

# ValueS

### Living, building: Switzerland's built environment

An information magazine of the Federal Statistical Office – Number 2/2011





Housing cooperative, Wettingen 2010

### A few statistical building blocks to depict the built environment

**Dr. Jürg Marti**Director General, Federal Statistical Office
Neuchâtel/Switzerland



The built environment, the floor area of dwellings, rents, and building costs are all topics on which the Federal Statistical Office (FSO) regularly publishes data. By bringing these subjects together in the second edition of ValueS, the FSO aims to provide the building blocks necessary for an understanding of the interactions between the different areas that make up the whole field of construction.

Basic human needs are closely linked to the home: they include physiological needs, the need for security and a sense of belonging, the latter also determined by where one lives. Clearly, everyone in Switzerland would like to live in a spacious, well-equipped and reasonably priced home in pleasant surroundings. The rise in population, due mainly to longer life expectancy and immigration, the declining size of households (single-person households are increasing rapidly), the desire for an ever larger living space (an average of 2.5 persons per family home) lead to the continuous expansion of the built environment for residential purposes. One of the consequences of this expansion is the disappearance of agricultural land in favour of areas for housing and infrastructure. The Land Use statistic bears striking witness to this development.

There is a Swiss saying that says "when the construction industry is healthy, the whole economy is healthy". Construction, which represents 5.7% of GNP, is an important economic factor. Buildings and infrastructure have to be regularly maintained, renovated and upgraded. The current favourable mortgage rates encourage new construction.

The aim of this publication is to showcase in a scientific and neutral manner the information produced by statistics in order to enable a better understanding of the driving forces at work in this complex field. The publication "Living, building: Switzerland's built environment" is our contribution to the current debate which should ultimately be striving for the sustainable preservation of Switzerland's quality of life.

# The changing landscape of Switzerland's built environment – competing interests of housing, work, mobility and leisure activities

Switzerland's settlement and urban areas have grown rapidly in recent years. The reasons for this are fast population growth and increased demands for housing, leisure and mobility. The transformation of the built environment is a reflection of social change. Felix Weibel

### Land is becoming a scarce resource

The built environment is constantly spreading and buildable land is becoming scarcer. That is why buildable land is now at the centre of the debate about the landscape. What exactly are settlement and urban areas? How are they used and what factors contribute to their transformation?

Settlement and urban areas comprise the areas of the landscape used for housing, work, mobility and leisure activities, which are designed and arranged accordingly. They may be located within or outside a building zone, a town centre or in a remote area. Settlement and urban areas currently account for approximately 9.4% of Switzerland's total surface area, representing 1.7 percentage points or a surface area the size of the canton of Basel-Landschaft more than 24 years ago. Each inhabitant takes up an average of 382 square metres. There

are major differences between largely urban and largely rural cantons. Social development, prosperity and population growth are crucial factors in the expansion of the built environment.

New roads, commercial areas and residential buildings are for the most part built on arable land, meadows and orchards. In other words, 94% of newly built areas are established on what used to be farmland. Most of the development is taking place in the larger urban zones and along the transport axes of the Central Plateau. As available land becomes more and more scarce, the construction density and redevelopment of existing built-up areas are increasing, particularly in conurbations. This process is one of the aims of land-use planners. Built-up areas do not consist only of asphalt and concrete. The degree of soil sealing is, on average, 62%, but varies considerably depending on land use.

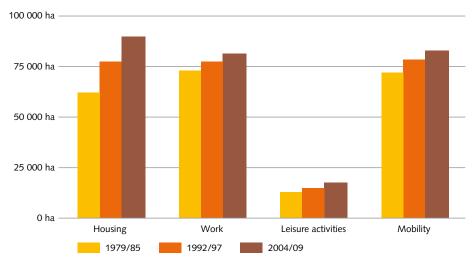
Whereas industrial and traffic areas are for the most part sealed up, recreation facilities have a high proportion of green land.

### Higher expectations from housing

Families are becoming smaller and individuals occupy large dwellings for longer. Besides a large open-plan kitchen, today's living standards also demand a separate office or a guest room with its own bathroom. Economic development and increased demands for individual housing are reflected in building activity. In well-developed larger urban zones, entire neighbourhoods with single-family homes are being created; in resorts, holiday homes are being built on sunny south-facing mountain sides. At the same time, in urban areas large apartment blocks are sprouting up, often set in grounds that resemble modern parks with elaborate, geometrically landscaped tree groves, paved surfaces or fountains.

In the past 24 years, residential areas have grown by approximately 276 square kilometres. The growing share of multifamily houses in the total residential area of most cantons is an indication of the fact that building density is increasing. The improved utilisation of existing space when old buildings are reconverted also points to the densification of inner-city areas. Thus, in old neighbourhoods, new buildings are usually constructed with more and larger residential units.

### Development of housing, work, leisure and traffic areas



### New spatial needs of industry and commerce

Industry and commerce want to be able to act and build cost-effectively, quickly and flexibly. Building on greenfield land meets this requirement. Thus, more than 60% of new industrial and commercial areas are built on arable land.

The decline of industrial production and the increasing focus on the service sector are also leading to changes in spatial needs. The premises of former industrial enterprises often remain unused for many years before they are occupied again. Manufacturing plants are reconverted into lofts or used by small businesses. Consequently, in recent years central urban locations have experienced a reconstruction boom. In particular, locations with a good transport infrastructure are experiencing a major growth spurt. Freight forwarding and logistics companies have chosen to set up their headquarters along the motorways in the Central Plateau, and shopping centres, speciality retailers and automotive trade are taking up extensive tracts of level building land along arterial roads and on the periphery of builtup areas.

### Transport networks

Roads and rail links connect various spheres of modern life. The steady growth of commuter and leisure traffic requires increasingly efficient transport axes. As a result of urban sprawl and densification, people have to travel ever farther to reach green areas. And the more rural an area it is, the costlier it is to integrate it in the transport network. Thus, the area taken up by roads and motorways has grown by 14% over the past 24 years, and that taken up by railways by 3%.

The demand for parking spaces for stationary traffic is also growing, because more and more vehicles are put into circulation every year. For example, customs facilities for heavy goods vehicles, speciality retailers and sports stadiums require large parking areas. The total parking area grew by almost 2000 hectares.

### Popular sports facilities and parks

Remarkably, recreational areas, which have increased by more than 36%, have grown considerably more than the settlement and urban areas as a whole. Sports facilities and parks account for about two thirds of such areas. Golf courses registered the most striking increase of all categories of settlement and urban areas. They have more than quadrupled their surface area over the past 24 years. On the other hand, garden allotments have become less common, which together with the decline of planting beds in house grounds, is an indication of the diminishing importance of food selfsufficiency.

Horse riding as a recreational activity is a reflection of the gradual transition from agriculture to the recreational

use of land. Stables are steadily being expanded by the addition of training arenas and large riding halls.

Because of the large number of visitors they receive and competition between tourism destinations, elaborate land-scaping is taking place even in remote recreational areas far from built-up areas. Restaurants with playgrounds, theme trails and other facilities are being built in mountain hiking destinations, and fenced-in picnic areas with tables and barbecue grills are being built where simple campfire spots once stood on the edge of forests.

**Felix Weibel** is a research associate specialising in Land Use Statistics at the FSO's Geoinformation Section

- Built-up areas outside a building area are mainly traffic areas, agricultural building areas, mines and landfills
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These data are based on the evaluation of the geodata as at 1 July 2011. They comprise the surface area of 22 cantons or 69.6% of the national territory. The information on changes in the built environment refers to the 24-year period between the Land Use Statistics for 1979/85 and 2004/09.

### Rütihof ZH 1982-2007 as an example of settlement densification



swissimage © 2011 swisstopo (BA110598/BA110599)





## "Inward development of residential areas" – fundamental pillar of the sustainable development of the built environment

The construction of homes in new building zones on land that was previously farmland, far from the nearest bus stop or train station, has a high cost – financially but also in terms of energy and the environment. Excellent methods exist to combat this development. The effectiveness of these methods has already been proven. Dr Maria Lezzi

he Federal Statistical Office publishes quarterly figures on the number of dwellings that have been given building approval, have been built and have been under construction over the previous three months. In recent years approximately 40,000 new dwellings have been built per year in Switzerland. The figures are borne out by the impression one gets when travelling around the country: building activity is intense – be it in the West and North of Zurich, in the Freiamt region in the canton of Aargau or in Lugnez in the Surselva region of Graubünden.

When, by whom and why home building projects are undertaken varies from case to case. Nevertheless, certain patterns can be recognised depending on the different interests involved building projects in metropolitan areas, conurbations or rural areas. The following examples illustrate how transport and landscape are affected by building projects.

### Different home building projects

In Zurich some housing cooperatives are replacing their 1950s housing estates by new buildings. Due to their poor quality, the original buildings are not worth renovating and the layouts no longer meet today's requirements. Real estate developers in western Zurich, on the other hand, are building tower blocks with apartments measuring 300 square meters and priced at over CHF 4 million.

Some communes in the Freiamt region of the canton of Aargau are enticing well-paid inhabitants from the neighbouring canton of Zug. For example, according to an article in the Neue Zürcher Zeitung, this has led to a large increase in the number of inhabitants living in the town

of Sins, where the commune has at the same time lowered its tax rate. People commute to their jobs in nearby Zug.

According to the Statistics Atlas of Graubünden, several communes in Lugnez, which together with Vella is connected to the skiing region of Obersaxen-Mundaun, have seen a large increase in the number of new dwellings. A case in point is Lumbrein, where the whole valley's population is nevertheless declining steadily. At least tourism brings value added to the region.

These examples show that the authorities' planning efforts have to anticipate a wide range of building projects. In particular, authorities should be able to put into place building requirements to ensure that projects are in line with the aims of a sustainable development of the built environment.

### Spatial development issues

Although communes and cantons have primary responsibility for spatial development, the Confederation can provide a framework. A vision that takes account not only of individual regions or communes but the development of the country as a whole is indispensable to Switzerland's wellbeing, in particular for the sustainable development of its built environment. This basic premise forms the basis for the draft of the indirect counter proposal to the popular initiative "Space for people and nature" – better known as the "Landscape initiative". The same vision is also bringing together the Swiss Confederation with delegations from the cantons, towns and communes as part of the "Spatial concept for Switzerland".

From the federal government's point of view, "Inward development of residential areas" is an important pillar of a sustainability-oriented

development of the built environment. Five objectives aim to curb urban sprawl and the development of farmland for housing.

- **Densification:** the improved utilisation of land by the conversion of, for example, abandoned industrial sites.
- Inward rather than outward development: Communes should only re-zone farmland for development under certain conditions. The draft of the partly revised Act on Spatial Planning (RPG), submitted by the Federal Council as a counter proposal to the landscape initiative, aims to reinforce cantonal planning guidelines and communal land use planning with regard to this issue too.
- Coordinated planning of residential areas and transport: Residential areas are mainly built in places with easy access to public transport. This means that transport projects, for example, must conform to the conurbation programme backed by the federal government, which favours "inward development". In light of the population growth forecast by the FSO and the growing transport flows that this is expected to produce, in the future it will be especially important to coordinate the development of transport with that of residential areas. In order to achieve this, cooperation beyond administrative and sectorial boundaries will be crucial.
- Safeguarding quality: Communes should improve the quality of residential areas, for example in urban districts suffering from pollution.
- Energy efficiency: (Residential) buildings should not only be energy-saving in terms of their construction or renovation. Their location is equally important. Short distances to work, to the shops or to the park encourage pedestrian and bicycle traffic and ensure that energy consumption does not increase even more.

### Effects on open space, transport and landscape

If the concept of "inward development of residential areas" is taken as a guiding principle, it becomes clear that the building projects in the examples cited above conflict with the objectives of a sustainable development.

If new replacement dwellings provide larger apartments for the same number of tenants as before, or even fewer, then they are not consistent with the realisation that residential areas should be "densified", in other words more

people should be housed in the same built-up area. The increasing number of second homes also poses a challenge – especially the luxury homes in western Zurich. Their contribution to the social and economic well-being of a town is questionable.

Towns like Zug are thinking about ways in which they can encourage the construction of homes for the middle class, because the fact that the latter have fled to the other side of the cantonal boundary has several negative consquences. The town is losing tax payers and the number of commuter journeys is increasing. This leads to further emissions and road and rail capacity may have to be expanded.

In Lugnez not everyone seems to have come to the realisation that "cold beds" (holiday homes), that are occupied by their owners for only a few weeks in the year, could have a downside. The communes are paying for the expensive provision of services and infrastructure that are seldom used. Consequently the cultural landscape loses aesthetic value and young local people say they have problems finding an affordable dwelling. Silvaplana in Oberengadin wants to put a stop to this development and is planning to tax second homes. The people of Switzerland will also soon be expressing their opinion on the matter of second homes: a popular initiative, "Stop the incessant building of second homes" is expected to be put to the vote next year.

### Further efforts are necessary

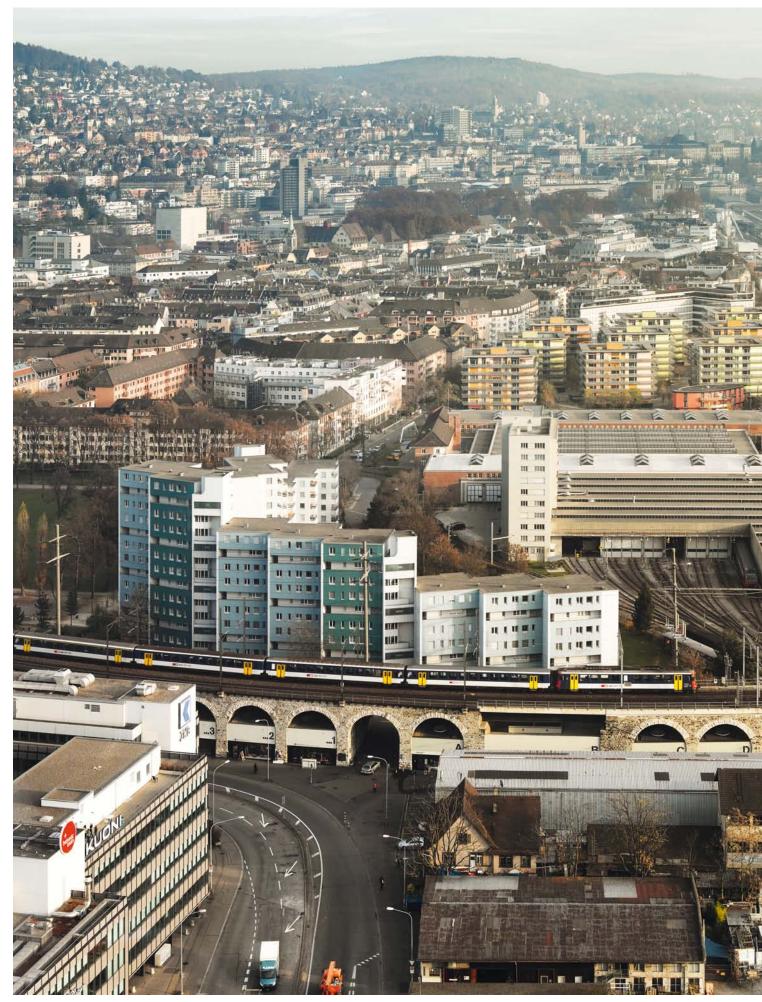
These examples show that there is still a long way to go to a sustainable development of the built environment. In the meantime, however, various actors in spatial planning in many cantons and communes are working towards the objectives of sustainable development of the built environment. The Land Use Statistics - the FSO's most important survey for spatial observation from 2004/09, show that from 1992/97 the settlement and urban areas in those cantons included in the survey so far increased to a lesser degree than in the previous twelve years; the settlement and urban area per capita also increased at a noticeably slower pace than before. These are encouraging signs but it is not enough. Further efforts are necessary.

**Dr Maria Lezzi** is Director of the Federal Office for Spatial Development, ARE

The housing statistics provide information on the number of newly constructed buildings with dwellings (apartments) and the number of newly built dwellings.



Private home, Gonzen in Sargans 2008



Viaduct, Zurich 2011

### Swiss Land Use Statistics – specialised methodology for documenting the creeping transformation of land use

The Land Use Statistics collect information in 12-year intervals on land use and land cover in Switzerland based on aerial photographs from the Federal Office of Topography (swisstopo). Anton Beyeler

and use statistics were already published in Switzerland in the years 1912, 1923/24, 1952 and 1972. But these statistics used different methods, definitions of characteristics and in some cases unidentified time references. The landscape was for the most part divided into only four categories: forest, agriculture, vinevards and uncultivated land and environs. The latter also included settlement and urban areas. The data from these surveys could be neither compared nor used to create time series. These deficiencies were only recognised when people began to feel concerned about the creeping transformation of the landscape because of steady economic and population growth, urban processes, increased mobility and other factors. Therefore, since the mid-1980s, the Swiss Land Use Statistics have been compiled by means of a newly developed, scientifically based method that allows comparisons over time.

### Updated methodology

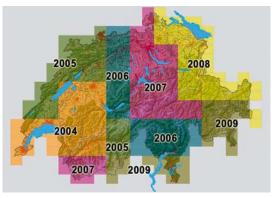
Until 2001, analogue aerial images were viewed with stereoscopes. By then, significant progress had been achieved in aerial technology and geographic information processing, which made it possible to make a transition to the spatial viewing and analysis of digital aerial photographs on computer screens.

A survey to determine the needs of the principal users of Land Use Statistics data showed that the separate collection of data on land use and land cover, including data on arable land, met a great need. Consequently, the Federal Statistical Office decided to compile the Land Use Statistics 2004/2009 with digital technology and a fundamentally updated nomenclature. At the same time, the two preceding Land Use Statistics are adapted to the new "Nomenclature 2004". The data from the three surveys thus remain fully comparable and make it possible to present time

series over 24-year periods. The results for these three time spans are scheduled to be available for the whole of Switzerland in 2013.

### Precise data photographs as a data basis

The landscape is interpreted based on aerial photographs which are taken on a regular basis by the Federal Office of Topography to update the national maps and made available to the FSO. The image resolution is about 25 cm per pixel. The current analysis is based on aerial photographs from the years 1979–85, 1992–97 and 2004–09. Consequently, the Land Use Statistics have a periodicity of 12 years. The image base for a survey cycle covering all of Switzerland is a mosaic of photographs covering a six-year time span.



Aerial photo mosaic from the 2004/2009 Land Use Statistics: Swisstopo flight programme

### 4.1 million sample points

The analysis of the land use and land cover is based on permanent sample points (SP) that are superimposed on the aerial photographs in a 100m grid. Overall, this results in just over 4.1 million sample points for Switzerland's total surface area of 41,285km². In addition to the actual image file, a "geo-reference" file is provided that establishes the reference to the

co-ordinates of the Swiss reference system. Thanks to this inherent geo-referencing of each SP, analyses based on any number or type of spatial units and combinations can be carried out. The photogrammetic adjustment to the terrain surface is carried out by means of a digital terrain model. The points are observed and interpreted every 12 years. Based on the consistent surveying of land use and land cover in all three of Switzerland's aerial image coverages, it is possible to determine where every point has been used at any point in time and how its land use and land cover have changed over time. The sampling method has the advantage that it is more cost effective and produces usable results more quickly than a sharp demarcation of land uses on the ground. In addition, an SP-based analysis makes it possible to minimise the demarcation of different uses, which is very costly in highly mixed areas.

### System of three nomenclatures

Following an analysis of the needs of key customers, since 2005 the land use and land cover have been surveyed separately: The interpreter assigns each sample point a 3-digit land use code (46 categories) and a 2-digit land cover code (27 categories).

An interpretation catalogue describes the definition, criteria and affiliations of each category. The nomenclature facilitates very detailed evaluations and meets the needs of many Land Use Statistics users. In order to ensure better comparability with previously published results of the Land Use Statistics 1979/85 and 1992/97, the standard nomenclature with 72 basic categories

and 3 aggregation levels (with 4 main areas and 17 or 27 types of use, respectively) was devised based on a combination of Land Cover and Land Use. Thus, the needs of the public, the media and other target groups have been largely met. Some examples of land cover categories are: Sealed surfaces, Buildings, Lawns, Grass and herb vegetation, Shrubs, Closed forest, Linear woods, Solid rock, Water und Wetlands.

### Aerial photo interpretation with a special application

The landscape is interpreted by means of a survey application specially developed for the Land Use Statistics, which displays information on two screens.

On the right screen, the various map views are shown with additional information as well as with information on buildings.

The left screen displays the main menu window and aerial view shots from the three years when the photographs were taken, which can be viewed in three dimensions with polarising glasses and a special monitor.

After an initial interpretation of all sample points, a second image interpreter checks all points again with codes for settlement/urban land and agricultural land and to some extent also with codes for forest and unproductive land. This is to ensure that the work carried out by the first image interpreter is verified and if necessary corrected. Any unclear points are discussed and adjusted or verified on the ground. By actually examining the terrain on foot, the specialists obtain an overall impression of the area covered and of its landscape features and types of use.

### 3-D screen and "normal" screen



This is particularly important for the correct designation of regionally heterogeneous structures of great importance.

### Valuable time series thanks to long-term project

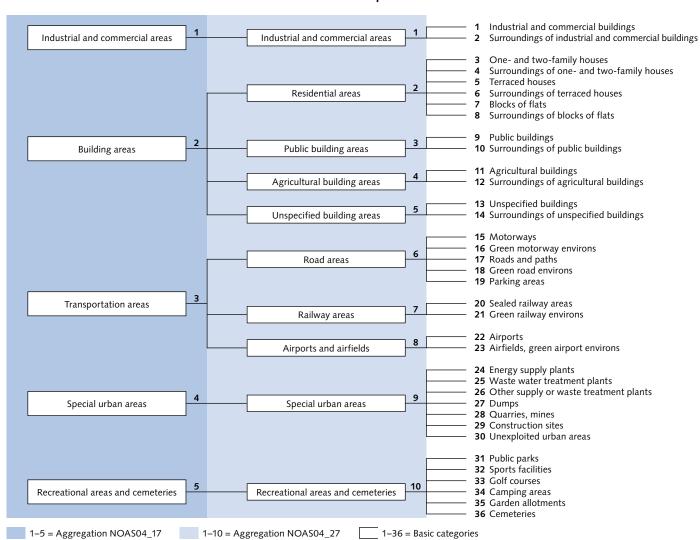
The landscape changes slowly. For the most part change takes place in small areas scattered across the whole country This transformation can only be represented by means of long-term, methodologically stable and spatially differentiated monitoring. That is why successful land use surveys are long-term projects that produce statistically relevant time series. Such surveys are relatively

costly and require long-term planning and funding, not least to ensure the preservation of technical expertise.

Further information and a detailed overview of the Land Use Statistics are also available in German and French at www.landuse-stat. admin.ch and www.geostat.admin.ch.

**Anton Beyeler** is a research associate specialising in Land Use Statistics at the FSO's Geoinformation Section

### Swiss land use statistics - Standard Nomenclature NOAS04: Excerpt from Settlement and Urban Areas data



### How do the Swiss live? The Buildings and Dwellings statistic provides information

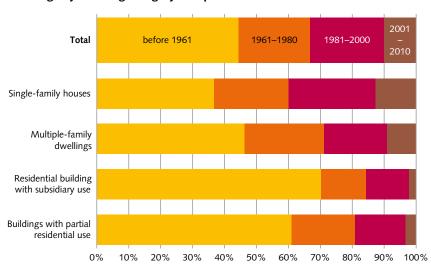
Interview with Fritz Gebhard

The Buildings and Dwellings statistic (BDS) provides information on the stock and structure of buildings and dwellings as well as on the housing situation, for example on the occupation density, the room density and the personal living space per inhabitant. Up until now data were collected from housing agencies and owners on a reference day every ten years. From this year the information is taken yearly from the Federal Register of Buildings and Dwellings (RBD). Some of the findings from the initial analyses of this register-based survey are commented upon below. Interview: Verena Hirsch

### What are the main changes introduced by the revision of the BDS?

Thanks to the change-over to a register-based buildings and dwellings statistic, house owners and housing agencies no longer need to answer questionnaires. As part of the former population census, 1.3 million questionnaires were processed for the part of the census devoted to the buildings and dwellings survey. Analyses of the questionnaires showed that over time approximately 70% of the variables on which data was collected remained unchanged. From now on, buildings and dwellings data are taken yearly from the Federal Register of Buildings and Dwellings which is updated by the cantons and communes. This means that data can be analysed faster and more easily. Thanks to the big clean-up carried out by the communes in recent years, the quality of the data has also been improved.

### Buildings by building category and period of construction 2010





Hardt bridge, Zurich 2011

### According to the BDS figures, in Switzerland the single-family house was the most common category of building in 2010, both in rural and urban areas. Has this always been the case?

Since the first Buildings and Dwellings Survey in 1970, numerically speaking, the single-family house has been the largest building category in Switzerland. The same remains true today and applies - in varying degrees - to both rural areas and larger urban zones. Only in the core cities of the largest urban zones such as Zurich and Geneva are multiple-family houses in the majority.

### So more people live in single-family houses than in multiple-family houses?

Although single-family houses constitute the majority of dwellings, the majority of the Swiss population live in multiple-family houses. And although the share of the population in singlefamily houses did rise slightly between 1990 and 2000, we can assume that today this state of affairs has not changed dramatically.

### What is the average number of inhabitants per dwelling? Can a change in trend be seen here?

Since 1970 a downward progression in the number of persons per dwelling has been observed. Whereas in 1970 the average was three persons per dwelling, in 2000 this number was only 2.3 persons. Concurrently, in the construction periods after 1970, a move towards larger dwellings can be observed. The number of 3-room dwellings fell continuously in favour of 5-room dwellings. In the construction period 2001–2010, for the first time 4 and 5-room dwellings constituted the majority of dwellings. Among newlybuilt dwellings constructed after 2000, almost three-quarters of dwellings have four and more rooms, whereas in buildings over 50 years old (i.e. built before 1961) their share is only 48%.

Overall, people expect to live in greater comfort and despite the trend towards larger homes it is unlikely that the number of persons per dwelling will increase again. The 2012 Buildings and Dwellings Statistics will provide concrete figures on this subject in 2013.

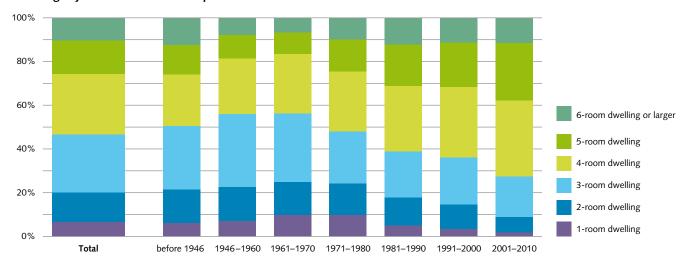
### From a statistical point of view, what does a typical single-family house look like?

The typical single-family house was built between 1961 and 2000, has 4 to 5 rooms and a surface area of 120 to 135 m<sup>2</sup>. It has two to three floors, is oil-heated and is located in an urban commune.

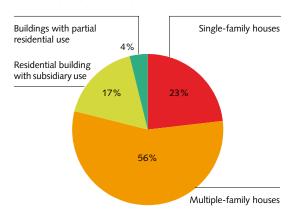
### The population has been growing for years. Have more high-rise flats been built to cope with this growth?

High-rise flats are still an exception in Switzerland. Among all residential buildings (excluding single-family houses) at least two-thirds are less than four floors high. Only a tiny minority of the remaining residential buildings are more than five floors high and at the same time contain more than six dwellings. Of these buildings, 96% are to be found in urban areas. And in rural areas there are almost no high-rise buildings.

### Dwellings by number of rooms and period of construction 2010



### Dwellings by building category 2010



### Does the BDS tell us how old dwellings are?

Just under half of all buildings were built more than 50 years ago, before 1961, and are therefore relatively old. Buildings that were built in the past 30 years (i.e. after 1980) make up about a third of the total building stock. The share of single-family houses that are more than 50 years old is 36% and is considerably lower than the average age of all building categories. 40% of single-family houses were built after 1980. Single-family homes tend, therefore, to be newer buildings, whereas mixedpurpose buildings are mostly older.

### According to the 2000 population census, the average surface area for dwellings was 97m<sup>2</sup>. Has this changed in recent years?

According to the 2010 BDS, the average floor area of dwellings today is 98 m<sup>2</sup> and has therefore remained stable since the population census of 2000. But as with the number of rooms, a trend towards larger homes can clearly be seen. Dwellings built in the 1970s have an average floor area of 93m2, in contrast, those built in recent years have a floor area of 125m2.

### Is there a difference between town and country in the floor area of dwellings?

As can be expected, the average floor area of dwellings in rural areas is, at 105 m<sup>2</sup>, considerably higher than in urban areas (96m2). This is due to the fact that in rural areas the average dwelling also has more rooms than in urban areas.

The total housing stock of Switzerland contains 4 million dwellings. The permanent residential population is just under 8 million persons. Statistically, one cannot speak of a housing shortage. Where's the problem?

The term "housing shortage" is open to different interpretations. From a statistical point of view, the demand for housing is increasing, due on the one hand to population growth and on the other, due to the declining size of households. The housing market's ability to react adequately to this growing demand depends on extremely diverse factors. The dwelling vacancy rate shows that the excess demand for housing is particularly great in city centres, whereas in peripheral areas more dwellings are empty. Although according to experts, Switzerland has enough building zone reserves, these are not always in the right place. Lastly, one should bear in mind that the total housing stock also includes holiday homes and other non-permanently occupied dwellings that are not available on the vacant dwellings market.

Verena Hirsch is Head of the Communication Section, FSO Fritz Gebhard is Head of the Buildings and Dwellings Section,



Housing estate, Zurich – Fuge art project, Roger Bumbacher 2003



Private home, Kriens in Luzern 2010



Buttisholz, Luzern 2005

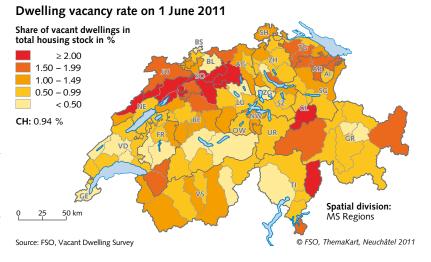


Buttisholz, Luzern 2011

### Vacant Dwelling Survey – Current situation, informational value and future survey

The Vacant Dwelling Survey provides important information on the housing market situation. However, additional indicators also need to be used to provide a comprehensive representation of the market development. The redesign of the Vacant Dwelling Survey aims to meet future information needs even more effectively. Christoph Enzler

ccording to the Vacant Dwelling Survey conducted by the FSO, on 1 June 2011 some 38,417 dwellings or 0.94% of the total housing stock were vacant in Switzerland; a year earlier, 36,713 dwellings or 0.92% had been vacant. Following a sharp decline around the turn of the millennium, since 2003 the dwelling vacancy rate has hovered around 1%. The relatively stable situation for Switzerland as a whole is also reflected in the fact that whereas in 16 cantons, the number of vacant dwellings showed a slight increase, in 10 cantons it showed a slight decrease. The highest cantonal dwelling vacancy rate was reported by the canton of Solothurn (2.09%), followed by the cantons of Appenzell Ausserrhoden (1.99%) and Jura (1.88%). The canton of Geneva (0.25%) continues to have the smallest percentage of vacant dwellings in relation to the housing stock. The dwelling vacancy rate was also low in the cantons of Zug (0.27%), Basel-Stadt and Basel-Landschaft (BL: 0.44%; BS: 0.48%), and in the canton of Vaud (0.52%). The number of vacant single-family homes increased at roughly the same rate as the total dwelling vacancy rates, and the number of vacant new dwellings increased at a slightly higher rate. This could be a first indication that housing production is slowly approaching the rise in demand. Due to historically low interest rates, the situation in the property market is following a different trend from that in the rental market: While the number of vacant rental dwellings rose, the number of vacant dwellings put up for sale decreased once again. A marked rise in interest rates could reverse this trend relatively quickly. The map below shows the dwelling vacancy rate as of 1 June 2011 for the 106 spatial mobility regions.1



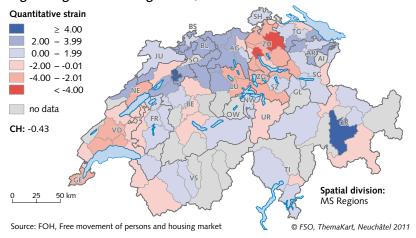
### Use and quality of the Vacant Dwelling Survey

Data on vacant dwellings and on the housing and real estate market are important for a wide range of policy areas, such as housing policy, spatial development policy, regional policy and economic policy. Investors in the real estate market also base their investment decisions on such data. Real estate investors in particular have questioned and continue to question the informational value of the dwelling vacancy rate. In response to parliamentary initiatives, a few years ago a group of experts examined theoretically meaningful indicators to represent the development of the real estate market and various possibilities to measure it. They found that during periods of excess supply, the dwelling vacancy rate and duration of vacancies are appropriate indicators to measure the change in the housing supply; likewise, during periods of excess demand, the time during which dwellings are on the market, possibly combined with a "supply rate", is an appropriate indicator. To set benchmarks, rents and prices also need to be measured. The quality of the current dwelling vacancy survey was also examined. This gives a wide variety of permissible data collection options to the communes that are obligated to report: residents' registration offices, data from power stations, analysis of newspaper and internet advertisements, the Official Gazette or surveys of administrations and property owners. An external quality test conducted on behalf of the FSO and the Federal Office for Housing shows certain shortcomings. In some cases, dwellings that were actually vacant were not identified as such, and in other cases, dwellings were mistakenly classified as vacant. However, since most communes use the same method or combination of methods every year, the dwelling vacancy rate can nevertheless be used as a cyclical indicator. But the absolute numbers do not correspond to the actual situation in every case. It was proposed that the Vacant Dwelling Statistics be qualitatively improved, extended and possibly supplemented with data from housing advertisements.

### A more comprehensive data set to monitor the housing market

To monitor the effects of the Agreement between Switzerland and the European Union on the free movement of persons on the housing market, the Federal Office for Housing commissioned the Zurich University of Applied Sciences/Meta-Sys Working Group to develop a monitor. To this end, an initial series of fact sheets2 was published in July 2011 covering Switzerland and its seven major regions. In most cases, the available data enable us to make statements down to the level of individual spatial mobility regions. Various datasets are used to develop the monitor. In the field of official statistics, these are mainly the Construction Statistics, the Population Statistics, the Swiss Labour Force Survey and the Central Aliens Register (CAR). In addition, private data from the Schweizer Baublatt are also used for the monitor. Conversions and estimates are carried out to obtain the property status, which is unfortunately not yet available from official statistics following the change in the census system. In addition, a market information system also provides data on price developments and the length of time properties are advertised. As the map below shows, the data on the tightening of the housing market in 2010 obtained in this way did not differ significantly from the data from the Vacant Dwelling Statistics. This correspondence shows that although the "dwelling vacancy rate" indicator cannot explain everything in the housing market, it is, nevertheless, an important variable.

### Tightening of the housing market, 2010



### A new basis for the Vacant Dwelling Statistics

In view of the increased use of register data, an integrated information system entitled "Building and Housing" is being implemented in stages by the FSO. In this context, the Vacant Dwelling Statistics are also scheduled to be put on a new basis. But a number of problems have to be solved before this can be done. For example, information on how dwellings are used would be extremely important for the entire field of "housing" statistics. On the other hand, by linking the harmonised population registers with the National Register of Buildings and Dwellings it is perhaps possible to obtain information on the length of time that dwellings remain vacant. In short, it seems possible that qualitative improvements and reliance on registers can result in better statistics and that the informational value of these statistics can be improved even further by linking them with private market data. In view of the desire for greater transparency in the housing and real estate market, this would certainly be advantageous.

Christoph Enzler is a research associate at the Federal Office for Housing (FOH)

- As part of a research project on spatial mobility, in 1982 the spatial mobility (räumliche Mobilität/mobilité spatiale) regions were formed based on existing mountain regions and land use planning regions. They are characterised by relative spatial homogeneity, follow the principle of small labour market areas and are functionally focused on regional centres. Individual spatial mobility regions cut across cantonal borders. In Switzerland, the spatial mobility regions are important analytical units at the microregional level.
- www.bwo.admin.ch > Themen > Wohnungsmarkt > Personenfreizügigkeit und Wohnungsmarkt [content available in German, French and Italian1.

The Federal Office for Housing (FOH) is the authority responsible for executing the federal government's housing policy. It is responsible for implementing federal laws in the area of housing promotion and tenancy law. It also monitors the housing market and makes, in the context of its research activities, proposals to improve housing conditions.

### Measuring change in rents for accommodation over time: a look at the past and the future

Rents for accommodation have been measured by the Consumer Price Index (CPI) almost since its creation in 1922. They are one of the items included in the basket of goods and services, which is composed of 12 main consumer commodities such as food, clothing, transport and restaurants. The CPI is one of the most important economic statistics. It measures price changes in household consumer goods and services and is used to compensate the increase in prices, to deflate nominal values and to serve as a decision-making tool for the Swiss National Bank's monetary policy. It also provides information on short-, medium-and long-term inflation. Corinne Becker Vermeulen

### Rent for accommodation, single largest expenditure in household budgets

In 1939, households spent an average of 20% of their consumer expenditure on rent for accommodation<sup>1</sup>; today, the share of rent for accommodation is still around 20%. The share allocated to accommodation has, therefore, remained very stable over the years, unlike certain other commodity groups such as food. In 1939 almost half of a household's consumer expenditure (40%) was spent on food whereas today this amount is about only 10%.

But although the proportion of expenditure on rents has remained stable, this does not mean that rents for accommodation have remained at the same price over the years. In 1924, a 4-room apartment in Lugano cost an average of CHF 32 per month. In La Chaux-de-Fonds the price was CHF 62 and in Zurich CHF 70. In 2010,

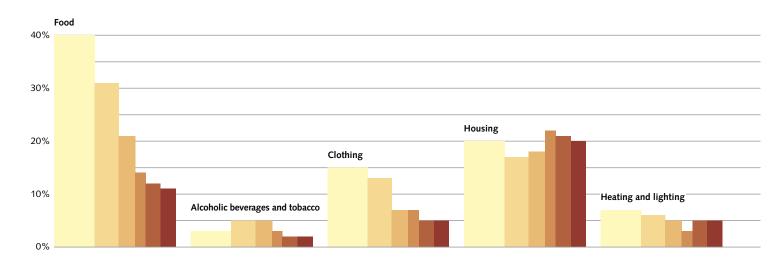
the rent for a 4-room apartment was an average of CHF 1273 in Lugano, CHF 800 in La Chaux-de-Fonds/Le Locle and CHF 1495 in Zurich. The increase in rents has, therefore, been considerable, much more so than the overall increase in prices.

### The increase in rents since 1939

From 1939 to 2010, the average increase in rents was 900%, whereas the overall increase in prices was by about 650% during the same period. Rents for accommodation have thus contributed to a great extent to the overall increase in prices. Without rents, prices would have only increased by 590% over the past 70 years.

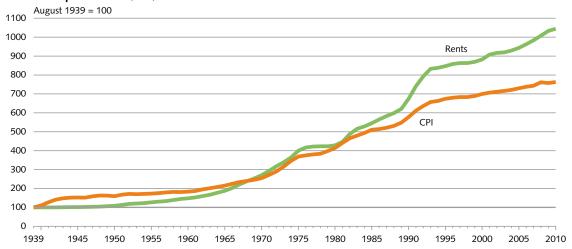
As Graph 3 below shows, the rise in rents was particularly high in 1967, 1975, 1982 and 1991 when it reached almost 10% in one year, affected by increases in mortgage rates.

Change in CPI weights 1939–2010,<sup>2</sup> Weights of different product groups



### Focus: Living, building: Switzerland's built environment

### Consumer price index (CPI) and rent index

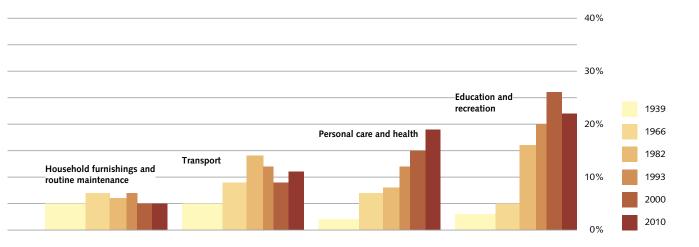


### The measurement of change in rents for accommodation over time

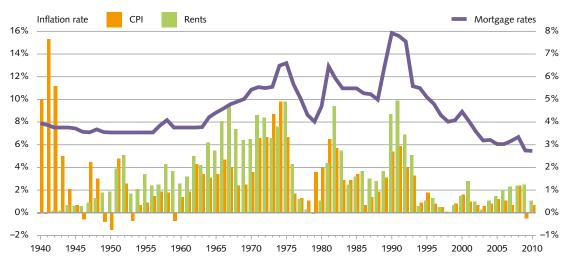
As rents for accommodation constitute a very significant expenditure, the availability of both long- and short-term statistical information on this subject has always been important. Questions on rents have been included in population censuses carried out every 10 years. In 1923, during a conference attended by statisticians, and representatives from employers', workers' and employees' associations, the decision was made to carry out a periodic survey on rents for accommodation. Twenty-eight communes were instructed to conduct the survey and 10% of 2 to 4-room dwellings were included in it. From the early 1930s, data on rents was gathered every year. A distinction was already made between

old dwellings and new ones, so that the influence of the latter on rental trends could be determined. In 1977, the representativeness of the sample was improved, by covering rural communes and including dwellings with 1 to 5 rooms. As of 1977, the rents statistic covers 100,000 dwellings in 85 communes and is conducted twice a year.

The rent index underwent its greatest transformation in 1993. In fact it had been decided that this statistic was only useful for short-term purposes as long-term information was supposed to be supplied by a complementary survey, the structural survey on rents. Since then the shortterm surveys have been conducted on a quarterly basis and dwellings are chosen at random from the Swiss telephone directory. This random sample of 5000 dwellings is a rotational one:



### Annual change in rents, the CPI and mortgage rates



1/8 is renewed every quarter in order to take new constructions into account. The communes and cantons are no longer responsible for the survey which now combines two methods: first of all a questionnaire is sent by post and then reminders are carried out by telephone by a polling institute. But the biggest change is certainly the way in which quality differences are treated. In theory, a price index should only measure changes in price, the quality of products remaining stable over time. Of course, the dwellings are already divided into units that are relatively homogenous in terms of quality, according to the number of rooms and age, but this is insufficient in order to compare only what is comparable. Starting in 1993 and until 2005, the quality differences of dwellings other than the number of rooms and age were taken into consideration: on the one hand dwellings age over time, which leads to a reduction in their quality. On the other hand, dwellings are renovated and converted, enabling their quality to be maintained and even improved. If the renovations are sufficiently extensive, the dwellings are artificially modernised and upgraded to an age interval that comes after their period of construction. Conversely, ageing dwellings that are not renovated may be downgraded to an earlier age interval, thus becoming old artificially.

From 2005, one of the targets of the rent index revision was to bring this method of quality adjustment up to date. After an internal review, it was shown that the relationship between renovations and rental rates is not so clearcut: "Renovation work is allegedly not so much designed to modernise dwellings as to keep them in good condition so they can continue to be rented out".3 The method of 1993 was therefore abandoned. In 2010, the rent index was once again studied in detail and improved: the size of the sample grew from 5000 to 10,000 dwellings and a hedonic model was developed. This model has been used in production since February 2011, enabling the quality of dwellings to be adjusted according to their individual characteristics (surface area, number of rooms, age, number of bathrooms etc.), their macro-situation (distance from town centre, nearby shops, local tax rates etc.) and their micro-situation (view, surrounding space, sunshine). One of the main criticisms levelled at the rent index no longer exists. The quality of dwellings is taken into account and neutralised in order to compare what is comparable.

For almost a century, Switzerland's official statistics have been providing information on rents for accommodation and measuring changes by using methods that are as close as possible to the reality of markets and based on the best methods available. But a dwelling is and will continue to be a distinctive consumer good because unlike other commodities, it is "unique" by dint of its size, its age or its situation. And that is what also makes this statistic a difficult and particular one.

Corinne Becker Vermeulen is Head of the Price Section, FSO

- In our definition, rent is the net rent (excluding service charges) paid by the tenant for occupation of the dwelling. Empty dwellings are not included in our sample.
- 2 Since the structure of the basket of goods and services was radically changed in 2000, the weights for 2010 are approximate.
- Methodische Grundlage "Landesindex der Konsumentenpreise, Dezember 2005 = 100", BFS, Neuchâtel 2007, S. 20.

Bases méthodologiques "Indice des prix à la consommation, décembre 2005=100" OFS, Neuchâtel 2007, p. 20.

### The construction sector – the fourth biggest employer in the Swiss economy

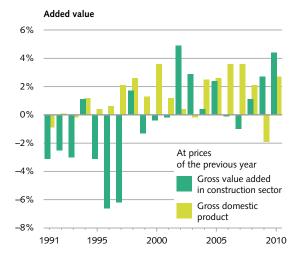
With an average share of 5.7% in gross domestic product (GDP), the construction sector is an important branch of the Swiss economy. As an employer it is even more important: 8% of Switzerland's full-time equivalent employment in the past 20 years was to be found in this sector. Ruth Meier and Gregory Rais

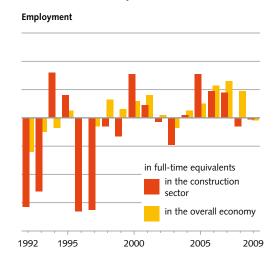
he development of the price-adjusted value added of the construction sector over the past 20 years has experienced several phases. With the exception of 1994 and 1998, the 1990s were characterised by annual growth rates that were at times very negative (see Graph Added value). This situation was the result of the property bubble that had developed in Switzerland at the end of the 1980s. Mortgage rates, which reached an all-time high of over 7.5% at the beginning of the 1990s, also had a negative influence on the situation. From 1994 the economy as a whole was already showing positive growth rates again and its growth over the next 15 years was to be strongly influenced by the fast growth of the financial and IT sectors as well as the export economy. The construction industry, however, continued to stagnate. A marked recovery was first seen in 2002, due, in particular, to a considerable relaxation of the Swiss National Bank's monetary policy, which amongst other things led to historically low mortgage rates.

### Growth in the full-time equivalent employment of the construction sector

The growth of the full-time equivalent employment of the construction sector followed trends that were to some extent similar to those of the value added (see Graph Employment). The considerable slowing-down of the economy in 1991-1996 and the resulting decline in investment activity had a major impact on labour demand. Employment in the construction sector slumped along with the economy as a whole. From 1998 the employment situation in the construction sector was alleviated somewhat – partly as a result of economic stimulus programmes. Due to strong investment needs, the construction industry was able to increase employment demand in 2000 and 2001. This can largely be attributed to investments in civil engineering, which, thanks to the infrastructure programmes, grew by more than 10% in 2000. When comparing the growth in value added of the construction sector with labour demand in this sector, it becomes clear that in the 1990s both

### Growth rate of the construction sector in comparison to the overall economy







"Sugus" houses in the Röntgenareal estate, Zurich 2011

indicators were largely synchronised. Subsequently, however, the two indicators drifted apart, with labour demand always reacting with a time lag to value added growth. Because of this, an increase in labour demand was seen especially from 2005 until 2007. Consequently, the substantial growth in construction production that began in 2008 did not show any effect on employment.

### The construction sector's contribution to growth

Another important indicator of a sector's importance to the national economy is its contribution to growth, which enables conclusions to be drawn as to whether a sector is a driving force in the economy. The construction industry made positive contributions to growth in 2002–2005 and in 2008–2010 in particular. The biggest contribution was made in 2002, when roughly 60% of GDP growth was attributable to activities in the construction sector. The sector's most negative result during the period under observation was in 1996–97, when its negative contributions to growth slowed down the national economy's recovery considerably.

The influence of the construction industry can be felt not only on the production side but also on the expenditure side of GDP. At the beginning of the 1990s, the share of construction investments in the National Accounts total gross fixed capital formation (machinery plus construction) was still over 50%. The extremely strong growth in investments in machinery and equipment from the middle of the 1990s resulted in the construction sector's share dropping to approximately 45%. The nominal value of all investment in construction in 2010 totalled CHF 52 billion. In the past 20 years about one fifth of construction investments have been made in civil engineering, whereas four fifths have been in building construction. In recent years particularly, building construction - certainly also as a result of low mortgage rates and various large civil engineering projects – has shown substantial growth.

Ruth Meier is Head of the Economy, State and Social Issues Division, BFS

**Gregory Rais** is Head of Macroeconomic Analysis, SUKO Section, BFS

Aggregates	Periods	Average annual growth rate	Average annual share in total economy
Gross value added construction sector	1991–2010	-0.2%	5.7%
Gross domestic product		+1.5%	
Investment in construction	1991–2010	+0.2%	45.7%
Fixed capital formation		+1.4%	
Full-time equivalent employment in construction sector	1991–2009	-0.8%	8.0%
Full-time equivalent employment in national economy		+0.4%	

General Classification of Economic Activities: NOGA 2002

Source: National Accounts and Productivity

### **Sector portrait: Construction**

Number of persons employed and workplaces in the construction industry, 2005 and 2008

NOGA 2008	Economic activity	Persons employed		Workplaces		Persons employed	Workplaces
		2005	2008	2005	2008	Variation 2005	-2008
05-96	Total Switzerland	3 715 699	4 016 837	375 167	389 165	8.1	3.7
05-43	Sector 2	983 107	1 061 643	75 728	77 711	8.0	2.6
41-43	Construction	298 222	315 272	36 415	38 299	5.7	5.2
41	Construction of buildings	78 908	79 921	4 328	4 837	1.3	11.8
42	Civil engineering	25 040	27 037	1 063	1 068	8.0	0.5
43	Specialised construction activities	194 274	208 314	31 024	32 394	7.2	4.4
411000	Development of building projects	434	616	122	179	41.9	46.7
412001	General construction of buildings	8 432	7 648	453	435	-9.3	-4.0
412002	General contractor work in building construction	10 058	10 248	640	822	1.9	28.4
412003	General building construction and civil engineering works n.e.c.	57 586	58 361	2 589	2 605	1.3	0.6
412004	Building maintenance and repair work	2 398	3 048	524	796	27.1	51.9
421100	Construction of roads and motorways	16 147	16 970	572	550	5.1	-3.8
421200	Construction of railways and underground railways	2 467	2 175	76	55	-11.8	-27.6
421300	Construction of bridges and tunnels	1 420	1 768	26	25	24.5	-3.8
422100	Construction of utility projects for fluids	2 484	2 937	171	187	18.2	9.4
422200	Construction of utility projects for electricity and telecommunications	605	746	44	48	23.3	9.1
429100	Construction of water projects	163	182	23	28	11.7	21.7
429900	Construction of other civil engineering projects n.e.c.	1 754	2 259	151	175	28.8	15.9
431100	Demolition	1 029	966	90	102	-6.1	13.3
431200	Site preparation	2 819	2 948	516	521	4.6	1.0
431300	Test drilling and boring	552	728	73	89	31.9	21.9
432100	Electrical installation	41 604	42 927	4 135	4 172	3.2	0.9
432201	Sanitary installation	4 374	4 925	874	890	12.6	1.8
432202	Sanitary installation and plumbing	8 832	8 836	1 262	1 212	0.0	-4.0
432203	Sanitary and heating installation	13 561	14 484	2 042	2 130	6.8	4.3
432204	Installation of heating, ventilation and air-conditioning systems	12 769	14 575	1 497	1 598	14.1	6.7
432901	Insulation work activities	3 526	4 038	484	553	14.5	14.3
432902	Other construction installation	3 329	4 302	704	871	29.2	23.7
433100	Plastering	6 577	6 777	958	1 021	3.0	6.6
433200	Joinery installation	4 394	5 287	1 307	1 410	20.3	7.9
433301	Laying of floor coverings	5 698	6 438	1 386	1 580	13.0	14.0
433302	Laying of tiles	7 467	7 867	1 909	2 055	5.4	7.6
433303	Wallpapering	131	152	70	73	16.0	4.3
433401	Painting	16 120	16 277	4 101	4 086	1.0	-0.4
433402	Painting and plastering equally combined	10 120	11 928	1 610	1 914	17.9	18.9
433403	Glazing	1 183	1 327	230	239	12.2	3.9
433900	Other building completion and finishing	1 679	1 583	290	274	-5.7	-5.5
439101	Carpentry, construction framing	16 190	17 152	2 018	2 080	5.9	3.1
439102	Roofing	3 906	3 998	703	676	2.4	-3.8
439103	Flashing and guttering work	6 903	7 218	1 207	1 154	4.6	-4.4
439901	Waterproofing	2 927	3 368	418	465	15.1	11.2
439902	Erection of scaffolding	2 548	3 039	257	288	19.3	12.1
439903 439904	Masonry  Renting of construction or demolition equipment	8 496 278	8 366 367	1 743 50	1 699 53	-1.5 32.0	-2.5 6.0
439905	with operator  Other specialised construction and civil engineering activities n.e.c.	7 262	8 441	1 090	1 189	16.2	9.1

Source: Business Census 2005 and 2008

### Val-de-Travers – And nine become one Commune merger in a rural area

The Val-de-Travers, a longitudinal valley in the Jura mountain range in the canton of Neuchâtel, is better known as a location for the watch industry and micro engineering and as the home of absinth than as the birthplace of new trends in politics or spatial planning. But in 2009, the successful merger of nine of the eleven villages in the valley with a total of 11,000 inhabitants took place. Apart from the merger of communes in the canton of Glarus, it is one of the largest commune mergers yet in a rural area. Caroline Schnellmann

n recent years, the Official Register of Swiss Communes (Amtlichen Gemeindeverzeichnis der Schweiz)<sup>1</sup> has shown a considerable reduction in the number of communes owing to mergers. In the last century there were already noticeably more mergers than separations. In the middle of the 1990s this trend increased significantly in some cantons and continued to do so overall between 2000 and 2010. At the end of 1960 there were 3095 communes in Switzerland, whereas by 2010 there were only 2495<sup>2</sup>.

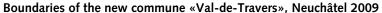
The motivation for mergers has always been economic, administrative or political. Most of the time the communes are small or very small and are increasingly trying to manage their complex tasks in cooperation with other communes. But sometimes they are also urban communes, motivated by strategic considerations. Just two years ago, nine communes in the Valde-Travers merged.

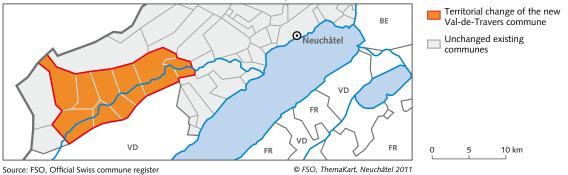
### A multifaceted valley

From the city of Neuchâtel, a 15-minute drive along the cantonal road in the same direction as the TGV to Paris, takes you first to Noiraigue and then to Travers, from where the valley gets its name. Next come Couvet, Môtier, Boveresse,

Fleurier, Saint-Sulpice, Buttes and the small villages of Les Bayards, Les Verrières and La Côteaux-Fées. Businesses active in precision and micro engineering as well as high-end watchmaking companies are located in the valley which also has a grammar school, several museums, a hospital, sports facilities, local traditions and a breathtaking natural environment, including the well-known Creux-du-Van or the Gorges de l'Areuse. Numerous visitors are drawn into the bowels of the earth every year at the disused bitumen mines in La Presta.

Although bitumen has not been mined here since 1986 and wealth disappeared from the valley with the collapse of the watch industry in the 1970s and 80s along with the prohibition of absinth in 1910, the villages are today united by much that constitutes a lively and liveable region. Due to the innovative thinking of the inhabitants, the idea of a merger was born with the aim of confronting the prevailing difficulties and of lending the region more political weight at federal and cantonal level. Improved coordination in public administration was sought as well as a lessening of the burden upon politicians, professional staff and last but not least, the budget.





26 FSO ValeurS

### Experience in cooperation

The experience in cooperation gathered in connection with the Swiss regional policy provided fertile soil for the commune merger. As early as 1974, the Val-de-Travers was one of the 54 LIM regions which, until a reorientation of regional policy, was able to benefit from federal aid to investment in mountain regions The Val-de-Travers had also proved its capacity for cooperation within the canton's development strategy, "Neuchâtel's urban network" (RUN), by the signing in 2004 of a declaration of intent and in 2007 of a contract between the communes, the canton and the major businesses in the valley, especially those from the watchmaking sector.

### Efficiency and identity

Initially, the villages of La Côte-aux-Fées and Les Verrières were also supposed to be joining the new commune. But at the time of the referendum on 17 June 2007, the majority of voters from both villages voted against the merger. They feared job cuts, poorer public services and a loss of village identity.

Nevertheless, on 24 February 2008, 72% of voters from the remaining nine communes voted in favour of a revised merger project. On 1 January 2009, "Val-de-Travers" became the third-largest commune in the canton of Neuchâtel.

The fine balance between identity and efficiency is evident in the Val-de-Travers, for example in the search for a name for its inhabitants. Until the merger, the villagers had been called "Fleurisans", "Covassonnes" or "Valloniers" and

Vallonières". The name "Valtraversins" and "Valtraversines", although unearthed from the history books, did not receive the people's blessing and was rejected by 74% of voters in the referendum.

### Noticeable effects

The merger did not automatically solve all of the valley's problems. Even with the best will in the world, hard work and a spirit of innovation cannot turn a poorly structured, peripheral region into a buzzing hive of industry in the space of three years. This can be seen in further cuts to infrastructure, unemployment figures that remain high and also the notoriously bad placing amongst the rearmost ranks of the Bilanz and Weltwoche commune rankings. Nevertheless, the effects brought about by the merger are noticeable. Since the merger, the commune has been able to reduce the high local taxes by approximately 7% for example. Thanks to greater efficiency in the provision of services, staffing cuts and other synergistic effects - such as insurances - the annual budget of the nine villages has been reduced by the considerable sum of CHF 2.2 million. Furthermore, thanks to its new size, the commune has better chances of defending its political interests when dealing with the Confederation, the canton of Neuchâtel and also its neighbours in nearby France.

Caroline Schnellmann works as an independent journalist

- 1
  General information and documentation on the Official
  Register of Swiss Communes
  are available on the FSO Statistics portal at: www.statistik.ch > Infothek > Nomenklaturen > Amtliches Gemeindeverzeichnis der Schweiz.
- 2
  The query tool on the historicised register of Swiss communes can be found at:
  www.statistik.ch > Infothek >
  Nomenklaturen > Amtliches
  Gemeindeverzeichnis der
  Schweiz > Historisiertes
  Gemeindeverzeichnis.

### Official register of Swiss communes

The Federal Statistical Office allocates every commune a number and compiles, updates and publishes the Official Register of Swiss Communes (GeoNV – Art. 19, Abs. 1 (Ordinance on Geographical Names)). The Official Register of Swiss Communes lists and updates all changes to commune names authorised by the Federal Directorate of Cadastral Surveying (swisstopo) as well as other changes (abolition of communes, boundary changes and changes in the districts or other similar administrative units of the canton) reported by the cantonal offices responsible.

The Official Register of Swiss Communes is used in numerous public administration applications at federal, cantonal and communal level as well as in private industry as a definitional basis for commune identification and commune names. The names of communes and the commune numbers in the Official Register of Swiss Communes are binding for the local authorities. The current legally binding version is available as soon as changes in the commune inventory have come into force at federal level, as well as a consolidated version as of 1 January. In addition, the most up-to-date version of the historicised commune register can always be consulted on the internet.

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Enquiries: Communication section,

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Communal assembly, Glarus 2006 – Vote in favour of reducing the number of communes