



Dear Readers,

In June, the BBSR presented its new population forecast. According to the forecast, we will be seeing a slight increase in the population by 2045 - due to immigration from abroad. Without this immigration, there would be considerably fewer people living in Germany in 2045, due to the fact that the number of deaths will exceed the number of births by far. The large cities and their surrounding areas will continue to grow, and the demand for housing will remain high here. However, according to the forecast, structurally weak regions will continue to experience a reduction in population. It will become increasingly difficult for them to provide adequate public services and offer people a good residential and working environment.

The challenges of demographic change concern all regions. They include ensuring the availability of skilled workers, integration, area-wide digitalisation and adaptation of social infrastructures. More people are going to need housing suitable for the elderly in the future. An ageing society also needs more communal housing options and support services in the neighbourhood. Strategies to combat loneliness will continue to gain in importance as an urban development task.

To access the forecast, please refer to the dashboard at www.bbsr.bund.de. This issue contains more information on the results.

I hope you will find this interesting.



Dr Markus Eltges

Director of the Federal Institute for Research on Building,
Urban Affairs and Spatial Development (BBSR)

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Circular economy
in rural regions

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Commuting in Germany –
2002-2022

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Regional structures and trends in population development in Germany by 2045

by Dr Steffen Maretzke, Dr Jana Hoymann and Dr Claus Schlömer

Since the last BBSR population forecast from 2021, there have been some significant changes in demographic conditions in Germany, particularly in regard to immigration from abroad. While the old forecast for 2018 to 2022 assumed external migration gains of 1.4 million people, the actual figure was 2.7 million.

The results of the BBSR's current forecast show that Germany's population will continue to grow up to 2045. Based on the forecast assumptions, 85.5 million people will live in Germany in 2045, about 0.8 million more than at the end of 2023. The expected external migration gains are the main reason for the increase in population over the forecast period. At the same time, by 2045, the average age of the population and the proportion of older people will have increased.

However, this nationwide population increase of 2.7% contains large regional differences (see table). Among the 401 districts, only the Hanseatic City of Lübeck will follow the national trend during this period. Of the other 400 districts, the population will further increase in 248 districts, while

in 152 districts it will shrink. The increases are mainly concentrated in West German regions, while the losses are largely concentrated in East German regions.

The BBSR's classification of various types of districts reveals that the socio-economic situation of a district has the greatest influence on the direction of population development. Neither the type of settlement structure of a district nor its type of location show the regional disparities in the population development as clearly as the type of socio-economic development, whose definition was based on various economic and social indicators.

Altogether, future population growth tends to be primarily focused on economically strong districts whose populations are already experiencing strong growth. Strongly shrinking, rather economically underdeveloped districts have to prepare for above-average population losses. Accordingly, the population development from 2021 to 2045 ranges from population increases of over 14% in economically strong independent cities (equivalent in status and functions to a district) such as Freiburg im Breisgau, Leipzig, Potsdam and

Population development in the regions of Germany from 2021 to 2045

District development type / Western and Eastern Germany / Germany	Population (in millions)	Average age (in years)	Under 20-year-olds (in %)	20- to under 67-year-olds (in %)	67-year-olds and older (in %)	Population	Average age	Under 20-year-olds	20- to under 67-year-olds (in %)	67-year-olds and older
	2021					2021 to 2045 (in %)				
Strongly growing	24.0	43.3	18.8	63.4	17.8	9.6	0.3	13.8	6.0	18.2
Growing	37.5	44.4	18.8	61.9	19.3	3.7	0.7	7.8	-1.5	16.3
No clear trend	11.1	45.6	18.3	60.9	20.8	-1.5	0.8	3.2	-7.4	11.9
Shrinking	10.2	47.9	17.1	58.9	24.0	-11.8	0.9	-9.1	-17.3	-0.2
Strongly shrinking	0.4	49.1	16.3	58.4	25.3	-16.2	0.9	-13.5	-21.9	-4.6
Western Germany (excluding Berlin)	67.1	44.3	18.8	62.2	19.0	4.1	0.7	8.5	-1.3	17.1
Eastern Germany (including Berlin)	16.1	46.3	17.6	60.3	22.1	-3.0	-0.5	0.0	-5.3	1.0
Germany	83.2	44.7	18.5	61.8	19.6	2.7	0.4	7.0	-2.0	13.6

Source: BBSR population forecast 2045, own calculations

the district of Ebersberg, to population losses of over 20% in many economically underdeveloped districts of eastern Germany (see map). The largest population losses were recorded in the districts of Greiz (-20.0%) and Mansfeld-Südharz (-24.2%).

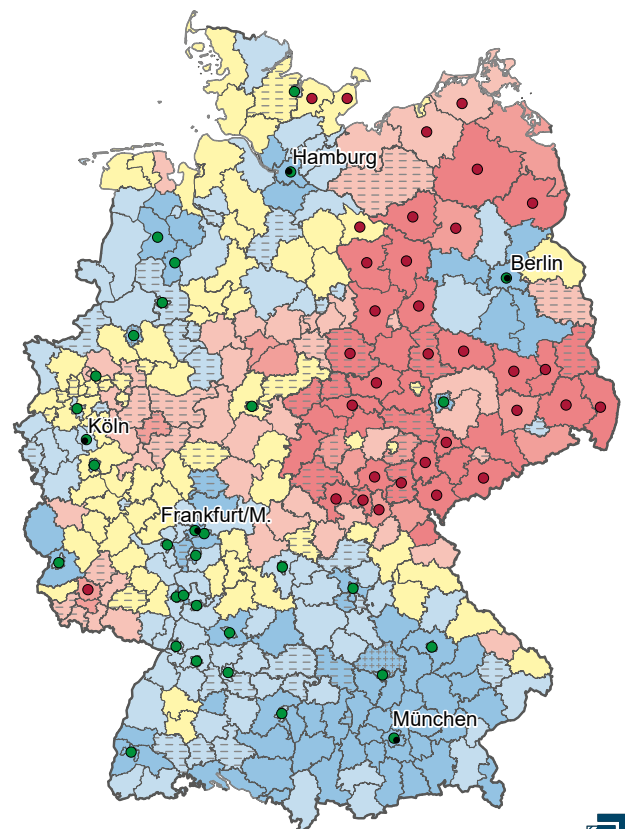
The key results of the BBSR population forecast can be summarised as follows:

- **Germany's population continues to grow:** Nevertheless, more than 150 districts have to prepare for declining population figures in the long term.
- **Growth and shrinkage take place at the same time:** They can be observed in all age groups in the districts.
- **The population is getting older:** Peripheral and/or shrinking districts have the highest average age.
- **Regional disparities are increasing:** Population growth is concentrated in more centrally located and/or economically stronger districts.
- **All districts will record gains in external migration:** This is a stabilising factor in population development.

In some cases, the challenges resulting from these considerable regional differences in long-term population trends are completely different. These include ensuring services of general interest, the demand for housing and the development of labour supply. Against this background, regional actors are well advised to inform themselves at an early stage about the future demographic trends in their district.

The population forecast is based on the official population research of the Federal Statistical Office. The results of the census were not yet available when the forecast was calculated. The BBSR is currently examining how the census results will affect the forecast. Information on this will soon be available on the BBSR website.

Population development from 2021 to 2045



Population development in the district regions in %

- under -12.5
- -12.5 to under -7.5
- -7.5 to under -2.5
- -2.5 to under 2.5
- 2.5 to under 7.5
- 7.5 and more

In 2045, the average age of the population is ...

- older than 49.0 years
- younger than 42.1 years

Between 2022 and 2045, the district region (cumulatively) shows ...

- internal migration gains and excess of births over deaths
- internal migration losses and excess of deaths over births

Database: 2045 BBSR population forecast of the BBSR
Geometrical basis: district regions,
as of 31/12/2020 © GeoBasis-DE/BKG

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📖 BBSR-Analysen KOMPAKT 04/2024 [in German]

Importance of the new privilege status for solar parks for the energy transition

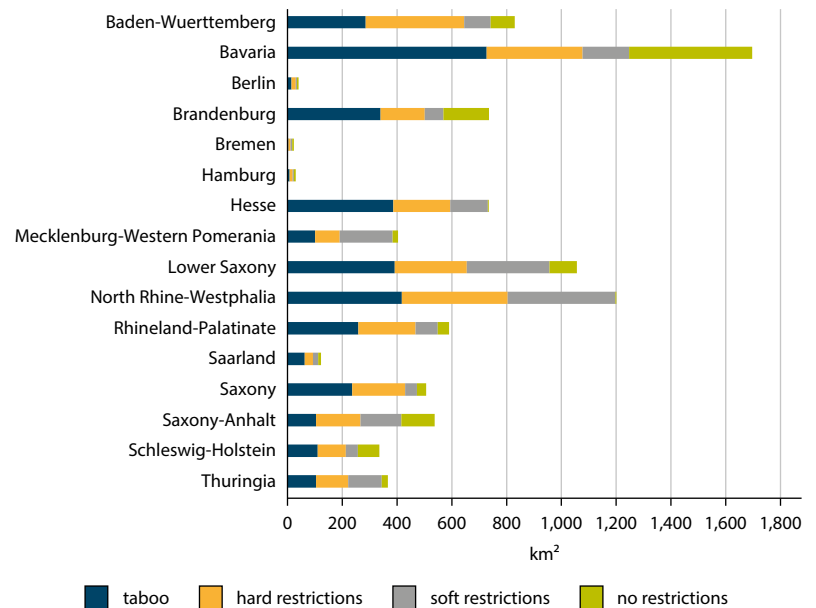
by Klaus Einig, Jakob Misof and Dr Brigitte Zaspel-Heisters

The BBSR operates a model of potential areas in order to investigate the conditions for expanding renewable energy production throughout Germany. A recent study investigated the effects of introducing the new privilege status for solar parks on area functions and definitions. Since 11 January 2023, under Section 35 (1) no. 8 b) of the Federal Building Code, all solar parks in corridors of up to 200 metres along motorways and railways with two main tracks have enjoyed the privileged status of undesigned outlying area projects. In addition to calculating the areas to which the new privilege status applies, for the first time it was possible to identify restrictions limiting the installation of solar parks for these areas. In addition, projections were made of the installed capacity that could be achieved by installing new solar parks in the areas potentially suited to solar projects.

With the new privilege status, the photovoltaic project development is considerably simplified: Privileged sites no longer require a legally binding development plan, so that planning applications for new solar parks can be submitted directly. However, privileged solar parks are only permitted if they do not come into conflict with public concerns. Apart from nature conservation and building law restrictions, the installation of solar parks is particularly limited by federal state and regional planning provisions. Altogether, 45 restriction criteria were considered in the analysis.

Along motorways and double-track railways, solar parks are privileged over an area of 11,878.26 km². Approximately 22% of this area are settlement or commercial areas. Since current restrictions in the already built-up settlement area cannot be recorded throughout Germany and solar parks are mainly planned in undesigned outlying areas, settlement and commercial areas are excluded from the restriction analysis, which reduces the investigated area to 9,210 km². The smallest area portion is covered by the federal state of Bremen (23 km²), the largest portion by the Free State of Bavaria (1,697 km²).

Area privileged for the construction of solar parks according to restriction categories



Source: Own diagram

On 38.6% of the area examined, it is almost impossible for solar parks to be approved. The reason is that planning solar parks is confronted with exclusionary criteria like the actual land use or legal provisions, such as those relating to spatial planning or nature conservation. Hard restrictions were detected for about 29% of the area. In these cases, solar parks can only be approved in exceptional cases. Soft constraints apply to about 20% of the area. They curb the installation of solar parks but in many cases, can also be circumvented. Only 12.6% of the area (approx. 1,556 km²) was unrestricted. However, even for this potentially suitable area, further restrictions avoiding the use of solar parks cannot be completely ruled out. Examples of this are provisions in municipal development plans and land-use plans that could not be included in the analysis.

Restrictions limiting the construction of solar parks differ considerably between the federal states. In North Rhine-Westphalia and Hesse, the density of restrictions is particularly high, only a very small proportion of the area is unrestricted, whereas the proportion in Bavaria is particularly large.

Depending on their size, unrestricted areas are to different degrees suited to the installation of solar parks. Normally, the profitability of solar parks increases with the size of a park. The larger the area on which a plant can be installed, the lower are the associated planning, development and security costs per installed megawatt (MW) capacity. In the relevant literature, two hectares (ha) are mentioned as the minimum area for an economical operation. In some cases, the minimum area is estimated even higher. This is why areas under two hectares were excluded when projecting the potential installed capacity. Minimum areas of two hectares account for around 89% (1027 km²) of the total unrestricted area. Smaller areas with 1 to under 2 ha account for only 4.8% of the potentially usable area.

Area alignment and layout, which play an important role in the suitability of a site for a solar park, are not considered. For example, solar parks ideally require round or right-angled, continuous areas to reduce the costs for fencing.

Assuming a relevant literature-based reference value of 1.4 ha for solar parks in order to achieve a capacity of one megawatt (MW), a total installed capacity of 73.4 gigawatt (GW) of solar power could ideally be achieved on unrestricted areas

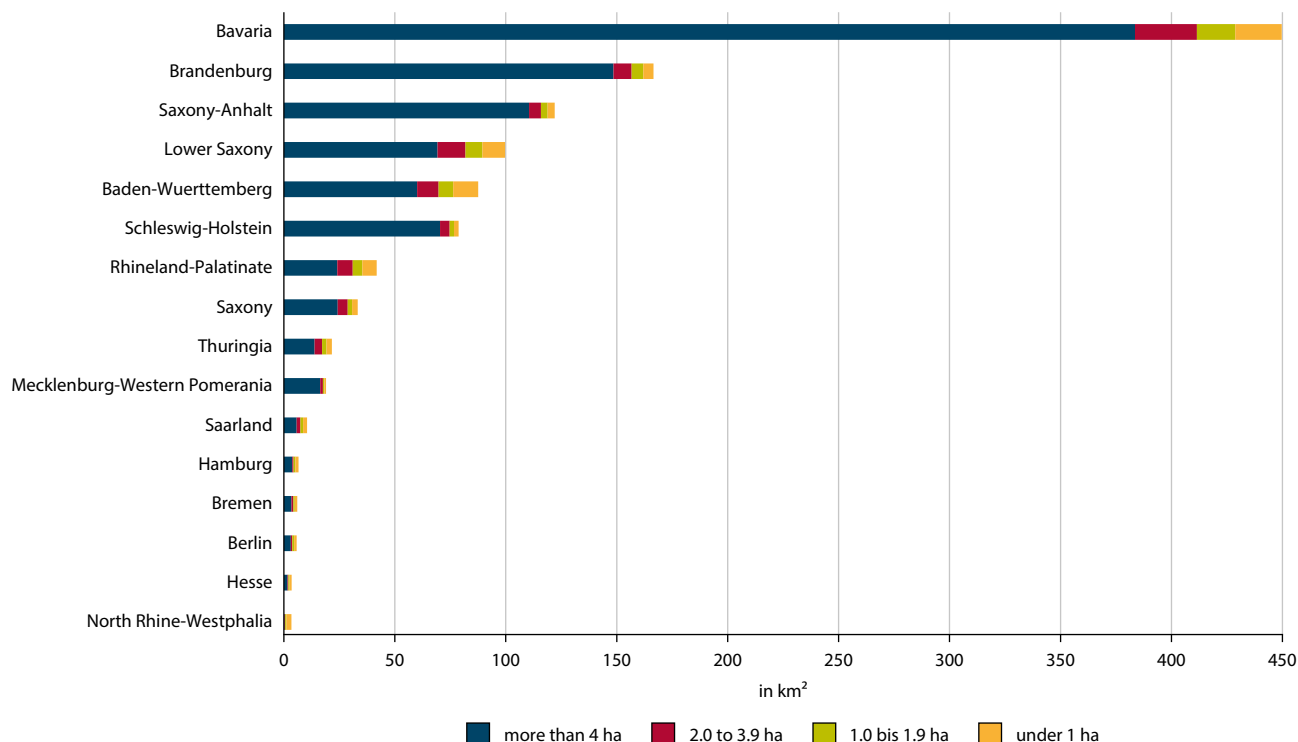
of at least 2 ha. By comparison, at the beginning of 2023, the total installed capacity of photovoltaic systems in Germany was around 71 GW.

With the 2023 Renewable Energy Sources Act, the German Government has set higher targets for the expansion of the installed capacity of solar plants. A solar capacity of 128 GW is planned to be installed by 2028, with 215 GW by 2030. In April 2024 the German Government adopted the so-called “Solar Package” of measures; this envisaged that 50% of the installation goals would be realised by photovoltaic systems on roofs and 50% by solar parks. This means that 68.3% of the 2030 target value of 107.5 GW for power from solar parks could theoretically be achieved by new solar parks on the larger unrestricted areas along motorways and railways with a minimum size of two hectares (1027 km²). This result shows the important role of the new privilege status of photovoltaic systems along motorways and railways for the energy transition.

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Potential of areas without restrictions for solar parks according to size of individual areas



Source: Own diagram

Circular economy in rural regions

by Christina Bredella

The circular economy is widely recognised as a crucial element for sustainable transformation. The discussion, however, often focuses on promising circular approaches in the urban context and in specific sectors. Therefore, the participants of the study 'Potentials of circular economy for rural development in Germany and Europe' analysed what constitutes a cross-sectoral systemic approach to the circular economy and how rural regions can benefit from it. The contractors for the project, Prognos AG and the Institute for Rural Development Research (IfLS), conducted the study for the Federal Ministry for Housing, Urban Development and Building (BMWSB) and the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR).

The results, based on case studies, show that successful initiatives are developed when policy-makers, administrators,

scientists and entrepreneurs work together. Public actors such as regional development authorities play a crucial role in consolidating existing initiatives into an overall strategy and by providing systemic support for the transition to a circular economy. Political support is needed to stimulate the demand for circular products and to raise awareness of the issue.

Benefits of the circular economy and recent developments in Germany

The circular economy aims to decouple economic growth from resource consumption, minimise absolute resource use, and increase regional value creation. In Germany, the circular economy has traditionally been associated with waste management. This has led to an outdated understanding of



Regional bio-economy can be an approach to circular economy

Photo: iStock.com – Drazen

the circular economy, primarily focused on waste reduction and recycling. However, at the European level, in its Circular Economy Action Plan, the European Commission proposes that circular development should start at the product design stage and encourage cross-sectoral cooperation. This systemic understanding is also embedded in the European Structural Funds. The Territorial Agenda 2030 shows how a place-based circular economy can strengthen functioning regions. Germany is currently developing a comprehensive National Circular Economy Strategy that will be based on a systemic understanding of the circular economy.

Learning from good practices

The analysis of German and European case examples demonstrates that circular economy initiatives may come from various sectors, including business, science, politics and administration. For instance, the BioökonomieRevier initiative in the Rhenish mining district arose from a challenge of finding solutions for the region's future economy after the phase-out of lignite mining. The goal of this initiative is to create a model region of bioeconomy in collaboration with regional stakeholders. A central coordination office assists in the development of resource-efficient, circular, and bio-based business models. Another initiative, Lippe zirkulär, based on political and administrative efforts, focuses on circular construction and education initiatives. The district of Lippe is responsible for coordinating the implementation and development of expertise for circular construction. To raise awareness of the circular economy, circular education projects are carried out. The importance of political support and commitment is also demonstrated by the Aragon Circular initiative in Spain, where they have developed a regional, cross-sectoral circular economy strategy that defines the region's strategic goals. The Aragon Circular validates functions as an incentive as it acknowledges companies and institutions that implement innovative and sustainable measures for the circular economy. In future, the quality mark will be a criterion for public procurement.

Material flow analyses and stakeholder mappings can help to develop a regional circular economy strategy. Cooperation enables the implementation of circular business models that minimise the dependence on primary raw materials. An example of this is the Circles initiative in East Netherlands, which is supported by the regional business development organisation. In the context of the initiative, a regional material flow analysis was conducted and a networking platform was established for companies to exchange information on secondary materials. The goal is to create

industrial symbioses by which a company uses waste material from another company as secondary raw material. One of the first success stories is a regional partnership of companies to recycle aluminium for use as a secondary resource, instead of importing it over long distances from Asia.

Success factors in rural areas

Overall, the examples analysed show a large variety of measures to support a regional circular economy. Even though most rural regions are still in the early stages of establishing a circular economy, in many places individual initiatives are being taken by a particular sectors or civil society actors. Motivated stakeholders appear to be vital for successful initiatives. Although physical proximity between the actors can promote cooperation, in some cases, social proximity and networks based on trust can bridge distances and were described as being even more important. The often small and medium-sized company structure is also a strength of rural regions, as these companies operate on a long-term basis and are often motivated to pursue sustainable approaches. A shared vision helps to strengthen a sense of community and promote cooperation. Although the case study regions often face challenges such as migration, job loss and structural change, they have a particular motivation and openness to new and creative solutions that is seen as a success factor.

BMWSB and BBSR build on the results

Particularly in smaller regions, there is often a lack of capacity and knowledge about potential measures to actively and systematically support the transformation to a circular economy. The German "Circular Rural Regions" pilot action implementing the Territorial Agenda 2030 builds on the findings of the study. Regional approaches to the circular economy will be supported in five rural model regions in Germany. The exchange with European partner regions is a central component aimed at facilitating knowledge transfer and joint learning. The partnership for the pilot action is currently being established with five European regions to complement the German model regions. The kick-off conference will be held on 26 September this year in Berlin, and the project will run until 2027.

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www.bbsr.bund.de > EN > Research projects > The potential of circular economy for rural development in Germany and Europe

Sports facilities funding by the BMWSB

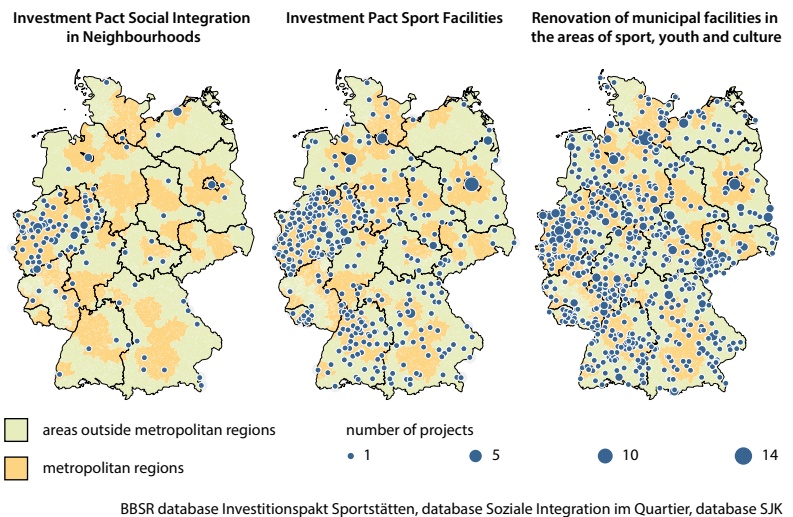
by Judith Kaschowitz, Charlotte Rimke and Kathrin Schultheis

The BBSR has carried out an analysis of the funding of sport facilities by the Federal Ministry for Housing, Urban Development and Building (BMWSB). The analysis investigated common grounds and differences of the three funding programmes: “Investitionspakt Sportstätten” (Investment Pact for Sports Facilities), “Investitionspakt Soziale Integration im Quartier (SIQ)” (Investment Pact for Social Integration in Neighbourhoods) and the federal government programme “Sanierung kommunaler Einrichtungen in den Bereichen Sport, Jugend und Kultur (SJK)” (Renovation of municipal facilities in the areas of sport, youth and culture). By investing in the expansion and renewal of local sports facilities, the BMWSB is helping to establishing equivalent living conditions and create and maintain social infrastructure. Up until Oktober 2022, a total of 1,251 measures have been funded nationwide.

The analysis answers the following questions:

- How do the three programmes differ in their basic orientation, legal basis and financial volume?
- What are the common grounds and differences between the programmes with regard to supported measures and their distribution in Germany?
- “Investitionspakt Sportstätten”: How does funding practice differ between the federal states?
- What conclusions can be drawn for future developments in the field of sports facility funding?

The funding programmes SIQ and “Investitionspakt Sportstätten” of the federal government and the federal states are similar in their orientation, funding conditions and funding practice. The SJK federal government programme is more different in terms of legal basis, programme objectives and type of sport facilities funded. All three programmes have in common that the renovation and expansion of existing sports facilities are eligible but (alternative) new buildings only in exceptional cases. A substantial difference is that the “Investitionspakt Sportstätten” programme mainly funds sports halls and sports grounds, whereas the SIQ programme funds swimming pools and sports grounds and the SJK programme, swimming pools and sports halls.



Compared to the other two programmes that focus on urban development funding districts, the SJK programme supports projects throughout Germany.

In the future, the sport facilities funds of the BMWSB will be pooled in the SJK federal government programme. The “Investitionspakt Sportstätten” programme was not continued beyond 2022 and the SIQ programme has not received any new funding since 2021. The funding focus is now on projects with a high investment volume: Going forward from the founding round “SJK 2022”, the federal government’s share of funding is expected to be between one and six million euros. By comparison, the federal government’s investment volume in the “Investitionspakt Sportstätten” programme has so far averaged around 650,000 euros, while SIQ’s investment volume was around 1.1 million euros.

The political decision to discontinue support the “Investitionspakt Sportstätten” and the SIQ programmes has changed the current logic of sport facilities funding in the BMWSB’s area of responsibility. With SJK, the focus is now on a programme by which the federal government can better pursue own its goals and set programme priorities. A more detailed analysis of the common grounds and differences of the programmes and of the consequences of restructuring can be found in the BBSR-Analyse-KOMPAKT issue 10/2023.

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📖 BBSR-Analysen KOMPAKT 10/2023 [in German]

Integrated water and urban development policy for greener cities

by Dr Fabian Dosch and Stephanie Haury

Water development corridors in cities along federal waterways offer new potential for developing green-blue infrastructure. This is what the Federal Ministry of Construction and the BBSR have been aiming for in a long-term process, since 2021, when responsibility for water development along federal waterways was transferred from the federal states to the federal government.

The process, which touches on the areas of ecological water development and urban renewal, is backed by the EU Water Framework Directive and bears great potential for the multifunctional design and use of corridors and riverside zones as components of the urban green-blue infrastructure and as open spaces to meet, move, experience nature and practise ecological conversion – spaces that are not always the focus of urban planning.

The research project partners investigated how to tap the potential of water development corridors within settlement areas. When these corridors along federal waterways run through urban areas, various planning issues come together in spatial terms. The Federal Waterways and Shipping Administration, which is also responsible for federal waterways, and local administrations have so far largely been planning separately from each other.

The aim of integrated water and urban development is the creation of multifunctional locations for recreation, ecology and networking. However, until now, little consideration has been given to urban concerns such as ecological water development, urban and open space development, leisure and recreation. A new form of integrated cooperation, i.e. cooperation between different sectors with modified responsibilities, is required to develop of water features in the public interest. On the one hand, the aim is to improve the open space design of urban riverside zones, combining ecology and quality of life, for use by urban society. On the other hand, cross-sectoral instruments are required for cooperative and efficient planning and decision-making processes. Civil society initiatives can also promote this process.

The focus of ecological water development is on landscape design and nature-based measures that require a minimum



Neckarstrand in Remseck

Photo: Michael Fuchs

of energy and technology, but generate a high ecological added value and improve the recreational value. The Fechenheimer Mainbogen in Frankfurt (a loop of the River Main near Frankfurt), the Neckar Island of Stuttgart and the Teltow Canal in Berlin are successful examples that combine ecological water development with semi-natural recreational use.

The BBSR online publication “Stadt am blauen Band” (City on the Blue Ribbon) presents strategies, processes, instruments and concrete measures for implementing high-quality, synergistic urban and water development. It brings together expertise from different areas of responsibility and supports municipalities in integrated, interdisciplinary work. The task of the responsible federal administration in the design and development along federal waterways should also include recreation, leisure and climate adaptation. Space can only be designed and used in a multifunctional way if this task is performed in a binding manner.

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📖 BBSR-Online-Publikation 54/2023 [in German]

Commuting in Germany – 2002-2022

by Dr Brigitte Adam and Sylvie Dugay

Between 2002 and 2022, the average commuting distance of all employees subject to social security contributions in Germany increased from 15.2 km to 17.2 km. An analysis by the BBSR shows nationwide trends and regional priorities.

During the analysis period, the commuting distances, mostly starting from a low level, have increased more than on average in parts of North Rhine-Westphalia, northern Bavaria, eastern Brandenburg and southwestern Germany. In the catchment area of large metropolises, which already have very long commuting distances (especially in the surrounding areas of Berlin, Hamburg and Munich), the willingness to travel even longer to work seems to be exhausted. The commuting distances there have not increased in recent years.

Apart from Frankfurt (Oder), there are only a few, mostly smaller towns and villages that stood out in the past 20 years due to both above-average high and above-average increasing commuting distances as well as a due to a high proportion of out-commuters. They include, for example, Lieberose (federal state of Brandenburg), Altdöbern (Oberspreewald-Lausitz region), Nennhausen in the district of Havelland and Barnim-Oderburch as well as Boostedt-Rickling in northern Hamburg or Haddeby in the federal state of Schleswig-Holstein.

What are the reasons for this? Cheap building land that entices people to leave expensive large cities or their immediate surroundings? Factors such as working from home that prevent people from driving to their place of work every day? Do employees prefer to commute rather than moving permanently?

The German “Big Eight”: Where do workers come from?

The largest German cities – measured by the number of inhabitants – have an enormous attraction for employees. A lot of people who do not live in these cities, work there and therefore commute to these cities. The eight largest

German cities comprise Berlin, Hamburg, Munich, Cologne, Frankfurt am Main, Stuttgart, Düsseldorf and Leipzig.

However, differences can also be seen among these cities. Leipzig has the lowest number of in-commuters. In addition, almost two-thirds of the people working in Leipzig also live in the city, which means that the proportion of internal migrants is very high. Only Berlin has a higher proportion. The German capital, for example, has a large number of employees coming from other large cities to work in the metropolis.

The commuter flow map shows all commuting patterns between the eight largest German cities and other cities, towns and villages. Each commuting flow can be considered individually.

Do the workers come from smaller or larger cities?

The ways to work in the Big Eight do not indicate any trend of younger people working in large cities to move to distant small places. But beyond these eight cities, there are other large and medium-sized cities playing a major role as places to live. Their importance has increased since 2002. The question is therefore as to whether long commutes should possibly be compensated for by short distances to supply and leisure facilities in an urban place of residence.

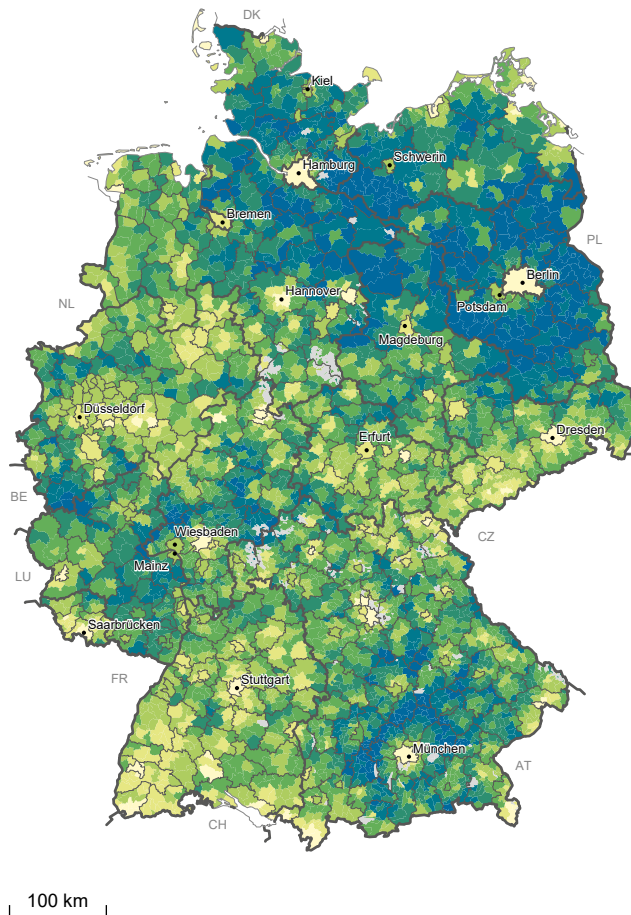
The dashboard offers the facility to display the proportion of people coming from large, medium-sized and small cities or rural municipalities for each of the eight major cities. It should be borne in mind that in the vicinity of these eight cities sometimes there are more large or medium-sized cities and sometimes more small towns or rural municipalities.

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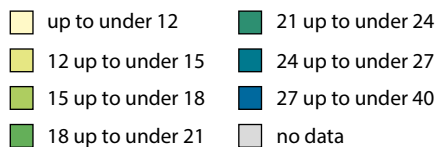
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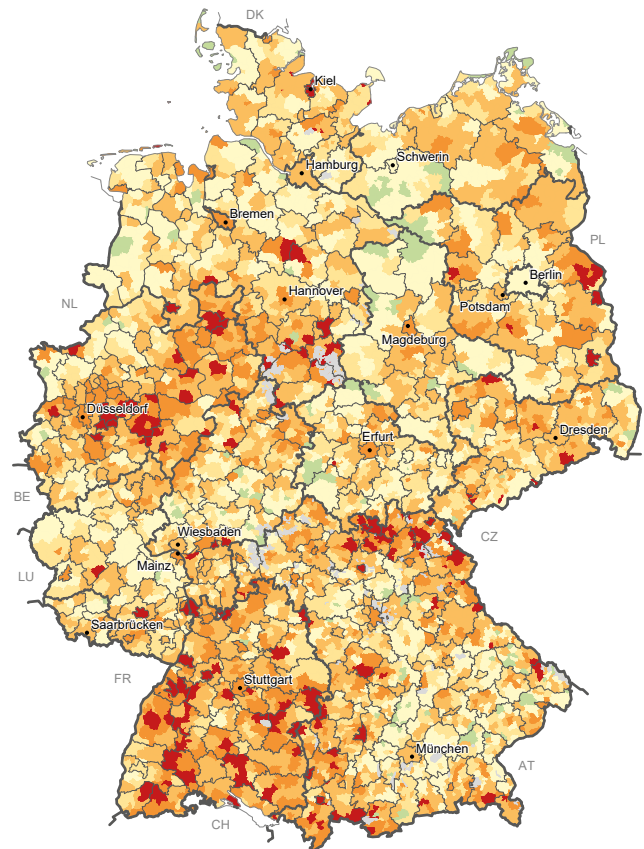
Commuting distances 2022



Average commuting distances of all employees subject to social security contributions from their place of residence 2022 in km



Development of commuting distances 2002–2022



Development of the average commuting distances of all employees subject to social security contributions from their place of residence between 2002 and 2022 in %



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Database: Spatial Monitoring System of the BBSR,
© Local government statistics of the Federal Employment Agency, Nürnberg 2022
Geometrical basis: VG5000 as of 31/12/2022 © GeoBasis-DE/BKG

Autor: B. Adam, S. Dugay, T. Pütz

Creating housing faster by digitising the development planning process

by Dr Vilim Brezina

The question of adequate housing provision and the creation of affordable housing has long been one of the most pressing socio-political challenges and is continuously examined by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). The current BBSR study “Bauland- und Innenentwicklungspotenziale in deutschen Städten und Gemeinden” (Building land and inner-city development potentials in German cities, towns and villages), for example, shows that in principle, land is available for the construction of 400,000 homes per year. However, the German federal government cannot initiate housing construction on its own. Planning and approval are the responsibility of the federal states and, in particular, depend on local planning development regulations.

Municipal development planning, in conjunction with the building permit procedure, is an essential factor in increasing the amount of land available for development. According to a survey in the Berlin House of Representatives, in the districts of Berlin it currently takes an average of more than nine years to prepare a binding development plan. Of course, Berlin is not representative of all German municipalities, but in other large cities the estimated average time from the decision to prepare a binding development plan to its publication is also between three and six years. Although there are no reliable studies on this, there is no doubt that the process of creating binding development plans needs to be accelerated in order to provide housing more quickly. This is why the BBSR sees great potential in digitalisation.

While the digital planning application has been available to municipalities since 2021 and is being used by a growing number of building authorities, the practical implementation of the development planning procedure is at best digital in public participation. It is against this background, that the BBSR and the German Federal Ministry for Housing, Urban Development and Building (BMWSB) jointly initiated the research project “Verfahrensbeschleunigung der Bauleitplanung” (Acceleration of development planning), which was launched in 2023. In the project, the contractor consortium of planners, legal experts and software developers is investigating which steps in the planning process can be significantly accelerated and whether delays can be reduced by using digital tools. The project aims to promote

the digitalisation of binding development planning as an integrated management process. The research perspective is divided into three areas:

1. technical approaches
2. work organisation approaches
3. structural conditions

From a technical perspective, available digital solutions will be evaluated to see if they can be used in a simple and technically and legally secure way and if they can be rapidly disseminated in municipalities. In terms of work organisation, the focus is on cooperation between authorities within a municipality. Concrete recommendations will be given for an agile way of thinking and working with digital project management tools and their integration into municipal processes. The structural conditions include recommendations for measures that fall within the competence of the federal states and the federal government, e.g. adjustments to urban development law and related areas of law, specific funding programmes, standardised service catalogues for environmental impact assessments or pools of experts.

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Resilience and built heritage – challenge and resource for a sustainable and resilient urban development

by Bastian Wahler-Žak and Jan Schultheiß (BMWSB)

Our built heritage not only includes historical neighbourhoods, parks, gardens or individual buildings, it also bears historical knowledge about construction methods and materials and is thus an important point of reference for our identity and sense of belonging. It contributes significantly to the social, cultural, economic and ecological dimensions of sustainable urban development and is thus “(...) a valuable resource for increasing the resilience of cities, towns and villages (...)” (Federal Ministry of the Interior, Building and Community 2021), which must be maintained and developed in a sustainable manner.

There is therefore an obvious need to develop and implement an integrated risk management system that concentrates on the built heritage as an important contribution to the resilience of cities, towns and villages. Local practice, however, shows that cultural heritage and risk management are often given insufficient consideration in urban development and that their interests are not sufficiently met.

In order to identify concrete requirements for action and solutions at both the European and the national level and to promote exchange between the various disciplines and practical levels, the BBSR carried out the research project “Resilience and built heritage. An integrated approach to the risk management of cultural heritage in urban development focused on the existing built environment”. The work particularly concentrated on defining universally applicable principles of integrated risk management for the built heritage and on providing guidance for local practice on this basis.

The research project was also part of an intensive European dialogue in the context of the Urban Agenda for the EU's Partnership on Culture and Cultural Heritage centrally coordinated by the Federal Ministry for Housing, Urban Development and Building, the BBSR and Italy. Between 2019 and 2022, various European partners in this thematic working group developed approaches to dealing with culture and cultural heritage in the field of sustainable urban development.

The results of the research project were published in two guidance papers in 2023. The English-language publication “Resilience and Cultural Heritage in Urban Development.



Reconstruction in Bad Münstereifel in 2022 following the flood disaster

Foto: Bastian Wahler-Žak

Guidance Paper on Integrated Risk Management” provides an overview of the current European discussion. It presents good practice examples and defines ten guiding principles to implement integrated risk management in urban development.

The publication “Baukulturelles Erbe vor Risiken schützen und resilient gestalten. Eine Arbeitshilfe für die kommunale Praxis” (Protecting the built heritage against risks and making it resilient. A guidance paper for the practice of local authorities) is based on these guiding principles and offers local planning practitioners support on how to develop and implement an integrated risk management system for the built heritage at the municipal level. It includes concrete instructions for actions and aids. Furthermore, it shows ways how to shape the necessary development and decision-making processes and how to implement them in the context of spatial planning.

It is planned to test the guidance paper for the practice of local authorities in the context of another research project in order to assess how it can be applied in practice and disseminated at municipal level.

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📖 **Baukulturelles Erbe vor Risiken schützen und resilient gestalten [in German]**

📖 **Resilience and Cultural Heritage in Urban Development**

📍 www.bbsr.bund.de > EN > Research > Research projects > Resilience and built heritage

Department stores in transition: Brief status report on “Baukultur”

by Dr Alexander Fichte

The BBSR's short report about the status of “Baukultur” (“culture of building” encompassing all human activities to change the built environment) focuses on the possibilities of repurposing centrally located department stores. The dynamic development of sales in online retail primarily affects the inner city-relevant groups of goods and leads to a reduction in physical sales areas. Current insolvencies might promote the future abandonment of numerous other locations. The resulting vacant properties usually have a negative effect on city centres due to trading-down effects. Converting these large properties can therefore promote a functional realignment of inner cities, save resources and preserve the Baukultur.

In the first part of the status report, the authors analysed the development of German department stores and their building typology in terms of architectural history and also took into account their value in relation to Baukultur. They categorised the buildings into different eras of building history, i.e. from their construction up to and including 1900, from then to the decline of the construction industry and the beginning of the diversification of architecture since 1980. In the next step, the authors identified general features relevant to their conversion based on the related building typologies.

In the second part of the status report, the authors described the structural change in the retail sector, associated effects on department stores and the need of inner cities for transformation, and analysed successful examples for repurposing department stores. Apart from the level of the structural interventions, they focused on new uses and the commitment of the actors involved in the project (municipalities, project developers, property developers and interest groups).

The results of the brief status report show that department stores are generally suited for other uses, regardless of their era of origin, and that a wide range of conversions, third-party uses and combined uses are possible. The size of space reused by the retail sector has continuously decreased in recent years. Local authorities have increasingly preferred mixed uses by the sectors of retail, culture, education, catering, and also housing in location development. Different target groups and times of use may have a major effect in



Vacancy of a Karstadt building in Hamburg-Bergedorf

Foto: Nina Hangebruch

promoting the revitalisation of city centres. The numerous post-war buildings are particularly suited for new uses and require relatively little construction effort owing to their solid structural design and curtain walls. In view of the unique basic conditions of each location, the examples examined show that buildings can be successfully repurposed if local actors carefully analyse the existing local and structural conditions, develop a suitable, well-coordinated repurposing concept and, last but not least, if the various project participants are motivated and flexible.

Deficiencies such as a lack of care in preparing projects or a lack of flexibility and speed of decision-making may prevent the successful repurposing of department stores. The strict legal conservation requirements, and lastly those of the building regulations, which can make a project inefficient, are also mentioned as obstacles.

The long version of the study will be published in summer of 2024.

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2023 report proves change in German real estate market

by Matthias Waltersbacher

In recent years, the German real estate market has been characterised by significant changes. The consequences of the COVID-19 pandemic could still be felt when Russia's attack on Ukraine led to strong economic upheavals. In such a phase of uncertainty and fears of a crash, real estate market players need detailed information about current market conditions. Due to their market knowledge and responsibility for the collection of purchase price information, the expert committees for building plot values in Germany are preordained to report in a neutral and competent manner.

The Report on the Real Estate Market Germany, published every two years by the expert committees, is the result of the cooperation between the German federal states and the federal government (represented by the BBSR) within the national working group of expert and higher expert committees, and central offices (AK OGA). The report focuses on the evaluation of the purchase price collections. These are databases in which the purchase contracts for building plots are captured with basic contractual data, price and other value-determining features.

With the real estate market report published at the end of 2023, the AK OGA has submitted a fact-based inventory of the German real estate market. It includes transactions, price developments and turnover rates for residential, commercial, agricultural and forest properties and the associated land, i.e. data that in their entirety draw a comprehensive and clear picture of the real estate market and its development.

The results show that already in 2022, transactions, turnovers and prices have significantly declined. The number of real estate transactions, for example, has decreased by 16% to 866,000 compared to the previous year. In the previous year, there had been about one million transactions. The turnover rate in the real estate sector has also significantly decreased. The number of sales of building plots for one- and two-family houses decreased by 32%, those for multi-family houses by 27%. The number of sales of brand new owner-occupied flats decreased from 68,300 to 38,700 (43%).

In all submarkets, there were still considerable variations in prices. In the city of Munich, a building plot cost €2,400/ m². That means, a plot of 600 m² cost around 1.4 million euros. In contrast, the price in the district of Hildburghausen (Thuringia) was €20/m², in the district of Mittelsachsen



Source: AK OGA

(Saxony) €21/m². A plot of 600 m² thus cost around 12,000 euros on average. On a national average, the 2022 square meter price was 200 euros.

From the beginning of 2022, the previous, nearly continuous price increases were considerably dampened, especially on the residential real estate market. This led to measurable price declines from about the middle of 2022. The decline in transactions was more prominent than the price decline, especially in the newbuild sector. Prices and transactions are also low in 2023. Given the current uncertainty among market participants, prices are expected to further stagnate or decline.

Given the shortage of supply, what effect the decreasing prices will have remains to be seen. At the same time, rents are continuously rising and, in view of the growing population, the demand for affordable housing has increased in many regions.



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Living between wish and reality: results of a nationwide survey of tenant households

by Gudrun Claßen and Dr Martin Ammon

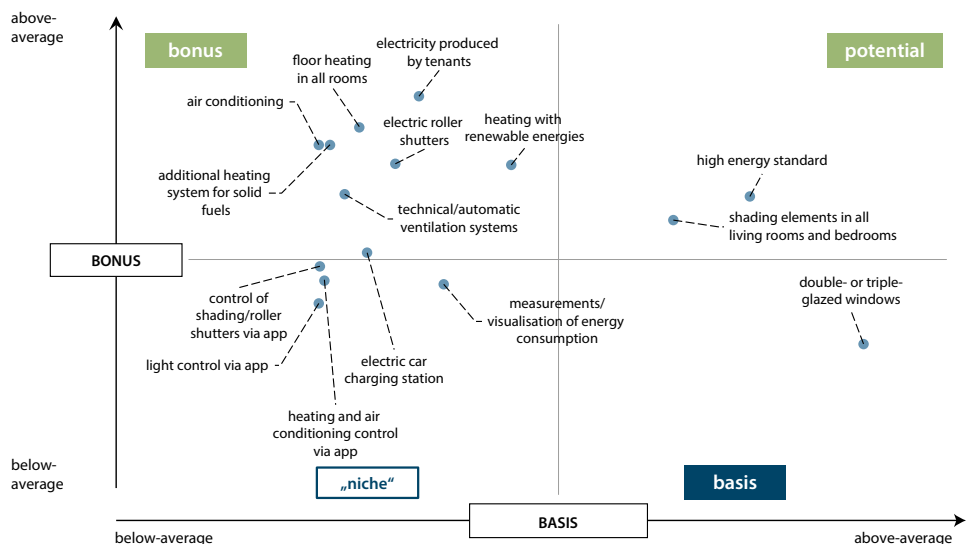
As housing costs have increased, creating affordable housing remains highly important for society and politics. In addition to housing demand and other factors, the level of rents is also determined by the construction costs, which among other things, depend on the tenants' demands on the equipment and condition of flats and residential buildings.

Tenants were comprehensively surveyed about their needs and demands on flats. The survey was part of the project "Standards im Wohnungsbau als Kostenfaktor – Ausstattungsmerkmale als Entscheidungskriterium und einhergehende Zahlungsbereitschaft bei der Wohnungswahl" (Housing standards as cost factor – Equipment features as a decision criterion and willingness to pay in housing choice), funded under the German Future Building programme. The result was over 60 equipment features with the associated willingness to pay.

Despite individual demand and related effects on residential satisfaction, the features can generally be divided into four clusters: must-have, potential, bonus (good-to-have) and niche (nice-to-have). Most important when choosing a flat are the basic features or so-called must-haves, without which a flat is unlikely to be rented. In general, tenants considered, for example, fast internet, well-distributed sockets, insulated glazing and a two-way intercom to be must-haves, whereas electronic consumption control apps were a niche product. The figure shows the classification of equipment features in the areas of residential climate and energy as an example.

The presence of certain equipment features involves the willingness of tenant households to pay more. The study identifies a total of 15 features on this. For example, tenants

Classification of equipment features: residential climate and energy



Source: InWIS Forschung & Beratung GmbH & albusarchitecture 2023

prefer new residential buildings and are willing to pay a higher rent for them. From the perspective of the tenant households surveyed, heating with renewable energies justifies higher additional costs to the rent. Apart from residential and building-related features, an above-average good residential area has by far the strongest influence on the willingness to pay.

The study results reflect the current status of the rental housing market. At the same time, they show that technical and societal trends will change the classification of the equipment features in the future. Examples are charging stations for electric cars, which are still an absolute exception in rented flats and are therefore classified as being between niche and bonus features. With increasing electromobility, charging stations for electric vehicles of all types will become an integral part of the building infrastructure and a must-have feature.

Everything laid down by law? Climate change-adapted building in planning and building regulations

by Svenja Binz, Dr Stefan Haas and Maximilian Gerhard

Precautionary planning and dealing with the consequences of extreme weather events are not entirely new tasks. The impacts of climate change therefore do not require a new definition of building and urban neighbourhood planning. However, due to

increasing climate change-related hazards and consequential damage, they are becoming a focus of spatial planning, urban land-use planning and building regulations in Germany and require the adaptation of related solutions.

The overview shows heat prevention measures for affected parts of the building, sorted according to legal regulations to illustrate the wide spread and influence through regulation

Measures	Part of building concerned						Legal provisions & technological standards			
Heat	Structural system	Building component	Building envelope	Internal space	External space	Miscellaneous	Level of building components	Building level	Local level	Level of spatial planning
Orientation and arrangement of buildings, ventilation corridors								BauNVO, B-Plan	BauGB, BauNVO, B-Plan	
Arboriculture, planting of trees and bushes, compensation of trees, bushes etc.								BauNVO, B-Plan § 178 BauGB	BauGB, BauNVO, e.g. tree preservation order of federal state	
Minimisation of large glass areas							Local construction projects § 86 MBO	BauNVO, B-Plan § 178 BauGB	BauGB, BauNVO, e.g. tree preservation order of federal state	
Thermal insulation in summer, cooling							DIN V 18599 DIN 4108-2	DIN V 18599 DIN 4108-2		
Roof form							BauGB, B-Plan Local construction projects § 86 MBO	BauGB, B-Plan Local construction projects § 86 MBO		
Optimisation of shading system							DIN EN 13659 Local construction projects § 86 MBO			
Shading design on windows and doors							DIN EN 13659 Local construction projects § 86 MBO			
Green roof							FLL guidelines	BauGB, B-Plan, local construction projects § 86 MBO		
Green areas									BauGB, B-Plan	BauGB, FNP
Water areas								BauGB, B-Plan	BauGB, B-Plan	BauGB, FNP
Design of front garden								MBO, LBO	MBO, LBO	
Agricultural and forestry areas as well as soil, natural and landscape areas										ROG, regional plan, BauGB, FNP
Albedo (colouring)							Federal state legislation in connection with § 9 Abs. 4 BauGB, local construction projects § 86 MBO	Federal state legislation in connection with § 9 Abs. 4 BauGB, local construction projects § 86 MBO		

Within its research programmes, the BBSR develops different approaches for adapting the built environment to the consequences of climate change. One thematic focus is on developing future goals for the building sector as required by as required by the national Climate Change Adaptation Act (“Klimaanpassungsgesetz KAnG”). This again requires the involvement of the federal government, federal states, local authorities, citizens, planners and associations and the facilitation of related discussions.

In order to prepare buildings for natural hazards and to build them in a more resilient way in the future, innovations proposed by construction researchers refer to both private regulations and standards as well as to the public building regulations and planning law. An interdisciplinary evaluation, focusing on the issues: “to what extent are current building regulation and planning laws able to take into account climate change adaptation issues?” and “how can climate change adaptation strategies be better considered in legislations and regulations?”, has produced the following results:

- A toolbox of legal requirements to plan neighbourhoods and buildings in a climate change-adapted manner is generally available.
- Local authorities are increasingly giving priority to climate impacts in their urban land-use planning activities. However, a few sections of the building regulations and

planning law have to be updated and more precisely formulated.

- There is a lack of basic principles to classify related risks (for example based on weather data, maps and assessment methods), a lack of aids to consider climate change adaptation issues in legally binding land-use plans and a lack of aids to support authorities in implementing climate change adaptation strategies.
- Climate impacts could be better considered in building standards if they were aligned to the “state of science” instead to the “state of technology”.

Heat, drought, heavy rainfall events and floods, which are impacts of increasingly extreme climate change, are reasons for re-evaluating and realigning building locations and types of building. Legislation as a planning and control instrument determines which climate adaptation measures are required or admitted. Therefore it either promotes or hinders adaptation in urban development and construction planning.

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📖 BBSR-Analysen KOMPAKT 06/2024 [in German]

📄 www.bbsr.bund.de > Forschung > Forschungsprojekte > Weiterentwicklung des klimafolgenangepassten Bauens im Bauplanungs- und Bauordnungsrecht > Endbericht [in German]

Construction prices decrease

by Christian Schmidt

According to current forecasts on the development of construction prices by Kiel Economics Research & Forecasting on behalf of the BBSR, construction prices are expected to decrease by 3% in 2024. Another decline by 5.5% is expected for 2025.

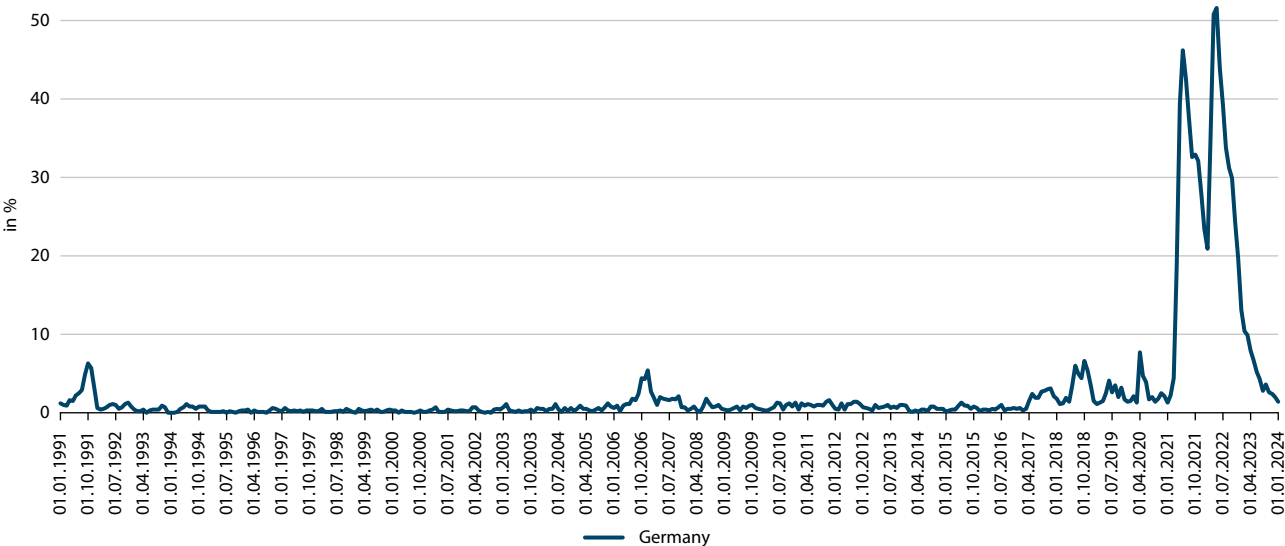
The coordinators of the research project “Forecasting German construction prices over the medium term” examined whether construction prices can be forecast over a longer period of time. Based on statistical-econometric methods, they were able to confirm a forecast of construction prices over a period of five years. In a first step, the prices were forecast for the period 2020 to 2024. Since the project ended at the beginning of 2021, it was not possible for the model to take into account the external shock of the material

shortage that occurred in 2022 and the associated price surge in construction materials.

For the present update, the model structure from the project was evaluated to check the consistency and robustness of the model and the facts derived from it.

In the context of the evaluation, unit labour costs in the construction sector in particular turned out to be a great challenge as the gross value added in the official statistics had been comprehensively revised later on. The analysis of the historical unit labour cost development shows that the revision is due to the data supply for advance services in the construction industry, which is particularly low in times of a volatile economy. Since, on average, the revised unit labour

Proportion of companies (in %) in the main construction industry reporting material shortages



Source: Kiel Economics Research & Forecasting, ifo Institute

costs are low, a separate model for estimating the unit labour costs provides hardly any better results than the unrevised results of the national accounts. In the course of the model evaluation, the material availability factor was also integrated into the model and is now considered in the forecast of the construction prices.

The forecast finalised in 2021 assumed a significant decline in the construction price dynamics, but in reality, prices increased, which has so far been unique in history. In 2022, prices for new residential buildings rose by 16.4%, for new non-residential buildings by 17.6% (Destatis 2023, construction price indices). This has been the strongest increase in construction prices since 1970. An important reason is a lack of construction materials, which so far has also been unique. Such outliers, which have not existed in the time series before, cannot be represented in a statistical-econometric model.

In the meantime, the bottlenecks in the supply chains have largely disappeared, so that the supply of construction materials has significantly improved. However, material prices remain high in some cases. Energy prices have fallen again, although not to the level of 2021. The construction price dynamics therefore declined in 2023. Prices for new residential buildings nevertheless increased by 8.5% (Destatis 2024, construction price indices). As the demand for construction is generally declining, prices are likely to fall again in the forecast period for the first time since the end of the 1990s.

The high interest rates particularly impair construction investments due to strongly increased financing costs. Inflation has led to a decline in real incomes for private households, so that the economic and income expectations of private households have declined. As a consequence, overall construction demand has decreased, which is currently reflected in significantly falling numbers of construction permits and new orders from construction companies. Altogether, the price dynamics is clearly decreasing over the forecast period. The largely resolved supply and material bottlenecks also have a dampening effect on prices.

For 2024, construction prices are expected to fall by 3% as a result of the expected weak construction demand. According to the current state of affairs, the low point is expected in 2025, following a decline by 5.5%. Construction prices will fall again in 2026. From 2027, prices might slightly

Forecast of construction prices	
Year	construction price forecast change compared to the previous year in %
2024	-3.2
2025	-5.5
2026	-0.9
2027	0.2
2028	2.0

Source: Own table

is updated regularly, new results will be available soon.

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17th Federal Congress on National Urban Development Policy

The Federal Ministry of Housing, Urban Development and Building, together with the Conference of Building Ministers, the Association of German Cities and the German Association of Towns and Municipalities, is organising the 17th Federal Congress on National Urban Development Policy “Kooperationen in der Stadtentwicklung – Bündnisse für das Gemeinwohl” (Cooperation in Urban Development – Alliances for the Common Good). The congress will take place on 17 and 18 September at the Heidelberg Congress Center.

There can be no urban development without co-operation. It thrives on the exchange of innovative ideas and good experiences. It is a joint endeavour in which many activities of different stakeholders work together to create something new – in the best case, a strong contribution to the common good. The event aims to explore this, whether in the neighbourhood, the region or across national borders, and ask who achieves the best results, how and in which alliances.

The congress will discuss current approaches and strategies for co-operation in urban development policy and develop ideas for the sustainable, integrated development of urban and rural areas at national, European and international level.

During the two days of the event, participants will be taken to special places in the city of Heidelberg and the surrounding region. There they will meet stakeholders, learn about best-practice projects and have the opportunity to exchange ideas with each other. Selected fringe events by various partners, a small project fair and interesting exhibitions round off the congress programme.



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