preparatory documents will be organised and the concerned property owners can decide whether the consolidation shall be initialized or not.

If the result of this initial decision is positive and all land owners have signed the property consolidation principles, an execution committee will be installed or else the municipal council provides the execution of the consolidation.

Based on the existing plan combined with lists of owners, notifications, servitudes, mortgages etc.; and according to the approved principles of distribution as well as the valuation of the former property rights, the executing body will propose a reallocation plan ("Umlegungsplan") which includes a reallocation inventory and statements concerning monetary settlements and reimbursements that compensate over- or under-allotments.

It is imperative that all land owners and persons otherwise involved approve of the reallocation plan with their signatures. Thus the reallocation plan becomes legally valid, and the legal changes will be listed in the land register (by the way: voluntary property consolidations are exempt from any kind of land register fees or property transfer taxes). When all monetary compensations are settled, the voluntary property consolidation is completed.

⁵ Gianluca Giuliani, "Landwirtschaftlicher Bodenmarkt und landwirtschaftliche Bodenpolitik in der Schweiz", Diss. ETH Nr. 14781, Zürich 2002

3.6 Common land use – “Corporate land – cradle of Swiss democracy?”

Field day example: **Oberallmeindkorporation Schwyz – a 1'000 year old common land community**

3.6.1 Corporations in Switzerland – historical and legal background

Farmers in the middle ages seldom owned land, because most of it either formed part of the large estates of land-lords, belonged to a monastery or was in collective possession of the village community. Farmers were obliged to pay levies – usually in kind, later more and more frequently replaced by money – to their land owners and were integrated in a system of cultivation requirements, duties and regulations.

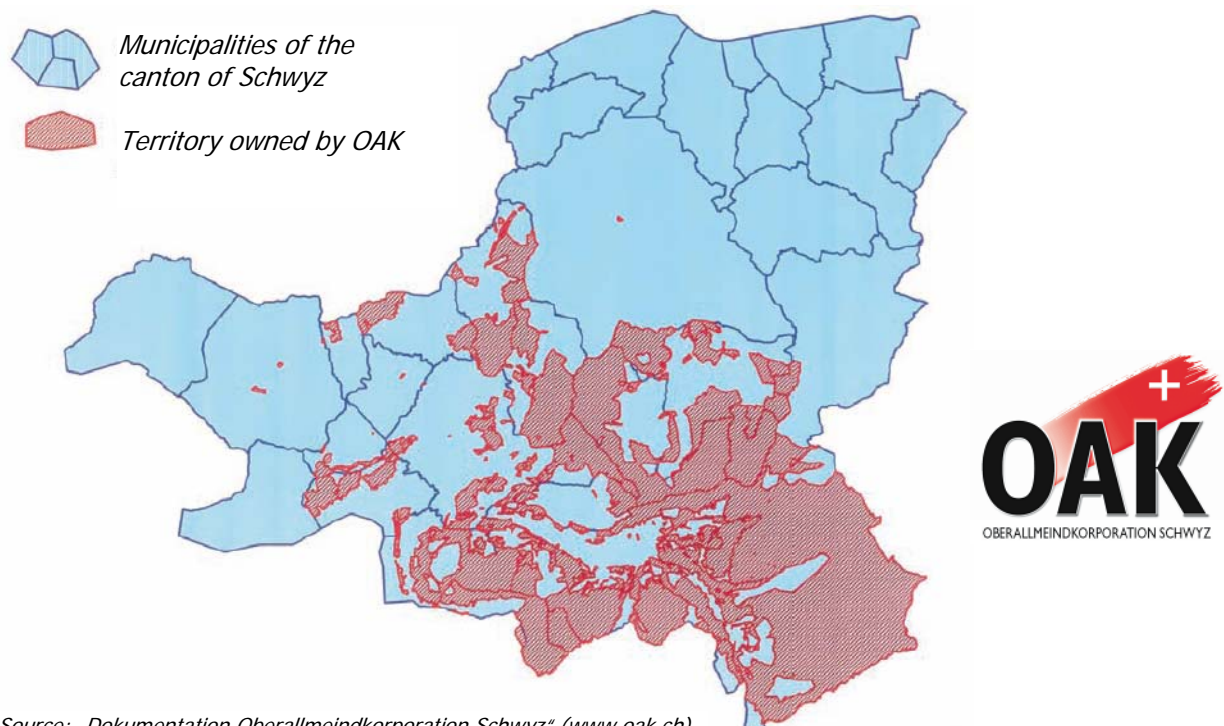
The utilization of village land– commons, pastures, forests, alpine meadows, waters and roads – was shared among the village population. Their common land was managed by associations of persons who eventually adopted corporate structures in the late middle ages, when the organisation of common land use had to be improved because of population growth and rising importance of cattle breeding. More and more the corporations began to restrict the benefit of their common property to a circle of old-established families, defining the participation by ancestry, residence or real estate ownership in the boundaries of the community.

Some of these corporations took on government tasks and developed into village communities, thus becoming the predecessors of today's municipalities. In some areas of Switzerland, whole valley communities and countries ruled their common properties (for example in the cantons of Uri and Schwyz). The development of the liberal Swiss constitution in the 19th century intensified the tendency of corporations to avoid being grasped by the public domain and to become private associations. Many of them changed into corporate civil communities (“Korporationsbürgergemeinde”) who reclaim the right to use their common land up to this day, but without being part of the official structures of municipality.

Corporations in the form of a partnership under public law (art. 52 of the Swiss Civil Code) are particularly frequent in central Switzerland. Among others, the canton of Schwyz has acknowledged public corporations and defines them in the cantonal constitution (art. 75): They are declared autonomous bodies under public law, their existence and self-government within the legal framework is guaranteed, and they can maintain the value of their goods and use them independently.

3.6.2 Oberallmeindkorporation Schwyz – Size and activities

The biggest corporation of the canton of Schwyz (and the whole of Switzerland) is the “Oberallemeindkorporation Schwyz” (OAK). It has more than 16'000 members and owns more than 24'000 ha of land (about 9'000 ha forest, 970 ha nature conservation area, about 8'000 ha alpine meadows (162 alpine economy units) and 450 ha leased out agricultural land) plus quite a number of economic and residential buildings (more than 80 rented apartments) as well as roads and waterworks. With its five main economic activities – forestry, alpine economy, energy, tourism and real estate – the OAK regularly generates a turnover of 8 - 9 Mio CHF per year.



Source: „Dokumentation Oberallmeindkorporation Schwyz“ (www.oak.ch)

3.6.3 Oberallmeindkorporation Schwyz – History

The first authentic mention of OAK dates back to the 10th of March 1114 – OAK therefor counts more than 900 years! A document of Emperor Henry 5th verified that the people of Schwyz had claimed as a collective the common land they were quarrelling about with the monastery of Einsiedeln. From then onward till the decline of the old confederacy in 1798 as a consequence of the French Revolution, the history of the “Old Land Schwyz” (later to become the central part of the canton of Schwyz) was identical with the history of the OAK.

The landmark conflict (“Marchenstreit”) with the monastery of Einsiedeln had by no means ended in 1114, on the contrary: land occupations, raids and robberies of the monastery of Einsiedeln by the people of Schwyz were retaliated with collective excommunications and military expeditions in favour of the monastery. This land dispute reached a climax with the mythical battle at Morgarten 1315, which the people of Schwyz won together with their confederates from Uri and Nidwalden. Morgarten is still an important (and controversial) symbol for the founding legend of the Swiss Confederation. The landmark conflict ended 1350 only and established the territory of the OAK in the boundaries that are still valid today.

Till 1798, the people of Schwyz (“Landleute”) alone decided during the regular people’s assemblies (“Landsgemeinden”) by voting about the corporation’s concerns. After the invasion of revolutionary French troops, so called new settlers (“Niedergelassene”) were admitted to the people’s assemblies and fully participated in the decision making – a difficult dilemma. In 1814 the people’s assembly decided to separate the OAK (and other corporations) from the state resp. canton of Schwyz. The property of the OAK in commons, forests, alpine meadows and agricultural land was confirmed.

Later in the 19th century, a conflict about alpine pasture rights (“Sömmerungsrechte”) escalated into brawls during a 1838 people’s assembly: Owners of small livestock (sheep, goats), mostly smallholders, wanted to assign pasture rights according to a smaller unit, the claws, and not as hitherto by horns, the unit that gave an advantage to the big cattle farmers. The “hornmen” opposed and attacked the “clawmen” during the spring people’s assembly with sticks. The assembly had to be repeated under confederate supervision later in the year, but the hornmen prevailed all along with the support of the liberals. A final settlement between the two hostile groups was reached in 1877 only.



*Drawing of the „Bashing People’s Assmby“ of 5th May 1838 in Rothenthurm
Source: Selbstportrait der Oberallmeindkorporation Schwyz (www.oak.ch)*

In order to determine the beneficiary members of the corporation properly, their family names were the first time listed in the regulations of the OAK 1884.

In 1993, women were accepted as members of the corporation, but they were refused the right to transfer their member’s rights. But 2005 only could female OAK members enforce the right to transfer their corporate membership to their descendants – by way of a decision of the administrative court to which they had appealed.

The OAK launched its own operating company “OAK Energie AG”, a public limited company under Swiss law for the operation of OAK’s energy branche. And in 2010 OAK incorporated “OAK Turismo AG” to manage its tourism activities.

3.6.4 Oberallmeindkorporation Schwyz – Organisation

The governing bodies of the OAK, as defined in the statutes, are the corporation assembly (“Oberallmeindgemeinde”), the board of directors, the general manager and the accounting control. The members are convoked to the assembly each year on the third Sunday of October, the meeting place is the open-air “ring” in Ibach, where the different (geographical) sections of the OAK have their assigned sector in the ring. Votes and elections are decided by rising hands, the tellers estimate the results, and only in case of doubt do they actually have to count the hands.



Source: „Dokumentation Oberallmeindkorporation Schwyz“ (www.oak.ch)

Tasks of the OAK assembly:

The assembly has the authority to elect the 11 members of the board and their president, the 3 auditors and the 6 vote counters, to approve the yearly annual statement and decide on the budget of the following year, to issue or change statutes and to take decisions on OAK-owned companies or on the participation in companies that are not in direct connection with OAK.

Duties of the board of directors and the general manager:

The board has to specify the objectives and policy of the corporation, to issue business regulations, to employ and dismiss the general manager and his deputy and to supervise their activities.

The general manager will prepare the decisions of the board, execute its decisions, carry out OAK's finance and accounting matters, maintain the members list and organise and run the OAK administration.

Aims of the OAK:

The OAK defines itself as a corporation under public law, emanated from the old dynasties of the ancient corporation. It has its seat in Schwyz and is aimed at securing the value of the corporation's goods and making beneficial use of it. The OAK's earnings can be spent for corporation shares and to support public or charitable enterprises.

Membership:


Members of the OAK are all persons already enrolled in the register of the corporation as well as persons who submit a written request to be included in the register and therein prove that they are directly descending from an approved member of the OAK, are enjoying Swiss citizenship, have reached the age of 18 and reside in the canton of Schwyz

The OAK-members rights include the right to vote and the right for collective convocation of the corporation assembly, the right to participate and to place requests at corporation assemblies, the active and passive electoral right, the right to claim a part of the corporations benefits ("Korporationsnutzen"), and access to the records of the corporation's assemblies.

Corporation benefit:

Depending on the result of the past year, the OAK board of directors can decide to pay out a cash-benefit ("Korporationsnutzen") to the registered members. In case this benefit distribution is not claimed in due time (within 6 months after public announcement), the member forfeits it.

Mission statement and strategy of OAK:



LEITBILD	<p>Allgemein</p> <p>Wir sind regional verankert, dem Fortschritt aber auch der Tradition verpflichtet. Wir handeln nachhaltig, unter gleichwertigem Einbezug ökonomischer, ökologischer und sozialer Gesichtspunkte. Wir verbessern uns kontinuierlich und treten stets freundlich, kompetent und bestimmt auf. Unsere Bürger fühlen sich mit ihrer "Oberallmig" verbunden. Die Oberallmeindorporation Schwyz ist Vorbild und ein wichtiger Teil der Gesellschaft im Kanton Schwyz.</p>		
	<p>Wirtschaft</p> <p>Wir sind innovativ, orientieren uns an unseren Kunden und vermehren unser Korporationsgut.</p>	<p>Lebensraum</p> <p>Durch bewusstes Handeln tragen wir Sorge zu Umwelt und Ressourcen. Wir sichern die Naturwerte auf unserem Grundeigentum.</p>	<p>Gesellschaft</p> <p>Für uns stehen unsere Bürger und unsere Mitarbeiter im Zentrum. Wir sind glaubwürdig und unterstützen gemeinnützige Anliegen.</p>
	STRATEGIE	<p>Wirtschaft</p> <ul style="list-style-type: none"> Wir entwickeln unsere Geschäftseinheiten auf den Kernkompetenzen Wald, Alp, Ländereien, Immobilien, Energie und Tourismus. Unser fachkompetentes Handeln erfolgt nach langfristigen Überlegungen und kaufmännischen Grundsätzen. Unsere Innovationen erfolgen unter Einhaltung einer hohen Eigenfinanzierung. Wir sichern hohe Qualitäten und optimale Kosten-Leistungs-Verhältnisse dank Anpassung an den Stand der Technik. Wir fördern regionale Wertschöpfungsketten. Die Zufriedenheit der Kunden und Partner steht für uns im Vordergrund. 	<p>Lebensraum</p> <ul style="list-style-type: none"> Wir erhalten und pflegen wertvolle Lebensräume. Wir bewirtschaften Boden, Infrastruktur und Immobilien nach hohen ökologischen Standards. Wir fördern das Bewusstsein zum nachhaltigen Umgang mit unserem Lebensraum. Wir fördern einheimische, erneuerbare Rohstoffe. Wir verringern die Umweltbelastung bei all unseren Tätigkeiten. Wir gehen sorgsam mit unserem Kulturland um.

3.7 Farm cooperation - "More cows – less strain"

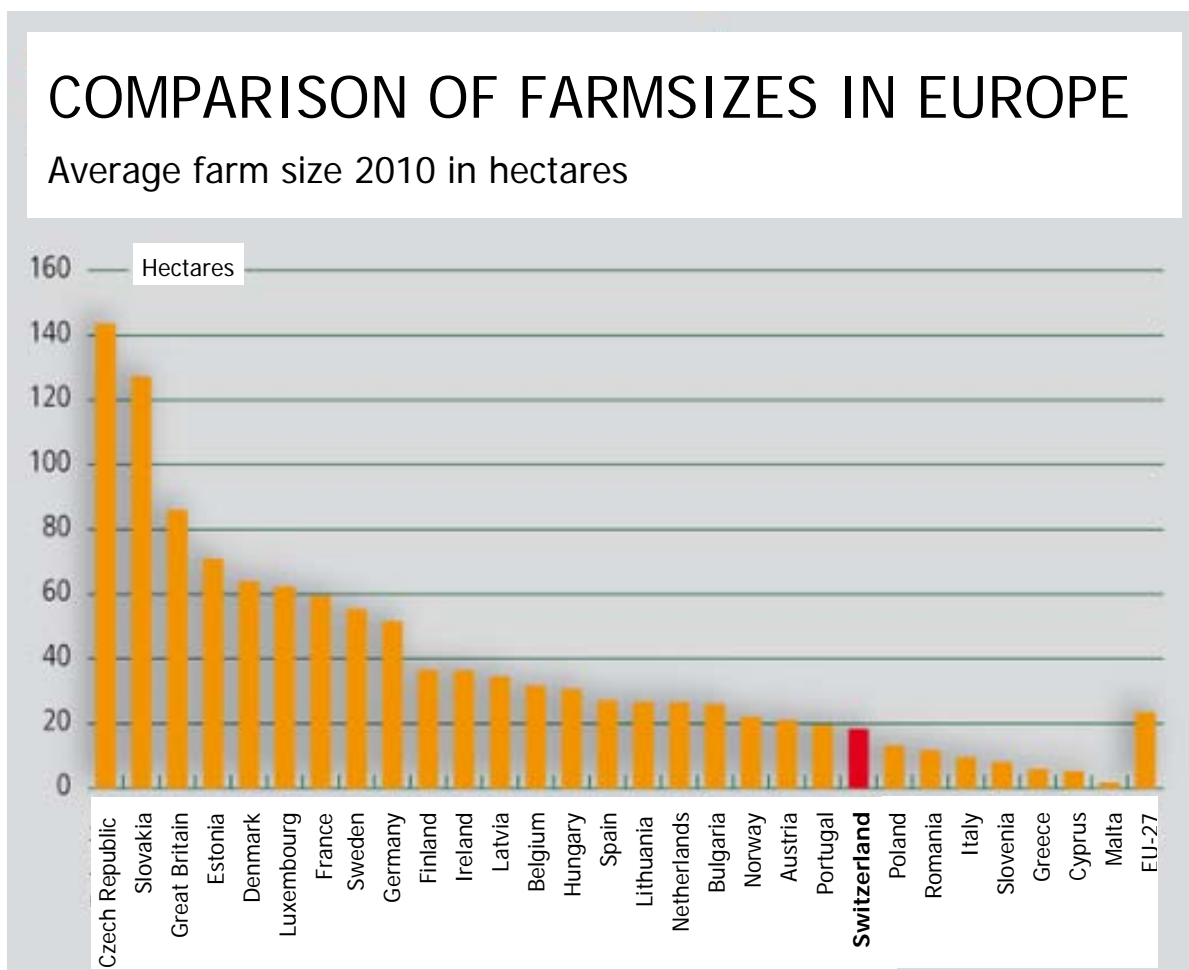
Field day example: **Farm association APMB – 5 famers join their assets to form one big company**

3.7.1 Background

The shrinking income of Swiss farms over the last few years – due mostly to sinking prices for key-commodities – is alarming and cause for an increasing number of appeals to the government to "do something to stop the decline of domestic agriculture". And indeed: According to art. 2 of the law on agriculture, the confederation has to "create favourable conditions for the production and marketing of agricultural commodities" and to "support structural improvement".

Analysis of accountancy data reveal that one major reason for the farmers alarming economic results is the contrary development of gains and costs: commodity prices point downward, whereas the costs for constructing, machinery, labour or variable means of production (seed, fertilizer, concentrate, veterinary service etc.) tend to increase or at least remain high. Consequently its no surprize that the average production costs of Swiss farms lie considerably above comparable figures of their colleagues in neighbouring (EU-) countries.

In principle, business experts agree that farms in Switzerland should grow in order to be able to profit from economies of scale: structural costs can be lowered per output (lower construction costs per cow place or less tractor costs per ton of wheat etc.), organization of manpower and allotment of agricultural land can be improved (less working hours per kg milk or fewer machine hours per ha grassland) through bigger production units.



Source: www.lid.ch / 2010

But: the free agricultural land market (buying and leasing) in Switzerland is very dry and/or very expensive (see chapter 3.5), which makes it more or less impossible for an individual farmer to scale up his enterprise.

The logical alternative – cooperation among famers or association of farms to build bigger units – gains renewed attention under these circumstances. If two average Swiss farms enter into full cooperation, they would be above the average farm size of, say, Spain or Ireland. If three unite their assets, they'd top the German average farm... And they would be able to reduce their production costs considerably.

3.7.2 Legal frame

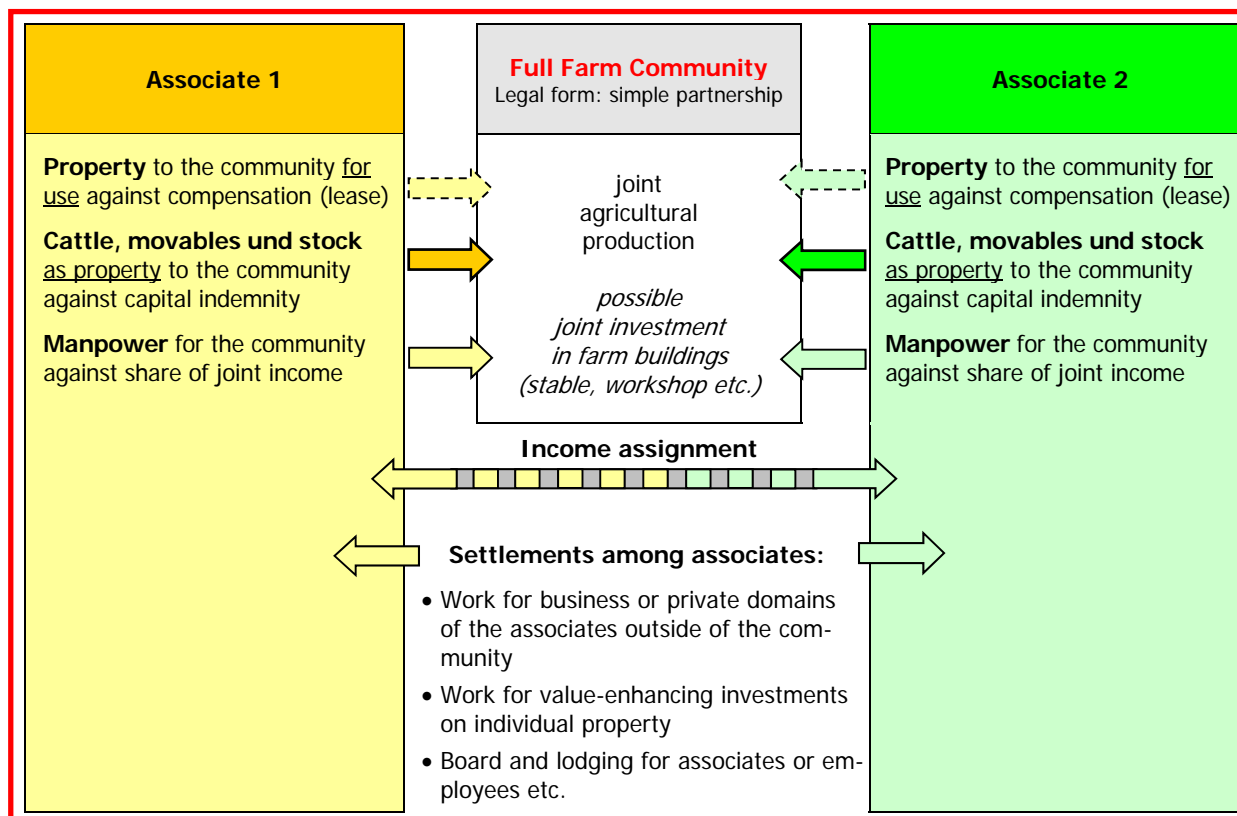
The cooperation of farms has been promoted by the federal ministry of agricultural in unison with official consultants for several decades already. As usual since the success of the “production battle” during the second world war, the Swiss national administration has decreed amendments in its agricultural legislation in order to steer farmers into desired directions: In the late eighties it has legally defined certain forms of inter-farm cooperation (“shared grazing land”, “full community of farms” (FFC) and “partial community of farms” (PFC)) and bestowed these acknowledged types of cooperation with subtle advantages concerning subsidies and direct payments:

- The thresholds for direct payments based on a scaling on farm size, income and fortune are loosened
- Corporations can get additional interest free investment credits for construction, equipment and installations
- Corporate initiatives of farmers aiming “to lower production costs” can be encouraged with non-refundable subsidies during their formation phase (founding modalities, consultancies, team-building activities etc.)

3.7.3 Full Farm Community (FFC)

The full farm community (“Betriebsgemeinschaft”) is defined as “a fusion of two or more farms into a new organisational unit under joint leadership of the partners”. The associates assign their cattle, machinery and movable equipment as common property to the community, whereas land, buildings and possible production rights are merely made available for use to the community (see schema).

Full Farm Community: Diagram of organisational principles



Legal form:

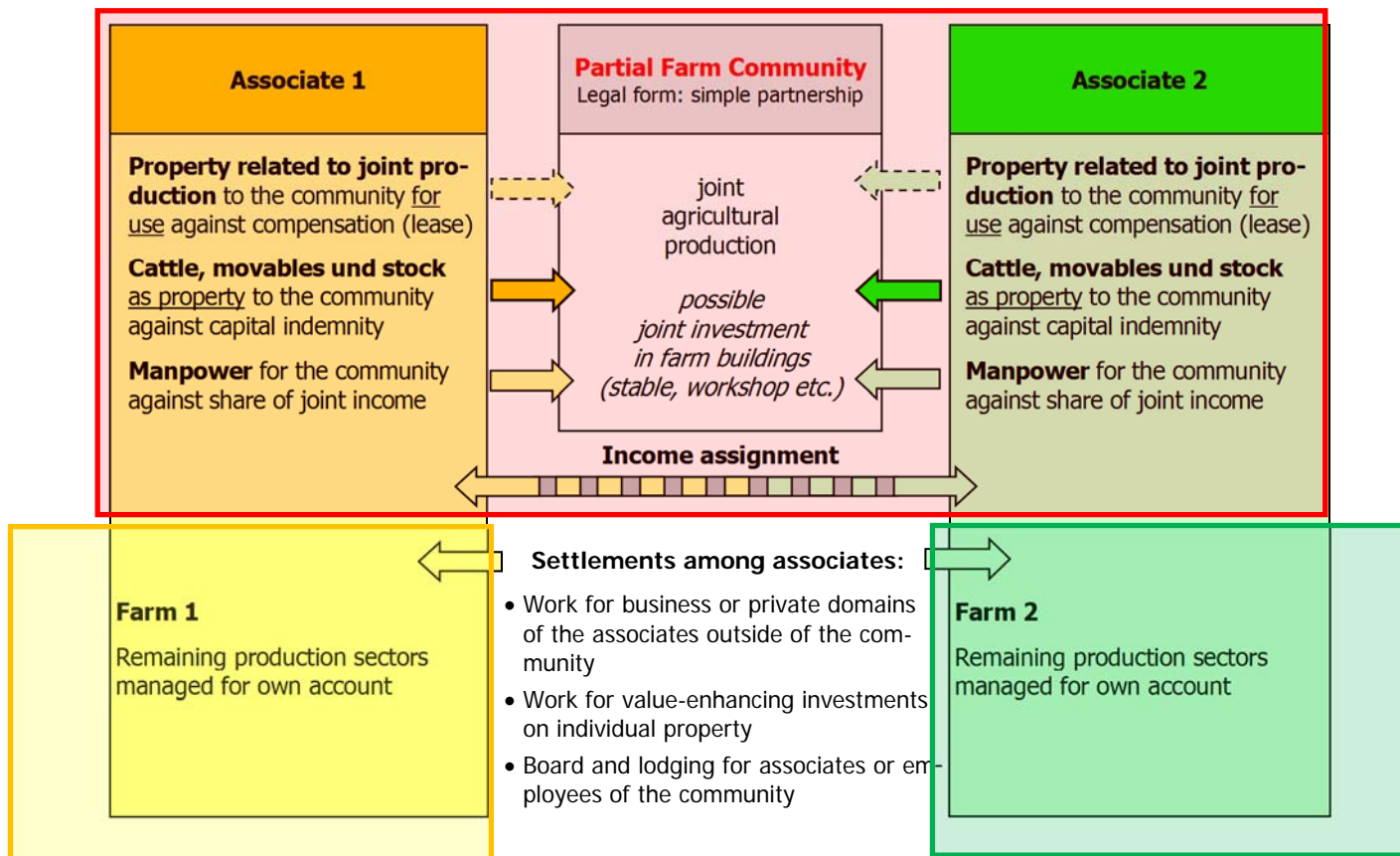
The main legal form for FFC’s is the **simple partnership** according to Swiss law (“einfache Gesellschaft”): It can be incorporated easily and is dissolved without much effort too: Any association of natural or legal persons who pursue a common purpose with common means form a simple partnership – even without contract. Every associate has to assume unlimited and solidary liability with all his assets for the obligations of the partnership. The simple partnership can’t be enlisted in the commercial register.

Some attorneys argue that farm communities of a certain size and commercial appearance should achieve the form of **collective partnership** under Swiss law (“Kollektivgesellschaft”). The collective partnership is an association of natural persons who join their manpower and capital to pursue economic objectives and run a business on commercial principles to this end. It must be enlisted in the commercial register and is first liable with its business assets for its obligations. Only when these are not sufficient the partners step in with all their assets and unlimited and solidary liability.

3.7.4 Partial Farm Community (PFC)

The partial farm community (“Betriebszweiggemeinschaft”) is legally established when “two or more farms keep livestock together or start a joint management of a part of their production units”. The associates assign the livestock, machinery and movable equipment of the joint units as common property to the community and make the part of their land, buildings and possible production rights that belong to the joint units available to the community for use, while the rest of their farm assets remain under the individual management of each partner (see schema).

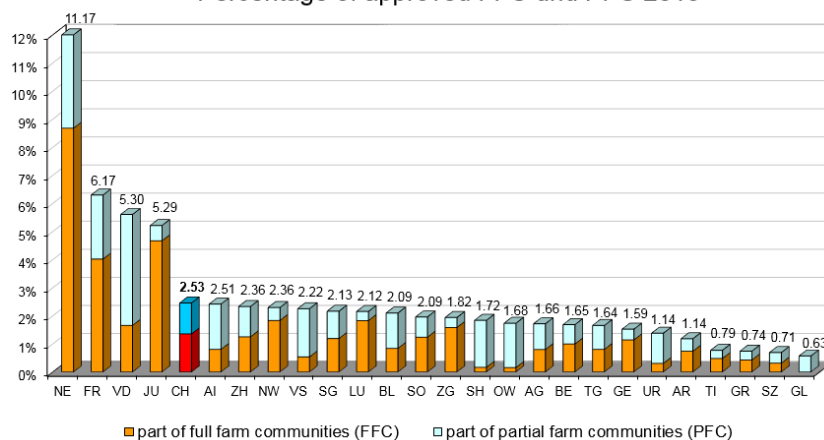
Partial Farm Community: Diagramm of organisational principles



3.7.5 Importance of enhanced cooperation forms in Switzerland

Farmers intending to start a full farm community must accept not to be the sole decision maker as before, but to find joint solutions with his colleagues in a process of discussion and persuasion. This not only concerns everyday issues but strategic objectives too: production plans, investments, employments etc. Furthermore, their income will depend not only on their own efforts, but on the performance of their partners too. The same restraints are valid for partial farm communities, albeit to a lesser degree (as associates in this cooperation form still manage independent sectors on their farms beside the joint venture branch of their community).

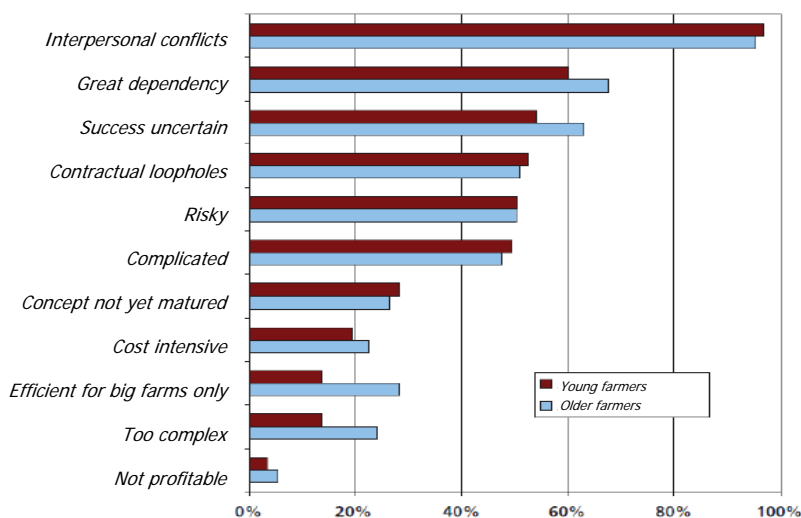
Percentage of approved FFC und PFC 2015



Source: Own presentation with statistics of the Federal Ministry of Agriculture 2015

These conditions clash with the strong striving for independence of most farmers. Subsequently, the percentage of full and partial farm communities is fairly low: For the whole of Switzerland, the part of approved communities in the past 20 years lingered around 2.5% compared to all farms (see graph above).

How Swiss farmers perceived weaknesses of full farm cooperations in 2007



Source: ART-Bericht 692/2007: „Das Image von Betriebsgemeinschaften“ Older farmers

The federal research institute for agriculture Agroscope has evaluated some years ago the reasons that make farmers shy away from high end cooperation (see graph below): it's their fear of the human factor. Can they really trust their partners, and will they remain calm and constructive in times of strategic disagreement or under economic stress? A majority think: no. Thus they stay on their own and tackle an uncertain economic future under the burden of too high construction and machinery costs as well as of an ever increasing workload. As an expert of Agroscope put it: "The pressure of suffering (Leidensdruck) for Swiss farmers is not high enough yet to make them switch to cross-farm cooperation" (in an article published in the Neue Zürcher Zeitung).

3.7.6 Field visit: How a community of 5 narrowly prevented their breakup

Joseph Häfliger, one of the partners managing the FFC "APMB" in Alberswil, will tell the story how his community almost broke up due to growing dissent and suspicions because of declining results in their dairy branch. After searching professional help to overcome their communicative blockade, the 5 partners gained new confidence and tried to find the source of their weakening milk production together. They finally discovered: a technical problem (leaking currents in their robot milking parlour because of a deficient grounding of the rectifier of the solar system...) had almost ruined their cooperation. Now they can tackle the tricky task of how to track down and remove leakages with joint forces.

Basic operational data of the full farm community APMB:

Plant production:

Total utilised agricultural area	99.6 ha		
Cereals		24.0 ha	
Winter wheat			10 ha
Winter barley			5 ha
Oilseed rape			9 ha
Root crops		35.0 ha	
Silage maize			25 ha
Corn maize			5 ha
Sugar beets			5 ha
Open arable land		59.0 ha	
Temporary grassland			19.5 ha
Arable land		78.5 ha	
Permanent grassland		14.1 ha	
Intensive natural grassland			9.4 ha
Medium intensive grassland			4.7 ha
Eco compensation area		7.0 ha	
Extensive natural grassland			6.3 ha
Old standard fruit trees			147 Pcs
Other Eco compensation area			0.7 ha

Animal production:

Animal category	Average number
Milking cows	150
Cattle rearing > 2 year	4
Cattle rearing < 1 year	25
Fattening calves	120
Fattening chicken	16'000

Buildings and facilities:

Building	Year of constr.
Loose parlour cowshed with:	2008
- 2 milking robots	2008
- Milk supply contract for	1'200'000 kg/y
- Photovoltaic roof (leased)	1'000 m ²
5 silage clamps	2000
Chicken fattening shed	2015
Machine hall	2015

Additional information:

Machine cooperative with thirds	Since the 1990 ^{ies}
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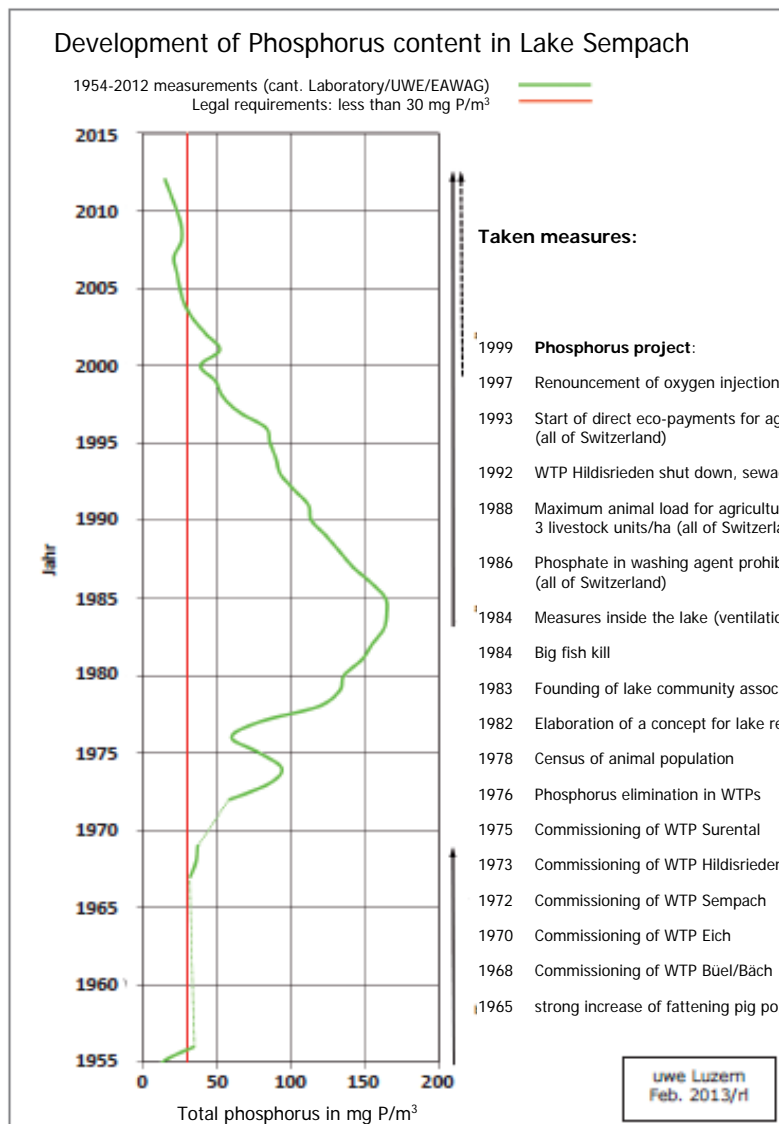
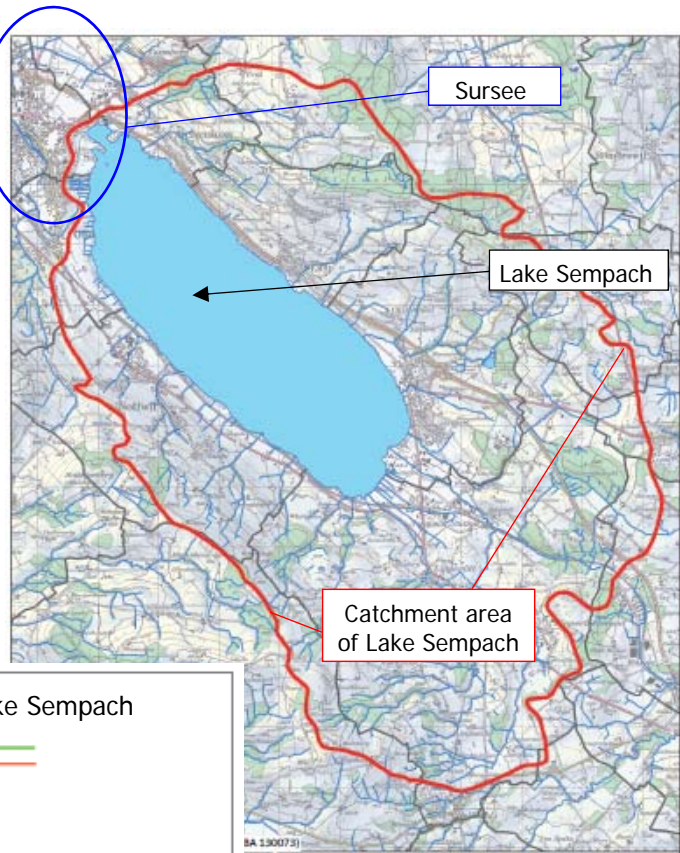
3.8 Nature conservancy and ecological balance – “Making ecology pay”

Field day example: **Restoration of eutrophic Lake Sempach**

Lake Sempach was highly eutrophic from the 1970s to the end of last century, due to the discharge of untreated sewage from industries and settlements, but also owing to a very animal-intensive agriculture in the Sempach region (see chapter 3.3.7), over-fertilizing the meadows and arable areas on its shores with heavy loads of mainly liquid manure.

This mostly uncontrolled development induced a dramatic increase of the nitrate and phosphorous content of the lake water, causing an excessive growth of algae. The increasing biomass of decaying algae used up more and more oxygen, the ensuing scarcity of oxygen has led to putrefaction processes and fish kills in the eighties.

Politics had to react, and by and by the administration tried to control the nitrate and phosphorus immissions into Lake Sempach (and other little lakes in the neighbourhood) with a series of measures (see description in graph below).



Phosphorus project

The phosphorus project of Lake Sempach is based on voluntary participation of farmers in the contributing area of the lake and includes the following measures:

- Reduction of phosphorus fertilization to 80-100% of plant requirement (remuneration per kg P below 100%)
- Buffer zones along of all waters (5 to 15 m wide, no fertilization, compensation for loss of revenue)
- Timely application of farmyard manures
- Renunciation of winter fallows (open soil during wintertime)
- Promotion of direct and strip-cultivation sowing (mandatory for field slope >18%, remuneration of yield risks)
- Reduction of root crops (maximum of 20% in crop rotation)
- Regular soil samples to control nutrient content (paid by the project)
- Renovation of farmyard and drainage systems (prevention of runoffs into waters)
- Reduction of pig and chicken production (shut down of stables for at least 20 years is compensated)
- Retention ponds (to hold back fertilizer flows)
- Mandatory trainings for participating farmers

The project is supervised by the cantonal departments of agriculture and forestry as well as of environment and energy. In 2011 a total of 186 farms with a utilized agricultural area of 3'234 ha participated in the project – this represents 71% of the total agricultural area in the catchment area of Lake Sempach.

3.8.1 Mandatory protection of nature – a comparatively good average standard

Basic nature protection requirements for agriculture

A number of laws and regulations set general guidelines for eco-friendly farming in Switzerland. They concern:

- Water protection: limits for animal density, buffer zones for fertilizers and pesticides, special requirements for the handling and spreading of pesticides, standards for stable buildings and facilities, rules for spreading solid and liquid manure etc.
- Soil protection: strict control of terrain remodelling, incentives for soil conserving practices etc.
- Biodiversity: strict protection of nature reserves and landscapes of national or regional significance, total herbicide treatments only with special permission, moratorium on GMO-plants, incentives for the promotion of biodiversity and of specific habitats etc.
- Animal welfare: standards for stable and animal husbandry measurements and materials, general rules for feeding, watering, keeping, treating and slaughtering animals, incentives for additional animal comfort measures etc.

Special water protection projects in agriculture

When the concentration of harmful substances in the water exceeds the thresholds defined in the water protection regulations, the canton has to determine the extent of the pollution and to find its source, to assess the effectiveness of possible measures and to implement the measures necessary for restoration. The Federation finances a substantial part of the additional costs and loss of earnings concerned farmers face because of agricultural measures applied to reduce the imission of pollutants.

Only well-coordinated measures (“measure-packages”) that go beyond standard requirements of good agricultural practice and that will reach the aims of restoration with high probability can be supported (art. 62 of the water protection law). The “Phosphorus Project” of Lake Sempach was such a measure-package accompanied and surveyed by the federation and also supported with federal money.

3.8.2 Voluntary ecological sustainability – how politics guide farmer’s decisions

Up to the early nineties of last century, Swiss agricultural policy was based on an elaborate price and sales guarantee that was regularly adjusted to assure farmer’s incomes to be comparable with the incomes of family businesses in other sections of rural economy. This price-subsidies-system led inevitably to overproduction, impressive import duties for food and feedstuff – and ever rising public spending for agriculture. Farmers intensified their production, with negative impact on nature and environment, international economic partners criticised Switzerland’s high trade barriers and heavy market interventions, plus taxpayers were less and less willing to pass increasing budgets for agriculture every year.

Direct payments

Today’s agricultural policy is dedicated to a triangle of economic, ecological and social sustainability, guiding farmer’s economic decision with a system of direct payments. These direct payments represent compensation for services provided by farmers for the common good, differentiating between general and ecological direct payments. In addition, measures taken to improve agricultural infrastructure (credits for investments in buildings and machinery, projects for reallocation and melioration of land etc.) should improve living standards and incomes in rural areas, particularly in mountain regions and peripheral areas.

Remuneration for services provided for the common good

Services provided by agriculture for the common good are remunerated through general direct payments. These include payments based on acreage and payments for grazing animals. Their aim is to ensure the appropriate use and care of all agricultural land. The more difficult farming conditions in hilly and mountainous regions are compensated for through additional payments for steep terrain and for keeping animals under difficult conditions. With the exception of payments for summering, direct payments are conditional upon "proof of ecological performance" PEP ("Ökologischer Leistungsnachweis"). This general requirements demand:

- keeping animals according to animal protection laws
- balanced use of fertilizer
- appropriate share of biodiversity areas (7% of utilized agricultural area)
- regulation-compliant management of objects in inventories of national significance
- regulated crop rotation
- effective soil protection
- purposeful selection and application of pesticides
- compliance regarding requirements for seed, plants, special cultures and buffer zones

Compensation for special performance with regard to the environment and livestock

Payments for ecological and ethological efforts, for eco-quality of extensive meadows, for alpine seasonal grazing ("Sömmerung") and for water protection are incentives to achieve levels beyond the PEP stipulations. With these measures the federal authorities pursue the following objectives:

- to promote biodiversity in agricultural areas
- to reduce the level of nitrates and phosphates in rivers and lakes
- to strengthen the comprehensive management of unfavorable areas
- to reduce the use of fertilizers etc.
- to promote resource-friendly production methods
- to promote extra animal-friendly conditions for livestock
- to ensure the sustainable use of alpine pastures
- to maintain a diverse and attractive cultural landscape

Financial impact and costs

The whole system of direct payments is fairly complex and a concise summary of all options a farmer faces counts 15 pages (which we will not copy into this study...). But the chart below gives an overview of the main types of direct payments and their financial importance.

Till 2013, direct payments made a distinction between general and ecological payments. Since 2014, the direct payments or contributions are allocated on 7 types of payments, named after their main objective.

Expenditures for direct payments in Switzerland

Expenditure areas:	2012	2013	2014	2015 ¹
	Mio. Fr.	Mio. Fr.	Mio. Fr.	Mio. Fr.
General direct payments (before 2014)	2 163	2 146		
Ecological payments (before 2014)	641	667		
Cultural landscape contribution			496	497
Security of supply contribution			1 096	1 098
Biodiversity contributions			364	379
Landscape quality contributions			70	120
Production system contributions			439	451
Resource efficiency contributions			6	53
Contributions for programs of water protection and resources (law on agriculture art. 77 a/b)			31	
Transition contributions			308	203
Reductions / Advance- and subsequent payments	13	15	6	
Total	2 791	2 798	2 804	2 801

Source: Federal agricultural ministry, Agricultural report 2015

3.8.3 Field visit: Farming on the shores of Lake Sempach

Basic operational data of the Ineichen family farm in Sempach:

The farm "Sonnhof" is an average Swiss dairy farm in in the contributing area of lake Sempach. It fulfils the "Proof of ecological production (PEP)".



Meters above sea level:	510
Precipitation	1'200 mm/year
Hectares (1 ha = 10'000m2)	24ha agricultural land, 3ha forest
Cultures/crops	4ha corn/maize (fodder, silage), 2ha spelt (Urdinkel, extensive label production, IP = integrated production), About 3 ha artificial grasslands (usually for 2 years) Wildflower Strips (3 years)
Grasslands	15 ha
Animals	50 dairy cows (heifers are raised in the mountains till they get the first calf) -> on the pasture during daytime 2x 4 herringbone milking-parlour Breed: Brown Swiss, Holstein, Jersey, Simmental
	10 fattening calves 260 fattening pigs 10 sheep (special race called "Spiegelschaf") and one ram
Sale of products	Milk is sold to Nutritec and processed to milk powder Pigs -> label "Naturafarm"
Workload/employees	Joe Ineichen works 50% on the farm and 50 % outside (cooperation), additionally there are 2 employees from Poland und Czech Republic working on the farm

Joe Ineichen grew up on this farm and took it over from his father in 1992. He and his wife have 3 grown-up children. Just after taking over the farm he expanded the cowshed to a spacious loose-house barn.

In 2003 Joe Ineichen built a new pigsty (barn for the pigs). It is a modern label compliant barn with a fully automatic feeding technology. In 2015 he renovated the family house.

Measures for a higher biodiversity and to save the lake

- Buffer strips along the creek
- No till measures
- Pond
- Hedges
- Wildflower strips
- Standard trees